

**HISTORY OF COOPERATIVE SOYBEAN PROCESSING  
IN THE UNITED STATES (1923-2008):**

**EXTENSIVELY ANNOTATED**

**BIBLIOGRAPHY AND SOURCEBOOK**

SOYINFO CENTER

**HISTORY OF COOPERATIVE  
SOYBEAN PROCESSING  
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**AGRI Industries, AGP, Boone Valley, CHS, Dawson Mills  
Farmland Industries, Far-Mar-Co, GTA, Gold Kist, Honeymead,  
Land O'Lakes, MFA, Monticello Cooperative, North Iowa Cooperative,  
Ohio Valley Soybean Cooperative, Riceland Foods**

**Compiled**

**by**

**William Shurtleff & Akiko Aoyagi**



**2008**

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 Harvest States Cooperatives (Includes Honeymead)  
 History of Consumers Cooperative Association  
 History of Cooperative Soybean Crushers (General &  
 Other)  
 History of Dawson Food Ingredients  
 History of Dawson Mills (Dawson, Minnesota)  
 History of Farmland Industries, Inc  
 History of Far-Mar-Co, Inc. (Hutchinson, Kansas)  
 History of Farmers Union Grain Terminal Association  
 (GTA) (St. Paul, Minnesota)  
 History of Farmers Union Grain Cooperative Marketing  
 Association (CMA)  
 History of Gold Kist, Inc. (Georgia)  
 History of Honeymead (as a Cooperative, Mankato,  
 Minnesota)  
 History of Land O'Lakes, Inc.  
 History of Missouri Farmers Association (MFA) (Mexico  
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 Co. (Monticello, Piatt Co, Illinois)  
 History of North Iowa Cooperative Processing  
 Association (Manly, Iowa)  
 History of North Iowa Soybean Cooperative (Manly,  
 Iowa)  
 History of Ohio Valley Soybean Cooperative  
 (Henderson, Kentucky)  
 History of Piatt County Soybean Cooperative Co. (Illinois)  
 History of PMS Foods, Inc.  
 History of Riceland Foods (Arkansas)  
 History of Tri-County Soy Bean Co-operative Association  
 (Dawson, Minnesota)  
 History of Cooperative Soybean Crushers  
 History of Cooperative Soybean Crushing Companies  
 Chronology of Cooperative Soybean Crushers  
 Timeline of Cooperative Soybean Crushing Companies  
 Bibliography of Cooperative Soybean Crushers

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## DEDICATION AND ACKNOWLEDGMENTS

This book is dedicated to James W. Lindsay, Bill Lester, Joe Givens, Glenn Pogeler, John R. Dunn, and Joseph G. Knapp - pioneers in this field.

Part of the enjoyment of writing a book lies in meeting people from around the world who share a common interest, and in learning from them what is often the knowledge or skills acquired during a lifetime of devoted research or practice. We wish to give deepest thanks...

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Finally our deepest thanks to Tony Cooper of Alamo, California, who has kept our computers up and running since Sept. 1983.

This book, now doubt and alas, has its share of errors. These, of course, are solely the responsibility of William Shurtleff.

# INTRODUCTION

## Brief Chronology of Cooperative Soybean Processing in the United States

1923 Sept. - Monticello Co-operative Soybean Products Co. (Monticello, Piatt Co., Illinois), America's first cooperative soybean crusher, begins operation. It is also the first U.S. plant to use solvent extraction - benzol.

1941 June - Ohio Valley Soy Bean Co-operative plant in Henderson, Kentucky, begins crushing soybeans. It is the first of the new wave of cooperative plants to start during the early 1940s. Built by soybean growers in western Kentucky and southeaster Indiana, it is an attempt to increase soybean prices, encourage soybean production by offering a new market, and create a source of high-protein soybean meal as a feed for livestock and poultry.

1944 March - Boone Valley Cooperative Processing Association starts crushing soybeans in Eagle Grove, Iowa.

1945 Feb. - There are now seven cooperative soybean crushing plants in Iowa, located at Sheldon, Dike, Manly, Ralston, West Bend, Eagle Grove, and Martelle (Soybean Digest. 1945. Feb. p. 13). They started for two main reasons: (1) During and immediately after World War II, it was almost impossible for soybean growers to obtain soybean meal, either as meal or in the form of mixed feeds. To alleviate this situation, they formed cooperatives and built soybean crushing plants. (2) To use this meal to raise meat, milk, dairy products and eggs to help the American effort in World War II.

1945 - Consumers Cooperative Association begins operating its first soybean crushing plant at Coffeyville, Kansas.

1947 Aug. 23 - Boone Valley: Fire destroys the plant in Eagle Grove, Iowa.

1949 - From 1940 to 1949, soybean farmers built 21 cooperative soybean crushing plants - 19 of the them from 1940 to 1945. These plants were located in Iowa, Illinois, Indiana, Kansas, Missouri, Ohio, Pennsylvania, and Wisconsin.

1951 Nov. - Tri-Country Soy Bean Co-operative Association (later renamed Dawson Mills) starts crushing soybeans in Dawson, Minnesota.

1952 Jan. - Joe Givens takes over as general manager of Dawson Mills.

1959 Oct. - Consumers Cooperative Association (later renamed Farmland Industries) begins operating its second soybean crushing plant at Van Buren, Arkansas.

1963 Sept. - CMA (Consumers Marketing Association, of Kansas City, Missouri) purchases Dannen Mills in St. Joseph, Missouri; this is CMA's first involvement with soybean processing.

1966 Sept. 1 - Consumers Cooperative Association changes its name to Farmland Industries, Inc.

1968 spring - After considerable discussion, four regional grain cooperatives (including CMA) agree to consolidate their business into a single association. On June 1, it would be known as Far-Mar-Co, Inc. At the time of the merger, only one member, Farmers Union CMA, was involved with soybeans (see 1963 Sept.).

1968 - Gold Kist Soya (Div. of Cotton Processors Assoc.) starts a soybean crushing plant at Valdosta, Georgia.

1968 fall. Farmers Export Co. (FEC) (Overland Park, Kansas) begins exporting soybeans. Three of its four owners are cooperatives.

1969 - Tri-Country Soy Bean Co-operative Association is renamed Dawson Mills.

1970 July - Far-Mar-Co (Hutchinson, Kansas) announces the creation of a new foods division. They soon have a food plant in St. Joseph, Missouri.

1974 - Dawson Food Ingredients is established by Dawson Mills. In about May 1977 they purchase Bontrae spun soy fiber and technology from General Mills.

1975 Aug. - Farmland Industries starts operating its soybean crushing plant at Sergeant Bluff, Iowa.

1977 Feb. - Far-Mar-Co merges with Farmland Agriservices.

1979 March 31 - Dawson Food Ingredients' soy protein isolate plant begins operating 1.5 miles east of Dawson.

1977 May 2 - Far-Mar-Co becomes part of Farmland Industries. Farmland is now also running the former Dannen soybean crushing plant in St. Joseph, Missouri.

1978 - Intrade is formed.

1978 - *Beyond the Fence Rows: A history of Farmland Industries, Inc., 1929-78*, by Gilbert C. Fite published. Includes an excellent history of Far-Mar-Co.

1979 - SoyCot starts exporting soybeans.

1980 March 1 - Dawson Mills is merged into Land O'Lakes, and is renamed Land O'Lakes - Soybean Division.

1981 May - Land O'Lakes announces that it will close Dawson Food Ingredients - the soy protein isolate and fiber spinning plant near Dawson. In Aug. the plant is sold to American Milk Products Inc. (AMPI).

1982 May 1 - Bill Lester, an old-timer in co-op soybean processing, starts to work for Boone Valley (Eagle Grove, Iowa) as general manager - with the blessings of Farmland Industries. He advocates cooperating with the other co-op soybean processors, most of whom are struggling. Talk of consolidation or merger begins. A study is conducted.

1983 June 1 - Farmers Union GTA combines with NPGG to form Harvest States Cooperatives.

1983 June 1 - Dawson Food Ingredients discontinues production of soy flour, soy grits, and textured soy flour, because the products are not selling well.

1983 Aug 31 - Merger deal is finalized. Boone Valley Cooperative Processing Assoc. buys five co-op soybean processing plants owned by Land O'Lakes (at Sergeant Bluff, Iowa; St. Joseph, Missouri and Van Buren, Arkansas) and Farmland Industries (at Sheldon, Iowa; and Dawson, Minnesota).

1983 Oct. - James Lindsay is chosen to be the new general manager and CEO of the new Boone Valley. Jim had been a vice president at ADM.

1983 - Three Far-Mar-Co. employees buy the company in a leveraged buyout and rename it PMS Foods Inc., standing for Parke, Major, and Shoup. They are still in Hutchinson, Kansas, making textured soy flour. Farmland is a mere shadow of its former existence.

1983 - GTA (incl. Honeymead) becomes part of Harvest States Cooperatives.

1984 March 7 - The new Boone Valley is renamed "Ag Processing Inc a cooperative," but soon becomes known as "AGP." The headquarters is now in Omaha, Nebraska.

1985 Dec. 31 - AGP buys two soybean processing plants from AGRI Industries (Manning, Iowa; and Mason City, Iowa). This brings to 8 the number of soybean processing plants owned by AGP, which now controls 11.5% of total U.S. domestic soybean crushing capacity

1991 March 1 - AGP purchases a vegetable oil refinery in Denison, Texas, from Conway Oil.

1992 - The book *Soybeans, Cooperatives and Ag Processing*, by Margaret Finnerty is published (178 p.). It contains the best history to date of the origins and development of AGP.

2002 May 31 - Farmland Industries of Kansas City, Missouri, files for Chapter 11 bankruptcy protection.

## ABOUT THIS BOOK

This is the most comprehensive book ever published about Cooperative Soybean Processing. It has been compiled, one record at a time over a period of 33 years, in an attempt to document the history of soy in this region. It is also the single most current and useful source of information on this subject.

This is one of more than 50 books compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyinfo Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features detailed information on:

- 43 different document types, both published and unpublished.
- 636 published documents - extensively annotated bibliography. Every known publication on the subject in every language.
- 79 original Soyinfo Center interviews and overviews never before published.
- 83 unpublished archival documents
- 92 commercial soy products.

Thus, it is a powerful tool for understanding the development of this subject from its earliest beginnings to the present.

Each bibliographic record in this book contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English language publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given). For most books, we state if it is illustrated, whether or not it has an index, and the height in centimeters.

For commercial soy products (CSP), each record includes (if possible) the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as advertisements, articles, patents, etc.) are also given.

A complete subject/geographical index is also included.



## ABBREVIATIONS USED IN THIS BOOK

A&M = Agricultural and Mechanical	ml = milliliter(s)
Agric. = Agricultural or Agriculture	mm = millimeter(s)
Agric. Exp. Station = Agricultural Experiment Station	N. = North
ARS = Agricultural Research Service	No. = number or North
ASA = American Soybean Association	Nov. = November
Assoc. = Association, Associate	Oct. = October
Asst. = Assistant	oz = ounce(s)
Aug. = August	p. = page(s)
Ave. = Avenue	P.O. Box = Post Office Box
Bld. = Boulevard	Prof. = Professor
bu = bushel(s)	psi = pounds per square inch
ca. = about (circa)	R&D = Research and Development
cc = cubic centimeter(s)	Rd. = Road
Chap. = Chapter	Rev. = Revised
cm = centimeter(s)	RPM = revolutions per minute
Co. = company	S. = South
Corp. = Corporation	SANA = Soyfoods Association of North America
Dec. = December	Sept. = September
Dep. or Dept. = Department	St. = Street
Depts. = Departments	tonnes = metric tons
Div. = Division	trans. = translator(s)
Dr. = Drive	Univ. = University
E. = East	USB = United Soybean Board
ed. = edition or editor	USDA = United States Department of Agriculture
e.g. = for example	Vol. = volume
Exp. = Experiment	V.P. = Vice President
Feb. = February	vs. = versus
fl oz = fluid ounce(s)	W. = West
ft = foot or feet	°C = degrees Celsius (Centigrade)
gm = gram(s)	°F = degrees Fahrenheit
ha = hectare(s)	> = greater than, more than
i.e. = in other words	< = less than
Inc. = Incorporated	
incl. = including	
Illust. = Illustrated or Illustration(s)	
Inst. = Institute	
J. = Journal	
J. of the American Oil Chemists' Soc. = Journal of the American Oil Chemists' Society	
Jan. = January	
kg = kilogram(s)	
km = kilometer(s)	
Lab. = Laboratory	
Labs. = Laboratories	
lb = pound(s)	
Ltd. = Limited	
mcg = microgram(s)	
mg = milligram(s)	

## HOW TO MAKE THE BEST USE OF THIS BOOK

Here are a few tips to help you get the most out of the information contained in this book.

**Chronological Order:** The publications and products in this book are listed with the earliest first and the most recent last. Within each year, references are sorted alphabetically by author. If you are interested in only current information, you might want to start reading at the back, just before the indexes.

**How to Use the Three Indexes:** A subject and country index, an author/company index, and a language index are located at the back of this book. They will help you to go directly to the specific information that interests you. Browse through them briefly to familiarize yourself with their contents and format.

Each record in the book has been assigned a sequential number, starting with 1 for the first/earliest reference. It is this number, not the page number, to which the indexes refer. A publication will typically be listed in each index in more than one place, and major documents may have 30-40 subject index entries. Thus a publication about the nutritional value of tofu and soymilk in India would be indexed under at least four headings in the subject and country index: Nutrition, Tofu, Soymilk, and Asia, South: India.

Note the extensive use of cross references to help you: e.g. “Bean curd. See Tofu.”

In the author/company index, a separate entry is given for each author and company. If there are no personal authors, the corporate author (typically an organization, such as UNESCO or the USDA) will be indexed. If there are no personal or corporate authors, the serial/periodical name will be considered the author, as in an article from Time magazine.

**Countries and States/Provinces:** Every record contains a country keyword. Most USA and Canadian records also contain a state or province keyword, indexed at “U.S. States” or “Canadian Provinces and Territories” respectively. All countries are listed under their region or continent. Thus for Egypt, look under Africa: Egypt, and not under Egypt. For Brazil, see the entry at Latin America, South America: Brazil. For India, see Asia, South: India. For Australia see Oceania: Australia.

**Most Important Documents:** Look in the Index under “Important Documents -.”

**Organizations:** Many of the larger, more innovative, or pioneering soy-related companies appear in the subject index – companies like ADM / Archer Daniels Midland Co., AGP, Cargill, Dupont, Kikkoman, Monsanto, Tofutti, etc. Worldwide, we index many major soybean crushers, tofu makers, soymilk and soymilk equipment manufacturers, soyfoods companies with various products, Seventh-day Adventist food companies, soy protein makers (including pioneers), soy sauce manufacturers, soy ice cream, tempeh, soynut, soy flour companies, etc.

Other key organizations include Society for Acclimatization (from 1855 in France), American Soybean Association, National Oilseed/Soybean Processors Association, Research & Development Centers (Peoria, Cornell), Meals for Millions Foundation, and International Soybean Programs (INTSOY, AVRDC, IITA, International Inst. of Agriculture, and United Nations). Pioneer soy protein companies include Borden, Drackett, Glidden, Griffith Labs., Gunther, Laucks, Protein Technologies International, and Rich Products.

**Soyfoods:** Look under the most common name: Tofu, Miso, Soymilk, Soy Ice Cream, Soy Cheese, Soy Yogurt, Soy Flour, Green Vegetable Soybeans, or Whole Dry Soybeans. But note: Soy Proteins: Isolates, Soy Proteins: Textured Products, etc.

**Industrial (Non-Food) Uses of Soybeans.** Look under “Industrial Uses ...” for more 17 subject headings.

**Pioneers - Individuals:** Laszlo Berczeller, Henry Ford, Friedrich Haberlandt, A.A. Horvath, Englebert Kaempfer, Mildred Lager, William Morse, etc. **Soy-Related Movements:** Soyfoods Movement, Vegetarianism, Health and Dietary Reform Movements (esp. 1830-1930s), Health Foods Movement (1920s-1960s), Animal Welfare/ Rights. These are indexed under the person’s last name or movement name.

**Nutrition:** All subjects related to soybean nutrition (protein quality, minerals, antinutritional factors, etc.) are indexed under Nutrition, in one or more of 14 subcategories.

**Soybean Production:** All subjects related to growing, marketing, and trading soybeans are listed under Soybean Production. E.g. Soybean Production: Nitrogen Fixation, or Soybean Production: Plant Protection, or Soybean Production: Variety Development.

**Other Special Index Headings:** Browsing through the subject index will show you many more interesting subject headings, such as Industry and Market Statistics, Information (incl. computers, databases, libraries), Standards, Bibliographies (works containing more than 50 references), and History (soy related).

**Commercial Soy Products:** All Soyinfo Center sourcebooks that focus on a specific soyfood (tofu, soymilk, tempeh, miso, etc.) or geographical area (Africa, Japan) contain extensive information about every known commercial soyfood product - a unique feature. We list the product name, manufacturer's name, address, and phone number, year and month of introduction, ingredients, weight-packaging-price, how stored, nutritional analysis, and documentation on sources of additional information on that product.

**SoyaScan Notes:** This is a term we have created exclusively for use with this database. A SoyaScan Notes Interview contains all the important material in short interviews conducted and transcribed by William Shurtleff. This material has not been published in any other source. Longer interviews are designated as such, and listed as unpublished manuscripts. A transcript of each can be ordered from Soyinfo Center Library. A SoyaScan Notes Summary is a summary by William Shurtleff of existing information on one subject.

"Note:" When this term is used in a record's summary, it indicates that the information which follows it has been added by the producer of this database.

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2. An asterisk after eng (eng\*) means that Soyinfo Center has done a partial or complete translation into English of that document.
3. An asterisk in a listing of the number of references [23\* ref] means that most of these references are **not** about soybeans or soyfoods.

**Documents Owned by Soyinfo Center.** Lack of an \* at the end of a reference indicates that the Soyinfo Center Library owns all or part of that document. We own roughly three fourths of the documents listed. Photocopies of hard-to-find documents or those without copyright protection can be ordered for a fee. Please contact us for details.

**Document Types:** The SoyaScan database contains 51 different types of documents, both published (books, journal articles, patents, annual reports, theses, catalogs, news releases, videos, etc.) and unpublished (interviews, unpublished manuscripts, letters, summaries, etc.).

**Customized Database Searches:** This book was printed from SoyaScan, a large computerized database produced by the Soyinfo Center. Customized/ personalized reports are "The Perfect Book," containing exactly the information you need on any subject you can define, and they are now just a phone call away. For example: Current statistics on tofu and soymilk production and sales in England, France, and Germany. Or soybean varietal development and genetic research in Third World countries before 1970. Or details on all tofu cheesecakes and dressings ever made. You name it, we've got it. For fast results, call us now!

**BIBLIO:** The software program used to produce this book and the SoyaScan database, and to computerize the Soyinfo Center Library is named BIBLIO. Based on Advanced Revelation, it was developed by Soyinfo Center, Tony Cooper and John Ladd.

**History of Soybeans and Soyfoods:** This book has a corresponding chapter in our forthcoming scholarly work titled History of Soybeans and Soyfoods (4 volumes). Manuscript chapters from that book are now available on our website, [www.soyinfocenter.com](http://www.soyinfocenter.com).

**About the Soyinfo Center.** An overview of our publications, computerized databases, services, and history is given on our website.

**Soyinfo Center**  
**P.O. Box 234,**  
**Lafayette, CA 94549 USA**  
**Phone: 925-283-2991      Fax: 925-283-9091**

SOYINFO CENTER

# HISTORY OF COOPERATIVE SOYBEAN PROCESSING IN THE UNITED STATES

1. Minnesota Cooperative Creameries Association founded. Renamed Land O'Lakes in 1926. (Early event). 1921.

• **Summary:** On 7 June 1921, representatives from 320 Minnesota cooperative creameries met in St. Paul to establish the Minnesota Cooperative Creameries Association. Its goal: To help the creameries increase the price that they receive for butter by improving quality and by strengthening the creameries' marketing efforts.

In 1924 a contest was held to find a name for the new, sweet-cream butter being marketed by the Association; "Land O'Lakes" was selected as the winning name.

In 1926 the popularity and relative brevity of the Land O'Lakes name prompted the Association to change its name to Land O'Lakes Creameries, Inc.

2. McGuire, A.J. 1921. Re: Dues and membership. Letter to Secretary, Henning Co-op. Creamery, Henning, Minnesota, Oct. 4. 1 p. Typed, with signature on letterhead.

• **Summary:** "We are pleased to tell you that 200 Co-operative Creameries have joined [the Minnesota Co-operative Creameries Association, Inc.] to date..." Note: This is the earliest document seen (Feb. 2008) concerning this organization, which was renamed Land O'Lakes in 1926. Address: Organization Manager, Minnesota Co-operative Creameries Assoc. Inc., Old Capitol Bldg., St. Paul, Minnesota. Phone: Cedar 4302.

3. Hackleman, J.C. 1922. Re: Soybean mills in Illinois. Letter to W.J. Morse, Forage Crop Investigations, USDA, Washington, DC, Nov. 18. 2 p. Typed, with signature on letterhead.

• **Summary:** Statistics for soybeans grown in Illinois, compiled by the farm adviser in each county, are significantly higher than those estimates reported by USDA's Bureau of Crops.

The soybean crushing plant at Monticello, Illinois, "is making progress but will not be ready to receive beans before the first of the year. A number of us went thru the plant very carefully. Those folks are very much in earnest and I believe will make their plant go across in fine shape. They are buying their first beans this week taking them in at \$1.25 per bushel. These are 'contract' beans as they are short on storage room.

"Staley [A.E. Staley Mfg. Co., Decatur, Illinois], Chicago Heights [Oil Co., Chicago Heights, Illinois], and East St. Louis [East St. Louis Cotton Oil Co., East St. Louis, Illinois] are all out after beans but the farmers are not selling much yet. They will probably begin about January 1.

"I shall see you December 4. I have my reservation at the Atlantic. If you go there, insist on being in the *New Portion* which is fireproof."

Note 3. This is the earliest document seen (March 2008) that mentions a soybean crushing plant at Monticello, Illinois. By early 1923 we learn that it was a cooperative (Monticello Co-operative Soybean Products Co., later also called Piatt County Soybean Cooperative Co.).

Location: National Archives, College Park, Maryland. Record group 54—Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup—Div. of Forage Crops and Diseases. Series—Correspondence with State Agric. Exp. Stations, 1899-1928. Box 11—Illinois. Folder #6—Illinois Exp. Station. Address: Crops Extension, Agric. Exp. Station, Urbana, Illinois.

4. **Product Name:** Soy Bean Oil, and Soy Bean Oil Meal.

**Manufacturer's Name:** Monticello Co-operative Soybean Products Co.

**Manufacturer's Address:** Monticello, Piatt County, Illinois.

**Date of Introduction:** 1923. January.

**Ingredients:** Soybeans.

**New Product—Documentation:** Gardner, Henry A. 1923. "Examination of commercial American soya bean oil." *Paint Manufacturers' Association of the U.S., Educational Bureau, Science Section, Circular*. No. 165. p. 117-18. Jan. "The following mills are now crushing the bean and selling the oil... Monticello Co-operative Soybean Products Co., Monticello, Illinois."

Bill, F.W. 1923. "Turning soy beans into money: Farmers of Piatt county, Illinois, build co-operative soy bean mill." *Wallaces' Farmer* 48(8):301. Feb. 23. "A group of farmers down in Piatt county, Illinois, have undertaken the task of promoting the soy bean to the second rank as a cash crop. They have organized a coöperative company and established a soy bean oil extracting plant at Monticello in order to provide the necessary competition in milling, to be sure that the market price of beans will be sufficient to promote the crop."

O'Brien, Harry R. 1923. "Soy-bean magic: It is shown in feedlots as well as in factories." *Country Gentleman* 88(13):4, 18. March 31. "But within the past year a number of mills for crushing soys alone have been projected. I visited Peru, Indiana, last summer, where one was being erected, and Monticello, Illinois, where a company was being organized to erect one."

*Orange Judd Farmer*. 1923. "Champaign County boosts



good soy bean seed in special tour.” 71(17):1. Sept. 1.

“‘Three events are coming which should be remembered by soy bean growers,’ announced J.C. Hackleman. ‘The new Monticello soy bean products plant opens for business September 5, and the next day, there will be our annual Soy Bean Day at Urbana,...’”

*Grain Dealers’ Journal*. 1929. “Monticello, Illinois.” Oct. 25. p. 550. Walter Flumerfelt has leased the Piatt County soybean mill.

Kishlar, Lamar. 1941. “Pacific coast mills first to crush soybeans in United States in 1910.” *Soybean Digest*. July. p. 11. “The following year [1923] the first solvent extraction plant for use on soybeans was built at Monticello, Illinois. It was 1929, however, before commercial production was started in the Monticello plant due to the fact that beans were not available at a price which was satisfactory...”

*Soybean Digest*. 1944. Expansion by General Mills. Feb. p. 18. Walter E. Flumerfelt, who joined General Mills, Inc. in July, 1943, “has been in the soybean business for about 15 years. He operated his own solvent extraction soybean processing plant—a batch arrangement—at Monticello, Illinois, starting in 1929. He was a director in the National Soybean Processing Association for eight years.”

Markley, Klare S.; Goss, Warren H. 1944. *Soybean Chemistry and Technology*. Brooklyn, New York: Chemical Publishing Co. vii + 261 p. See p. 139-40. This ill-fated undertaking, sometimes referred to as the Monticello Grain Company, was apparently unable to cope with the scarcity of soybeans and was in operation only for about 6 months during 1923-24.

5. Gardner, Henry A. 1923. Examination of commercial American soya bean oil. *Paint Manufacturers’ Association of the U.S., Educational Bureau, Scientific Section, Circular* No. 165. p. 117-18. Jan. [1 ref]

• **Summary:** “As a result of the efforts of the Educational Bureau (Footnote: See Circular No. 155 [Nemzek 1922]), soya oil has now become an important American crop product. The following mills are now crushing the [soy] bean and selling the oil, according to the Secretaries of the Cottonseed Crushers’ Associations: Chicago Heights Oil Co. (Chicago Heights, Illinois), Monticello Co-operative Soybean Products Co. (Monticello, Illinois), A.E. Staley Mfg. Co. (Decatur, Illinois), East St. Louis Cotton Oil Co. (East St. Louis, Illinois), Peru Products Co. (Peru, Indiana), Eastern Cotton Oil Co. (Elizabeth City, North Carolina), Havens Oil Co. (Washington, North Carolina).” Note 1. No additional information is given about any of the above companies.

A table gives an analysis of the two samples of American soya bean oil and compares them with the A.S.T.M. [American Society for Testing and Materials] Tentative Specification Requirements for 1922.

Note 2. This is the earliest document seen (March 2000)

stating that the following companies are actually crushing soya beans and selling the oil: Monticello Co-operative Soybean Products Co., East St. Louis Cotton Oil Co., Peru Products Co., and Eastern Cotton Oil Co. (North Carolina).

Note 3. This is the earliest document seen (March 2008) that mentions soybean crushing by a cooperative (Monticello Co-operative Soybean Products Co., later also called Piatt County Soybean Cooperative Co.).

6. Morse, W.J. 1923. Growing soy beans as a cash crop: Will it pay to produce soy beans for oil and meal in the corn belt? *Wallaces’ Farmer* 48(5):155, 161. Feb. 2.

• **Summary:** “The very large increase in acreage for [soybean] seed production the past two years—due principally to the high price of seed—has resulted in a surplus of seed for which a commercial outlet must be found. This has been particularly true in some corn belt states and in North Carolina.”

“One oil mill in Illinois the past season crushed about 10,000 bushels of 1921 corn belt grown soy beans and has purchased about 30,000 bushels of the 1922 crop. Several other mills in Illinois and Indiana have prepared to crush large quantities of the 1922 crop. In Piatt county, Illinois, soy bean growers, after careful investigation, concluded that a home plant could be handled with economy and profit. A soy bean cooperative company was organized with a capital stock of \$50,000, the stock being held almost entirely by growers in Piatt and adjacent counties. The solvent method of extraction has been installed, the capacity being about 150,000 bushels yearly.”

“The price of oil seeds is generally governed more or less by the price received for the oil, but with the soy bean, many are of the opinion that the cake or meal will be the governing factor in the purchase price of the beans... Cottonseed and linseed oil in reality determine oil prices in the edible and commercial fields, respectively... In paints, varnishes and linoleums, at the present linseed prices and supply, soy bean oil may be actually indispensable. Soy bean oil has nearly displaced linseed oil as a soft soap material, and with the use of hydrogenation process can serve in the manufacture of hard soaps, in which it now enters in equal quantities with linseed oil.”

“The largest quantities of soy bean oil are consumed in the manufacture of soaps, lard and butter substitutes, and paints. Other trade uses are in the manufacture of rubber substitutes, linoleum, waterproof liquids, enamels, salad oil, printing ink, and waterproof goods, such as cloth for umbrellas, etc.”

“The recent experiments with soy beans and soy bean meal at the Indiana and Ohio experiment stations seem to have established the fact that soy bean meal or soy beans with suitable mineral mixtures, were as effective as high-grade tankage or meat scraps in the feeding of hogs and poultry. The use of the meal as flour for human food has become an important factor in many European countries and

to an increasing extent in the United States as a food of low starch content.

"In Asiatic countries, the cake or meal is recognized as a most valuable fertilizing material, and as such is used extensively for sugar plantations, rice fields and for mulberry trees. It has been used to some extent in the United States by manufacturers of fertilizers."

A photo shows an ordinary binder, pulled by two horses, being used in harvesting soy beans.

Note: This is the earliest document seen (June 2005) that uses the terms "solvent" or "extraction" in connection with a soybean crushing plant in the USA—in this case at the cooperative plant at Monticello, Piatt County, Illinois. Thus, it is the earliest document seen stating that oil is being extracted commercially from soybeans in the USA using this new process. Address: Agronomist, USDA, Washington, DC.

7. Bill, F.W. 1923. Turning soy beans into money: Farmers of Piatt county, Illinois, build co-operative soy bean mill. *Wallaces' Farmer* 48(8):301. Feb. 23.

• **Summary:** "A group of farmers down in Piatt county, Illinois, have undertaken the task of promoting the soy bean to the second rank as a cash crop. They have organized a coöperative company and established a soy bean oil extracting plant at Monticello in order to provide the necessary competition in milling, to be sure that the market price of beans will be sufficient to promote the crop. And the farmers are not alone in the venture. Business men and bankers, some who have no farms of their own, have contributed to the capital stock of the mill.

"The movement has a double purpose. It is intended to forward the work of replacing an unprofitable crop, oats, by a profitable one. By reducing the oat acreage, and to an extent, that of corn, it is expected to help stimulate the price of those crops...

"The Piatt County Farm Bureau, with its adviser, J.W. Watson, originated the idea of having a mill. The acreage of beans in 1919 was not worth mentioning in the census report. There was only a small acreage in 1920. In 1921, 1,700 acres were planted in Piatt county and several surrounding counties also became interested. There were fully 12,000 acres in the county last year, and there would have been three times that many were it not for a shortage of seed."

Photos show: Exterior of the Piatt County Soy Bean Mill. Hulling soy beans near a barn at some unknown location.

Note: This is the earliest document seen (March 2008) that mentions the "Piatt County Soy Bean Mill."

8. O'Brien, Harry R. 1923. Soy-bean magic: It is shown in feedlots as well as in factories. *Country Gentleman* 88(13):4, 18. March 31.

• **Summary:** Describes the results obtained by feeding a soy-and-mineral ration in a pasture to hogs, cows, poultry and

horses. The idea was conceived in 1920 by three faculty men at Purdue University (W.A. Ostrander—extension farm crops specialist, S.D. Conner—chemist, and C.M. Vestal—dep. of animal husbandry). "Soy bean products are being used commercially to make salted peanuts and peanut brittle, meat substitutes, cheap coffee, synthetic milk, margarine, axle grease and other lubricants, chocolate, sardine packing oil, lard substitutes, soap, linoleum, artificial suet, foundry casting-cores, printer's ink, vegetable cheese, toilet powder, fertilizer, high explosives, rubber substitutes, waterproof cloth, and salad oil. The Chinaman makes an oil to use in lamps as a kerosene substitute.

"The use of soy-bean products commercially is just in its infancy in this country, hitherto the two most important uses being paint and soap. Most of the oil used has been imported from the Orient... Since 1912, when oil was first produced commercially in the United States from home-grown soy beans, the oil has been produced by the flaxseed crushing mills. But within the past year a number of mills for crushing soys alone have been projected. I visited Peru, Indiana, last summer, where one was being erected, and Monticello, Illinois, where a company was being organized to erect one.

"The past year there has been a big demand for soys from the paint companies who cannot get enough flaxseed."

Prof. W.E. Hanger, extension farm crops specialist at Ohio State University, says: "It is quite possible that before long, instead of feeding many beans, the farmer will sell his bean crop and buy back the soy-bean oil meal to feed... Last year there were somewhere between 40,000 and 50,000 acres of soy beans grown in Ohio, where in 1920 only about 7,000 acres were grown... and the acreage will doubtless be largely increased this year."

Photos show: (1) A man standing in a thriving "thirty-acre field of soy beans on the farm of Noah Fouts, Camden, Indiana. For two years previous this field has been in soy beans and corn and pastured with lambs. The present crop indicates there is nothing wrong with the system." (2) A man driving a tractor "harvesting and hulling soys in one operation on the Homer Johnson farm in Sheridan, Indiana." Note: This looks like a primitive combine, which is pulled alongside the tractor. Address: Indiana.

9. Hackleman, J.C. 1923. Re: Processing of soybeans by oil mills in Illinois. Greatly increased interest in soybeans in Illinois. Letter to W.J. Morse, Bureau of Plant Industry, USDA, Washington, DC, April 23. 2 p. Typed, with signature on letterhead.

• **Summary:** On April 14 Morse wrote Hackleman asking "to what extent the oil mills in Illinois entered upon the crushing of domestic grown soybeans the past season."

Hackleman replies: "Soybean oil mills have not had enough beans this year to supply the demand. I was in Staley's plant last week and they are shut down so far as soybean oil is concerned. They told us that they secured

several carloads of beans in the state, but the seed demand soon became so great that prices were soon beyond the commercial market and they have not attempted to operate the factory recently. The same thing is true of the Chicago Heights plant. The Monticello plant is just about ready to open.

"They have been moving very cautiously with their plant, watching the Peru plant and following their suggestions—profiting by their mistakes. These people have several thousand of bushels of beans stored, ready for use as soon as the factory is ready to operate.

"The East St. Louis Company I believe, did not succeed in finding enough beans to start on soys. They felt it unwise to do anything on this crop unless they could get several thousands of bushels and that seemed impossible.

"We are seeing a very heavy demand for soybeans seed now—beans that were welling at \$1.00 per bushel in October are now bringing from \$2.50 to \$3.25 per bushel. Present prospects are that we will have a considerably greater acreage of beans than we had last year. If the chinch bug menace becomes more serious, even the present indicated increase is likely to be materially enlarged, provided seed can be found in the United States.

"I was talking with Mr. Sommer of Pekin, who told me that in the last three days he had orders for two hundred bushels of soybean seed, all of which was requested in small lots, from two or three to five or ten bushels. Note: O.J. Sommer, a seed dealer, was also president of the Illinois Crop Improvement Association in 1923.

"This of course means a great interest in the crop. We are planning on putting out more soybean demonstrations this year than we have ever had—not because we feel that the crop is not appreciated, but to acquaint people with the better varieties. Incidentally we are getting demonstrations started in six or eight counties where soybeans have practically remained an unknown quantity."

Location: National Archives, College Park, Maryland. Record group 54—Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup—Div. of Forage Crops and Diseases. Series—Correspondence with State Agric. Exp. Stations, 1899-1928. Box 11—Illinois. Folder #7—Illinois Exp. Station. Address: Crops Extension, Agric. Exp. Station, Urbana, Illinois.

10. Hackleman, J.C. 1923. Re: Soybean variety demonstration in 27 counties. Morse's upcoming visit. Letter to W.J. Morse, Bureau of Plant Industry, USDA, Washington, DC, July 9. 2 p. Typed, with signature on letterhead.

• **Summary:** "Dear Professor Morse:... We have 27 county soy bean variety demonstrations this year, and I should like very much for you to spend some time with us in this State... Perhaps, September would be better, since the Corn Belt Soy Bean Meeting has been advanced to September 11th."

Hackleman and the people at the new soy bean mill at

Monticello hope that Morse can visit Piatt County for a meeting. "They propose to invite the leading soy bean growers from Piatt, Champaign, Macon and DeWitt counties—make it an invitational affair—and they expect to put on a real entertainment for us. Last year they put on one of the finest 'feeds' I ever had the pleasure of attending. They had about eight or ten from the College here out to their meeting, and I think it was voted a 'howling success'. Mr. Watson, the farm adviser, has asked us to set the date and outline the program.

"They are primarily interested in getting information regarding harvesting and handling the soy bean seed crop. I thought of having Professor Lehmann, who is chairman of a special committee on this subject, appointed by the American Society of Agricultural Engineers, to give us a report of his findings; to have you give us your observations on the machine that are in operation in the east; and then to have someone give us a rather detailed statement of the experiences of corn belt farmers who are harvesting beans with special harvesters. I think these talks, if supplemented with a large number of pictures, would be very interesting indeed."

Morse replies on July 12: "It would surely be a great pleasure to be in Piatt County for the meeting, I am very anxious indeed to look over that mill and hear the results that they have obtained. It may interest you to know that the International Vegetable Oil Co. is erecting a new solvent process mill at Norfolk [Virginia], and I understand this mill will be in operation for soybean about the middle of November."

Note: As of Sept. 2005, we can find no subsequent records that mention the International Vegetable Oil Co. However, in 1924, the Eastern Cotton Oil Co. began solvent extraction of soybeans at Norfolk, Virginia.

Location: National Archives, College Park, Maryland. Record group 54—Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup—Div. of Forage Crops and Diseases. Series—Correspondence with State Agric. Exp. Stations, 1899-1928. Box 11—Illinois. Folder #7—Illinois Exp. Station. Address: Crops Extension, Agric. Exp. Station, Urbana, Illinois.

11. *Orange Judd Farmer*. 1923. Farmers crushing their own beans: New kind of cooperative in Piatt County getting under way. 71(14):375. July 15.

• **Summary:** "A new kind of cooperative association for Illinois farming is getting ready for its grand opening early in August. This association, known as the Piatt County Cooperative Soy Bean Company, has just completed the building of an up-to-date, thirty-five thousand dollar crushing plant near Monticello, Illinois, and expects to handle a good share of the bumper soy bean crop which Central Illinois is now grooming for the late summer market..."

"They have built a fair sized plant, with a power house



adjoining, near the Monticello farmers' elevator. Some specially designed equipment has been installed, and according to I.N. Biebinger, manager, every bit of the work was done by farmers."

The oil is extracted from the flakes using a solvent, benzol. The "solvent process" for extracting the oil is new in America. It "has not been tried for soy beans in this country since the war, as it was too expensive. However, it is considered much better than others now, and gets all but 2.8 to 4 percent of the oil from the beans. Recently a series of four batches were run through the plant, some soys and some cotton seed, to test out the equipment, and to determine how far to try to extract the oil and still make it profitable. The benzol is highly inflammable... They estimate that the plant will have a daily output of about 300 bushels."

"With Piatt having about 10,000 acres for seed, Champaign County about 50,000 acres, and Macon, Moultrie, Douglas and DeWitt counties all heavy producers, the plant has a favorable supply of raw product within easy reach."

"Of the stock which has been sold in the company, no one person controls more than 5 shares at \$100 per share. Anyone could buy stocks, and a large number of business men have added to the farmer capital, to help the thing along. The officers and executive committeemen are: F.V. Dilatush, president; J.W. Watson, secretary-treasurer; J.P. Kratz; Frank Mailinder, and I.N. Biebinger, manager. The company was incorporated under the Illinois cooperative marketing law of 1921, and capitalized at \$50,000. \$35,000 worth of stock have been sold since the men started out last year on the project."

The plant has its own water supply. They dug a big underground reservoir to hold water from a nearby spring. Biebinger notes that they did all of the work themselves, "which shows you just how much of a farmers' company this really is. There aren't any plants in this country using the solvent process like ours, but over in Europe, they have been using it right along since the war, and the extra oil they extract pays for the cost of hauling the beans."

A photo shows the exterior of the "new Piatt County Co-op soy bean crushing plant at Monticello."

Note 1. This is the earliest document seen (March 2008) in which "Piatt County Cooperative Soy Bean Company" is given as the name of this firm. Previously it has been called the "Monticello Co-operative Soybean Products Co."

Note 2. This is the earliest English-language document seen (June 2005) that uses the word "benzol" to refer to a type of solvent used to extract the oil from soybeans in the USA.

Note 3. This is the earliest document seen (June 2000) that uses the word "elevator" (or "elevators") in connection with soy beans in the United States. Address: Illinois.

12. Hackleman, J.C. 1923. Re: Speakers and program for

meeting at Monticello, Illinois. Letter to W.J. Morse, Forage-Crop Investigations, Bureau of Plant Industry, USDA, Washington, DC, July 17. 2 p. Typed, with signature on letterhead.

• **Summary:** "My dear Mr. Morse: We have about decided that the best time for you to visit Illinois will be the first week in September." They would travel the first four days (Sunday to Wed.), then conclude the week "with a meeting in Monticello the afternoon and evening of the 5th, and on the South Farm, here at the University, all day September 6th, thus making September 6th Illinois Soy Bean Day. Friday and Saturday have not yet been arranged for..." Then they will drive to Wisconsin, visiting two or more soy bean plots as they go north.

The people at the Monticello plant are "anxious that this meeting be a most valuable one, from the standpoint of the future of the soy bean in Illinois. They are going to discuss almost solely the handling of the seed crop. The following are the suggested speakers for this meeting:

"W.J. Morse—'Soy Bean Harvesters in the United States.'

"E.W. Lehmann—'Summary of a Questionnaire Sent 5,000 Soy Bean Growers in the Corn Belt.

"Carl Walker—'My Experience with a Soy Bean Harvester.'

"We were wondering if it would be possible for you to get Mr. Clapp, who, I believe, has built a special soy bean harvester, to come with you on your western trip, taking in the soy bean work in Illinois and going on to Wisconsin... At this same meeting they will have at least one administrative officer, preferably a member of the board of directors, or one of the chief men in the Research Department of the International Harvester Company, the John Deere Mfg. Company, the Avery Mfg. Company, and perhaps other manufacturing companies who might be interested in this problem."

"Professor Piper tells me you are going to furnish me some suggestions for a talk that he wants me to make before the American Society of Agronomy, in Chicago, in November. I will be glad to have all the help you can give me."

Location: National Archives, College Park, Maryland. Record group 54—Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup—Div. of Forage Crops and Diseases. Series—Correspondence with State Agric. Exp. Stations, 1899-1928. Box 11—Illinois. Folder #7—Illinois Exp. Station. Address: Crops Extension, Agric. Exp. Station, Urbana, Illinois.

13. *Orange Judd Farmer*. 1923. Champaign County boosts good soy bean seed in special tour. 71(17):1. Sept. 1.

• **Summary:** Champaign County, Illinois, now grows more soy beans than in almost any other county of its size in the Corn Belt. About 150 people took a tour of important soy bean farms and "listened to some interesting talks on the development of this new and popular legume. The morning was spent at the farm of John T. Smith, near Tolono. Mr.

Smith began growing soys for seed in 1910, and with C.F. Meharry, where the afternoon meeting was held, was a pioneer in the soy bean movement in central Illinois. There are 500 acres of about 99.9 percent pure seed around Tolono, and all of it is certified Manchu variety, which these men believe is best for corn belt farms. The best results on the Meharry farm, managed by W.E. Riegel, have been secured with a rotation of corn (soy beans in the corn), soy beans, wheat and sweet clover...

"Several good talks were made on the tour by Prof. J.C. Hackleman, of the University of Illinois; O.J. Sommer, president of the Illinois Crop Improvement Association; C.H. Oathout, former advisor in Champaign County...

"Three events are coming which should be remembered by soy bean growers," announced J.C. Hackleman. "The new Monticello soy bean products plant opens for business September 5, and the next day, there will be our annual Soy Bean Day at Urbana, with reports on experiments and a chance to see all varieties growing on the University farm. Then September 11, a National Soy Bean Day will be held at Madison, Wisconsin, and all states are in on that program."

Note: This is the earliest document seen (Oct. 1999) that refers to a soy bean "movement" in the United States.

14. *SoyaScan Notes*. 1923. Early history of soybean crushing, including solvent extraction, in the USA (Overview). Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** The first documented crushing of soybeans in the USA to obtain oil and meal took place in 1911 (probably not in 1910 as some accounts say) at Seattle, Washington. The soybeans were imported from Manchuria by the Albers Brothers Milling Co. and sold to Herman Meyer, who operated a small hydraulic press in Seattle. His establishment was later named Pacific Oil Mills.

The second U.S. crusher, and the first to crush American-grown soybeans, was the Elizabeth City Oil and Fertilizer Co. in Elizabeth City, North Carolina; ordinarily a cotton-seed crusher, they began crushing soybeans on 15 Dec. 1915. At that time, North Carolina was America's leading soybean producing state. By 1916 seven cottonseed mills in North Carolina were crushing soybeans.

Soybeans grown in the Corn Belt were first crushed for oil and meal in 1919 (probably not in 1917 or 1918 as one account says) by the Chicago Heights Oil Manufacturing Co. in Chicago Heights, Illinois (located just south of Chicago). The plant, operated by George Brett and I. Clark Bradley, primarily crushed linseed for oil, but it also crushed soybeans, corn germ and mustard seed. For the first few years the soybeans were crushed using screw presses (expellers) which were generally used for crushing corn germs, but by 1922 they were using hydraulic presses. In Aug. 1923 the company went out of business for lack of soybeans. In 1924 Funk Bros. Seed Co. of Bloomington, Illinois, bought the Chicago Heights plant (Eisenschiml 1929, *American Paint*

*Journal*. March 18. p. 22-30; *Soybean Digest*, Sept. 1944, p. 18-19 and May 1945, p. 15).

The A.E. Staley Manufacturing Co. in Decatur, Illinois, first began crushing soybeans on 30 Sept. 1922. Staley was the first company to construct a plant solely for the purpose of crushing soybeans, the first to crush only soybeans in a U.S. plant, and the first to crush only domestically-grown soybeans in a U.S. plant. Staley was also the only one of the early U.S. soybean crushers that survived under the same ownership for more than several years. Although Staley operated at a loss from 1922 to 1924 due to a shortage of soybeans, in 1925 an upswing began and from that year until 1957 Staley was America's leading soybean crusher (Forrestal 1982, p. 60-66).

In Aug. 1923 the Piatt County Cooperative Soy Bean Company (soon renamed the Monticello Co-operative Soybean Products Co.) in Monticello, Illinois became the first company in the U.S. to process soybeans using solvent extraction. The plant was scheduled to open for business on 5 Sept. 1923. They used a batch extraction process with benzol as a solvent. The plant was shut down in about 1924-26 (*Orange Judd Farmer*. 1923. July 15, p. 375; *Journal of the American Oil Chemists' Society*. 1977. March. p. 202A).

The first continuous solvent extraction of soybeans was done by the Eastern Cotton Oil Co. in Norfolk, Virginia, starting in 1924, and using a Bollmann extractor imported from Germany. The plant closed in 1925, being unprofitable (W.H. Goss. 1941. *Chemical and Metallurgical Engineering*. April. p. 80; *Journal of the American Oil Chemists' Society*. 1977. March. p. 202A). As early as 1926 the William O. Goodrich Company (acquired by the Archer-Daniels-Midland Co. [ADM] in 1928) had been experimenting with solvent extraction of soybean and other vegetable seeds using a Scott batch extraction system.

In 1933 Robert Boyer and coworkers at the Ford Motor Company developed the Ford Extractor using hexane as a solvent. By 1934 it processed 6 tons of soybeans a day using a screw inside of a metal tube. It was probably the first to use hexane as a solvent. They had a working extractor in Ford's Industrialized Barn at the 1934 World's Fair in Chicago.

ADM and The Glidden Co. initiated large-scale solvent extraction of soybeans in the USA in 1934. ADM purchased from Germany a 150-ton-per day capacity Hildebrandt continuous-flow, counter-current (U-tube) hexane solvent extractor. It began operation in March 1934 on Blackhawk Street in Chicago. It was America's first successful continuous solvent extractor; at the time it was also America's largest and most modern soybean crushing system, and the first to use hexane as a solvent with soybeans. The Glidden Co. purchased an identical solvent extraction plant from Germany and also installed it in Chicago. It began operation in about Nov. 1934. In 1937 Central Soya purchased from Germany an even larger continuous solvent unit, a 275-ton-

per-day capacity Hansa Muehle extractor, which began operation in November 1937 at Decatur, Indiana.

15. Gardner, Henry A. 1923. Examination of commercial American soya bean oil. *Institute of Paint and Varnish Research, Educational Bureau, Scientific Section, Proceedings*. p. 117-18. For the year 1923. [1 ref]

• **Summary:** This is a reprint of Circular 165 by the same author with the same title published in Jan. 1923 by the *Paint Manufacturers' Association of the U.S., Educational Bureau, Science Section* (p. 117-18). Address: Philadelphia, Pennsylvania.

16. Eisenschiml, Otto. 1929. History and prospects of domestic soya bean oil. *American Paint Journal* 13(22):22, 24, 26, 28, 30. March 18. [2 ref]

• **Summary:** Soya beans were first brought to America in 1804 and "were grown as a curiosity until 1880, when commercial crops began to appear here and there. In 1914 only 2,000 acres were planted in beans in the state of Illinois, but by 1927, this acreage had increased to 776,000. In the entire United States 50,000 acres were planted in 1917, 2,500,000 in 1924, and the acreage for 1928 was 2,847,000. Figuring an average yield of 18 bushels to the acre, it can readily be seen that the soya bean crop is fighting its way through to the smaller major crops of our country with a rapid stride."

"North Carolina led the way and produced a small amount of [soya] oil in 1916 and intermittently from then on. The first oil mill was produced in a cotton oil mill with the existing machinery and during a time when the mill otherwise would have been idle.

"Pioneers of the industry: So far as I have been able to ascertain, the first soya bean oil made outside of North Carolina was made at Chicago Heights, Illinois, in 1920 by the Chicago Heights Oil Manufacturing Company. An Anderson expeller was used, and I bought and sold the first 20 barrels made. In 1922 oil was made by the A.E. Staley Manufacturing Company, of Decatur, Illinois. At that time only one expeller was installed by this concern, but two more were installed shortly afterwards and 90,000 bushels of beans were crushed. The capacity of this mill today is over a million bushels per year. Mr. A.E. Staley, a North Carolinian by birth, is taking an active interest in all developments pertaining to soya beans. In 1923 the Blish Milling Company, of Seymour and Crothersville, Indiana, also began to crush soya beans, and their production rose to 317,000 pounds in the season 1927-28.

"In 1924 Funk Brothers, of Bloomington, Illinois, joined the ranks of these pioneers, engaging the services of I.C. Bradley, of the Chicago Heights Oil Mfg. Co., and one of the greatest living authorities on soya beans and their allied lines. Mr. Bradley today has under his supervision mills that will crush in the season of 1928-29 a probable total of

700,000 gallons. This compares with a total of 20,000 gallons made by him in Chicago Heights in 1921.

"The total domestic production of oil was too small to be tabulated by the Bureau of the Census in Washington until the year 1922, when the production was given as 751,000 pounds. Since that time it has risen in 1928 to 4,716,000 pounds as may be seen from the following table: 1922-751,000 pounds. 1923-1,404,000 pounds. 1924-950,000 pounds. 1925-2,520,000 pounds. 1926-2,645,000 pounds. 1927-3,088,000 pounds. 1928-4,716,000 pounds (estimate).

"The greatest handicap the soya bean oil industry has had to combat has been the scarcity of mill beans. Only one or two mills have ever been able to run the year through. The farmers would either feed the beans to live stock or else they would hold them for seed purposes so that the mills could not work continuously and therefore economically. Last year Funk Brothers, in connection with the American Milling Company, at Peoria, offered the farmers a base price of \$1.35 a bushel for a quantity up to a million bushels received for crushing purposes, and thereby seem to have stabilized their source of supply.

"At the present time new mills for the crushing of beans are springing up everywhere and others are planned in various localities. Soya beans are now being grown in practically all states east of the Mississippi, and the erection of oil mills appears quite a logical sequence, especially in the South where existing facilities could be utilized to good advantage."

In crushing soya beans, "some producers are using expellers; others are using hydraulic presses. One mill, at Monticello, Illinois, used an extraction plant, but apparently not with good success. The solvent used was benzol, and difficulties were encountered in removing the last traces of solvent from the meal."

A table shows imports of Manchurian soya bean oil from 1918 (335.98 million lb) to 1928 (13.12 million lb), and exports of soya bean oil from the USA during the same period. "A 2½ cents per pound duty on foreign soya bean oil has been in effect since 1922 which makes it impossible for it to compete with domestic products of a similar nature except in localities where the freight rate offsets the duty, principally on the Pacific Coast."

"Soya bean oil can be used in unlimited quantities for soap making purposes; it can also be used as an edible oil, but is not particularly well adapted for that purpose." Other uses are those in the paint and varnish industry, in which field soya bean oil has a well-defined place.

Note: This paper was read before the Northwest Paint & Varnish Production Club, Minneapolis, Minnesota, on 11 March 1929. A portrait photo shows Otto Eisenschiml. Address: President, Scientific Oil Compounding Co., Chicago, Illinois.

17. Christensen, Chris L. 1929. Farmers' cooperative



associations in the United States, 1929. *USDA Circular* No. 94. 66 p. Aug. See p. 23-27.

• **Summary:** Discusses: Cooperative marketing of grain. The local farmers' elevator movement (Started from late 1860s to 1880; revival of activity and success from 1880-1904). Cooperative line elevators (p. 23-25). Soy is not mentioned.

During 1880-1904, the second period of farmers'-elevator activity, the Farmers' Alliance, a new economic organization formed in 1885, was largely responsible for the revival of interest in grain-marketing reforms. "New interest was aroused in the organization of farmers' elevator companies. In Iowa alone, 52 companies were formed between 1885 and 1903, and in Minnesota 34 companies were operating in 1900."

"The [USDA] Division of Cooperative Marketing has at this time (July 1, 1929) records and reports of 3,571 farmers'-elevator associations which are active and operating. It is estimated... that there are now approximately 4,000 farmers'-elevator associations operating in the United States. (Fig. 5; map of USA showing locations of these associations). The number of stockholders of farmers' elevators is estimated by the department to be about 450,000 and the number of patrons about 900,000." Address: Formerly Principal Agricultural Economist, Div. of Cooperative Marketing, Bureau of Agricultural Economics, now Secretary, Federal Farm Board.

18. *Grain Dealers' Journal*. 1929. Monticello, Illinois [Walter Flumerfelt leases Piatt County soybean mill]. 63(8):550. Oct. 25.

• **Summary:** "The soy bean mill built in 1922 by a group of Piatt county farmers thru a corporation they organized has been leased to Walter Flumerfelt, Des Moines, Iowa, who has reconditioned the plant after its 4 years of idleness. It is estimated that there are 12,000 acres of beans in the county and only 2,000 acres under contract. The mill is located near the Farmers Elevator and the beans are received at the elevator and sent thru a conveyor to the mill. The mill has a capacity of 300 bushels per day."

19. Holman, Reuben Augustus. 1932. Forty years of co-operation: A history of the first successful co-operative grain elevator in the United States. Rockwell, Iowa: Rockwell Farmers' Elevator Office. 4 + 61 p. Illust. 23 cm.

• **Summary:** The Incorporated Co-operative Farmers' Society of Rockwell, Iowa, was founded on 2 March 1889. This history covers the period from the founding until 2 March 1929. Soy is not mentioned. Reuben A. Holman was born in 1867. Address: Rockwell, Iowa.

20. Bumstead, Charles M.; Tippet, Darrell J. 1937. Centennial history: Monticello, Illinois, July 4, 1837-July 4, 1937. Monticello, Illinois. 64 p. See p. 54-55. No index. Illust. (incl. ports). 37 cm.

• **Summary:** This "book" consists of large (14.5 inches tall), laminated, spiral bound pages. On page 55 we read: "Soybean Co-operative Company: By 1922 soybeans were taking an important place in the rotation on Piatt County farms. As is all other enterprises, production had been the first thought, but soon the marketing end came in for due consideration. In this behalf, the Piatt County Soy Bean Co-operative Company was organized. The object was to supply a local market for beans through building a processing plant. Stock was practically all owned by farmers. A small photo of the plant appears on p. 54."

Note: Talk with Lynn Richardson at Allerton Public Library in Monticello, Illinois. She worked for VioBin for several years. The old mill is gone. Only the VioBin buildings now stand on that property. Address: Monticello, Illinois.

21. Photographs of the Ohio Valley Soy Bean Co-operative plant, under construction in Henderson Co., Kentucky. 1940. Henderson Co., Kentucky.

• **Summary:** Two black-and-white digital photos were sent to Soyinfo Center in March 2007 by Al Reisz, Jr., son of the key man in organizing and running this cooperative. These photos show the first cooperative soybean processing plant in the USA:



(1) The Co-op plant under construction. If you look closely, you can see railroad tracks in the foreground. The soybean meal was loaded from the warehouse at the right end of the plant onto rail cars. The oil extraction plant had not yet been constructed in this first photo. The company name and logo (the cardinal) can be seen in this photo.

(2) In this second photo, taken several months after the first, the oil extraction plant is visible.



22. Goss, W.H. 1941. Modern practice in solvent extraction. *Chemical and Metallurgical Engineering* 48(4):80-84. April.  
 • **Summary:** The American soybean processing industry uses hydrocarbons "to solvent-extract about 350,000 tons of beans per year, i.e., over 20% of its operations."

"Solvent extraction of soybeans, as we know it, did not originate in the U.S. Its reduction to practice occurred in the twenties and early thirties and was the natural result of the requirements of Germany and the Low Countries for supplies of edible oils and of protein feeds for their live-stock. In Europe, a soybean extraction industry evolved quite logically as a result of (1) the ability of the German trade program to make available plentiful supplies of Manchurian beans, (2) the necessity for recovering the utmost yield of oil in order to meet domestic deficiencies, and (3) the unique adaptability of soybeans to solvent extraction."

"As far back as the early twenties, efforts were made to solvent-extract soybeans in this country. A Bollman [Bollmann] type of extractor at Norfolk, Virginia [owned by the Eastern Cotton Oil Co.], ran local soybeans in 1924-1925 and attempted to process imported flaxseed, but the project was unsuccessful. Another Norfolk plant used Scott rotary extractors on a variety of oil-bearing seeds, including soybeans and copra, during the same period. About a year earlier, a batch solvent system at Monticello, Illinois, also failed. The first successful large-scale operations were those of the Archer-Daniels-Midland and the Glidden companies who installed Hildebrandt type extractors in Chicago during 1934 and 1935. The Glidden plant was destroyed by an explosion in 1935 but was immediately rebuilt with a doubled capacity."

"At present, there are 5 solvent systems used in large-scale soybean extraction in this country, 2 of them being of German and 3 of American origin. These are installed in 8 large (over 50 tons of beans per day) and 2 small plants. At least one other system is operated on a relatively small scale" (see table 2).

An extractor of the Allis-Chalmers type processes soybeans at Cedar Rapids, Iowa. Until recently, another processed soybeans at Evansville, Indiana (probably for American Soya Products Corp.).

"The enthusiasm which ran high in the early 1930's for the 'industrialized barn' type of soybean extractor has become more rationalized, and at least 2 technically satisfactory types of extractors have resulted. The Ford Motor Co. developed one consisting of an inclined tube housing an internal screw which conveys beans upward against a countercurrent solvent flow. It is now being used in one large and 2 small plants, all owned and operated by Ford.

"There has evolved, from work done by Iowa State College and by the R. & H. Chemicals Department of E.I. du Pont de Nemours & Co., an extraction system which, in simple terms, might be described as a Ford extractor running backwards. It is designed for solvents heavier than soybean

oil, specifically trichloroethylene; hence it operates with an upward flow of solvent and downward flow of soybeans in the main extraction tube. There are no commercial installations at present."

"Apparently there is only one commercial soybean extraction plant in the world using any solvent other than a petroleum cut. The exception is the Manchuria Soybean Industry Co., in Dairen. Here, the so-called hot alcohol process is used with a battery of rotary extractors to process approximately 100 tons of soybeans per day. The solvent is 99.8% ethanol... Considerable research has been directed toward the use of methanol-benzene and ethanol-benzene mixtures for soybean extraction in cases where phosphatide recovery is of importance. In the late 1920's, the plant of the Hansa-Muehle, A.G., at Hamburg operated for a short time using such mixtures."

Tables show: (1) Soybeans (tons and percentage of total) processed annually in USA by expeller, solvent, and hydraulic methods (1936-39; in 1939 the percentages were 74.2, 20.2, and 5.4 respectively). (2) Estimated total capacities of installations of the various types of continuous solvent extraction systems worldwide and in the USA (Basis: short tons of oilseeds or oilseed press cakes per 24 hours): Bollman (German): 3,100 / 750. Hildebrandt 2,200 / 430. Fauth (German): 800 / 0. Allis-Chalmers (American): 170 / 170. French (American) 130 / 130. Ford (American): 75 / 75.

Photos show: (1) Aerial view of Central Soya's huge processing plant at Decatur, Indiana. It uses both a Bollman extraction system and expellers. (2) Ford Motor Company's soybean mill at River Rouge plant (exterior view). (3) Two small soybean extractors in Ford's soybean mill at Saline, Michigan. (4) The huge soybean mill of Hansa-Muehle, A.G., Hamburg, Germany, using the Bollman system. (5) Hildebrandt extractor. (6) Experimental extractor built by the R. & H. Chemicals Department of E.I. duPont de Nemours & Co., Niagara Falls, New York. Address: U.S. Regional Soybean Industrial Products Lab., Urbana, Illinois.

23. *Gleaner and Journal (Henderson, Kentucky)*. 1941. Prep for start of bean mill: Demonstration work being done. May 14. p. 3. Morning edition.

• **Summary:** "In line with Henderson's new soybean industry the county agent and the University of Kentucky are cooperating with the soybean mill and farmers in conducting demonstrational work regarding the best adapted varieties of soybeans to this region and to the soybean industry. Last year fifteen varieties were tested out and five of these were eliminated on the first test due to their weakness and inadaptability features.

"This year the project work has been expanded to five Kentucky counties in the vicinity of the soybean mill, viz., Henderson, Daviess, Hancock, McLean and Union.

"The varieties to be tested this year will be Macoupin, US-5, US-2, the Mansoy, Scioto, Wood's Early Yellow, Illini,

Ogden, Delsta and Arksoy. These will be checked against one outstanding black variety of beans known as the Kingwa. This variety tests includes yield of beans and ability to stand up and hold in the pod [not shatter] in spite of bad weather until the combine can get to the field for harvest. They are, also, tested for oil content.”

“The purpose of this demonstration is to find out what varieties are most promising, as yellow beans for oil and soybean meal, the two important products made from the processing of soybeans in the new industry. The soybean meal [sic, mill] has just about completed construction since the last piece of machinery has been received and is being installed at the present time.

“Processing of beans should be well under way by the first of June... the first year’s full grinding will begin about September 1. This plant will process 400,000 bushels of beans from the crop which is now being seeded. Farmers in the tri-state area [Kentucky, Illinois, and Indiana] are very fortunate whether they be bean producers or livestock producers in the opportunity which the soybean mill offers them.”

“Bean farmers in planting their bean crop should lean on the information from the experiment station regarding varieties of yellow beans and plant mostly yellow beans for the soybean mill as they are more desirable than black beans.

Note: This is the earliest document seen (March 2008) concerning the Ohio Valley Soy Bean Co-operative of Henderson, Kentucky.

24. *Gleaner and Journal (Henderson, Kentucky)*. 1941. Soy bean plant’s formal opening is scheduled for Wednesday at 10 A.M. June 15. p. 3. Sunday.

• **Summary:** “The Ohio Valley Soy Bean Co-operative processing plant is due to formally open Wednesday, June 18. After many delays it is very gratifying to be able to announce the opening of this plant. It offers a real boom to agriculture in this community in supplying the farmers with an immediate dependable outlet for a large volume production of soy beans. The plant in operation is to have a capacity of approximately 500,000 bushels annually; and those planning this new industry have exercised far-sighted judgment in so designing the plant that capacities may be doubled very readily when production conditions justify this increase.

“Need for outlet cited: There are 364 farmer members of this co-operative, and it was through their combined strength and support that this plant was made possible. These growers having pledged to grow more than 15,000 acres of soy beans annually to support this new industry... the Louisville Bank for Co-operatives came to their support agreeing to lend 60% of the cost of the facilities and 50% of the cost of operating to this proposed processing plant.”

The organized movement to find a better market outlet for soy beans “commenced early in the year 1940. On April 5

there was a district meeting held in the Farm Bureau building, Henderson, which was attended by a large number of soy bean growers representing farmers of this area who voted unanimously to support this co-operative movement in endeavoring to establish the organization and erect the plant to furnish them a market for their soy beans.

“Required much work: After much work on the part of the leaders of the Farm Bureau of Henderson and surrounding counties in Kentucky and Indiana [just across the Ohio River to the north] and assistance furnished by the extension service, the organization was completed and incorporated August 30, 1940, under the Co-operative Marketing Act of Kentucky which is known as the Bingham Act.

“Special mention should be made of the untiring efforts of H.R. Jackson, county agent... also the untiring efforts of Charles B. Smith, one of the largest producers of soy beans in Henderson county who is now ably serving the organization as president. G.W. Allen gave considerable time and effort to the movement, and since Oct. 1940 has served actively as secretary-manager of the organization; and it has been under his supervision that the plant has been erected.” He has been ably assisted by Mr. L.C. Amiet, who used local labor.

“Many visitors expected: It has been reliably estimated that there are more than 100,000 acres of soy beans grown in this area. With the recent announcement that the United States Department of Agriculture expects to peg the price of soy beans at approximately \$1.00 per bushel on the farms, the industry should be even more attractive to the farmers of this region.

Many dignitaries are expected at the plant opening. “The soy bean certainly offers a wonderful future both to the farmer as a producer and to industry in its many and varied uses, according to Mr. Allen.”

A large photo shows the entire Ohio Valley Soy Bean Co-operative facility.

Note: This is the earliest document seen (July 2005) that gives the name “Ohio Valley Soy Bean Co-operative.”

25. Hudgions, Frank. 1941. Soy bean plant is started operating: Large crowd witnesses formal opening of new industry. *Gleaner and Journal (Henderson, Kentucky)*. June 19. p. 1, 6.

• **Summary:** “Henderson’s new \$60,000 processing plant of the Ohio Valley Soy Bean Cooperative took its seat on the production roster Wednesday when formal opening of the plant was held at 10 o’clock with a program being conducted by Charles Ball Smith, president of the Co-op, and G.W. Allen, general manager of the plant.

“Several hundred visitors poured through the plant during the morning and the general manager and president explained in detail how machinery on all three floors of the plant will work.

“Many visitors: Visitors were from Indiana, Illinois,



Kentucky, Ohio and Virginia, the registration book showed. Due to the illness of Ben E. Niles, president of the state and local Farm Bureau organizations, Mr. Smith opened the meeting and later turned the program over to County Agent Jackson.

Mr. Smith "declared that the soy bean plant is the realization of a strong Farm Bureau, cooperation of the big and little men and the splendid assistance of the Louisville Bank of Co-operatives." Dignitaries were then introduced, and short speeches given. "T.R. Bryant, from the College of Agriculture, University of Kentucky, Lexington, explained the soy bean as a defense crop" [in relation to the war in Europe].

"Shortly after 11 o'clock in the morning, President Smith, with Manager Allen and other dignitaries looking on, pressed the button that started conveyors dropping cracked beans into the tempering bins... The two bins have a capacity of 600 bushels of beans daily."

"Attracting considerable interest also were the reconditioned [used] storage elevators composed of 18 tanks and ten interstices with a total storage capacity of 200,000 bushels." A "frame and metal building was placed over them. A section of the concrete roof still remains too."

"Erected in the room on top of the storage elevators is the huge bean cleaner, capable of cleaning 3,000 bushels of beans daily. The processing capacity of the plant is in excess of 1,200 bushels a day—400,000 to 500,000 bushels annually."

"The cooperatives more than 300 members signed up 15,300 acres of soy beans for 1940 and 1941 at \$1 an acre, giving the organization \$30,600 of common stock already subscribed of a maximum of 40,000 shares at \$1 par value. Beans grown last year are now stored in the bins at the plant."

"Livestock feed: 'The soy bean serves the greatest number of useful purposes of any product of the soil and holds the greatest promise of agriculture of any plant,' says Mr. Allen, general manager and secretary of the plant."

"Farmers in this section first began to grow soy beans about 20 years ago. County Agent H.R. Jackson explains principally as feed for livestock and later for the sale of seed and for export to other neighborhoods. The plant is ideal for rotation with corn, of which Henderson county is a heavy producer, Jackson said. It is a legume and its root system stores nitrogen, thereby enriching the soil."

"Move started in Feb.: Also, several years ago, the farmers sensed the decline in returns from dark tobacco and began to lean more heavily on livestock. This trend created a demand for additional supplemental livestock feed. All these factors have contributed to the steady increase in soy bean acreage."

"Finally the need for a processing plant resulted in concrete action in February 1940 under the sponsorship of the Henderson County Farm Bureau of which Ben E. Niles is president."

"The first step was an educational trip by a group of

interested farmers and businessmen to Urbana, Illinois, where a government soybean laboratory [U.S. Regional Soybean Industrial Products Laboratory] is located.

"Interest increased rapidly after the trip and the co-op was formed under the Bingham Cooperative Marketing Act after a mass meeting has been held to determine whether an effort would be made to interest private capital in the plant or whether or whether the project should be set up under a co-operative association."

New building erected: A five acre tract on which stand 18 concrete elevators with a total storage capacity of 200,000 bushels was purchased. This was part of the plant of A. Waller and Company, grain dealers. The mill was destroyed by fire several years ago.

"Reconditioning of the elevators was completed and a metal building 40 x 30 feet has been built to house the two processing mills."

A brief biography of Mr. Allen is given. For the last 10 years he was "the agricultural agent for the Ohio Valley Trust company, directing operations of the farm properties under its management." The plant will have two presses and "will serve an area in Kentucky, Indiana and Illinois within a radius of 75 to 100 miles of Henderson."

Note: The members of this cooperative were farmers; by the 1950s, the members of most soybean processing cooperatives were cooperative grain elevators.

**26. Product Name:** Soy Bean Oil, and Soy Bean Oil Meal.

**Manufacturer's Name:** Ohio Valley Soy Bean Co-operative.

**Manufacturer's Address:** Henderson, Kentucky.

**Date of Introduction:** 1941. June.

**Ingredients:** Soybeans.

**New Product—Documentation:** Hudgions, Frank. 1941.

"Soy bean plant is started operating: Large crowd witnesses formal opening of new industry." *Gleaner and Journal* (Henderson, Kentucky). June 19. p. 1, 6. The plant started operating on 18 June 1941. In an article in this same newspaper on June 15, a photo of a large sign on the plant shows the name of the co-operative.

USDA Northern Regional Research Laboratory. 1943. "Soybean processing mills in the United States." *USDA Bureau of Agricultural and Industrial Chemistry*. AIC-26. 10 p. Nov. See p. 2. Henderson, Kentucky: "Ohio Valley Soy Bean Cooperative Association." (M = Medium capacity, between 50 and 200 tons/day of soybeans).

Vennes, L.A. 1955. "The Ohio Valley Soybean Cooperative." *Rural Kentuckian* 8(11):16-17, 20. Nov. Tells the story of the development of America's first soybean processing and marketing cooperative.

*Ohio Valley Soybean Cooperative News* (Henderson, Kentucky). 1955. This monthly serial/periodical began publication in July 1955 and continued until about June 1961.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 8-10. Cooperative activity with soybeans began when soybean producers (farmers) in western Kentucky and eastern Indiana formed the Ohio Valley Soybean Cooperative and built the first cooperative soybean plant at Henderson, Kentucky, in 1940-41. "This was an effort to increase bean prices, to encourage production by offering another market, and to have a source of high protein feed for livestock. During and immediately following World War II, it became almost impossible for soybean producers to obtain soybean meal either as meal or in the form of mixed feeds. To alleviate this situation, they built cooperative mills..." They had ceased to exist by 1970 (p. 10).

27. Kishlar, Lamar. 1941. Pacific coast mills first to crush soybeans in United States in 1910. *Soybean Digest*. July. p. 11.

• **Summary:** Gives a brief history of the soybean from its origins in China up to the present. "As early as 1910, imported Manchurian soybeans were first crushed by an oil mill on the Pacific Coast [in Seattle, Washington]. Soybean oil hardened by hydrogenation was used in shortenings as early as 1914... Soybean oil in margarine was first used in large quantities in 1916, although it had been used in a small way as early as 1912.

"In 1920 an Expeller was first used in processing soybean oil and meal from domestic seed at Chicago Heights, Illinois. In 1922 large scale production of soybean oil and meal was under way at Decatur, Illinois, using Expellers.

"The following year the first solvent extraction plant for use on soybeans was built at Monticello, Illinois. It was 1929, however, before commercial production was started in the Monticello plant due to the fact that beans were not available at a price which was satisfactory... In the Chicago Board of Trade, trading in soybeans is second only to wheat in volume." Address: Member, Soybean Nutritional Research Council.

28. *Eagle Grove Eagle (Iowa)*. 1943. Soybean processing plant may be located here: Machine shop at round house the location. Project will be owned and operated by cooperative societies in Wright and nearby counties. April 15. p. 1. Thursday.

• **Summary:** A big page-width banner headline. "As a result of a meeting at the City Hall Monday evening [April 12], plans are under way for a soybean processing plant to be owned and operated by Cooperative Elevator companies in this and adjoining counties.

"Companies represented at this meeting were Woolstock, Badger [probably Glenn Pogeler], Humboldt, Goldfield, Holmes, Dows, Clarion and Eagle Grove. Also present at this meeting were: D.C. Edison, secretary of the Farmers

Grain Dealers Association of Fort Dodge; W.H. Thompson, vice president and secretary of the Omaha Bank for Cooperatives [Nebraska], representatives of the C. and M.W. Railway company, Joe Richardson, president of the Golden State Bank and Trust company, and members of the local Chamber of Commerce.

"A temporary organization was formed with M.K. Frey of Eagle Grove as chairman and Victor Claude of Woolstock as secretary... It is expected that other companies will cooperate in this movement to make possible the processing of beans at the point of production and where there is production of livestock in sufficient quantities to utilize the meal to supply the protein required in a well balanced feed ration.

"Some consideration was given to the possibility of using the C. and N.W. Railway shop building, where there is ample room to install the necessary equipment and provide whatever storage may be required for beans and meal in the operation of such a plant."

The "War Production Board has indicated a willingness to grant priorities for the material needed." However an application must be submitted and their approval obtained.

Note: This is the earliest document seen (March 2008) concerning the Boone Valley Cooperative Processing Association (Eagle Grove, Iowa).

29. *Eagle Grove Eagle (Iowa)*. 1943. Second soybean meeting held. April 22. p. 1.

• **Summary:** "Representatives of the cooperative elevators in this locality who are interested in the location of a soybean processing plant in Eagle Grove met here again Tuesday evening... the men will take the matter up with their local boards of directors for action."

30. *Eagle Grove Eagle (Iowa)*. 1943. Soybean meeting here tonight. April 29. p. 1.

• **Summary:** "Representative of around 20 Cooperative Elevator companies are expected to attend a meeting here this evening. The proposition of a soybean plant in the former C. & N.W. machine shop building will be given further consideration at this time."

31. *Eagle Grove Eagle (Iowa)*. 1943. Soybean plant priority granted. June 17. p. 1.

• **Summary:** "M.K. Frey says he has received a certificate from War Production Board at Washington, D.C. granting priorities for machinery for soybean plant."

"If sufficient interest is shown and the required capital subscribed, a permanent organization will be formed and plans made to proceed with the work of equipping plant that same may be ready in time to handle the new crop."

32. *Eagle Grove Eagle (Iowa)*. 1943. Buy building and equipment for soybean mill: New plant to process this year's crop. Organization of cooperatives completed with Edward



Olson of Woolstock as president. June 24. p. 1.

• **Summary:** A big page-width banner headline. "The Eagle Grove Soybean mill will be in operation this fall. The plant machinery has been ordered. The plant will be located in the former Chicago & Northwestern machine shop building near the round house.

"The company gives the Soybean Processing Company a 99-year lease on the grounds and has already received payment in full for the building.

"The organization of the cooperative which will own and operate the mill was completed at a meeting in Eagle Grove last Thursday night [June 17]. The charter members of the group are 13 cooperative companies. Each company has paid a substantial membership fee and it is expected that" more companies will join.

"One reason Eagle Grove was selected as the location for the mill was that a suitable building was available at a nominal cost." The machine shop, erected in 1918, was purchased for only \$1,500. A list of the name and location of each of the 13 affiliated cooperatives is given, e.g. "Eagle Grove-Farmers Cooperative Co." The other 12 are located in Iowa at Woolstock, Badger, Iowa Falls, Fort Dodge, Humboldt, Gilmore City, Bradgate, Ottosen, Goldfield, Belmond, Whittemore, and Blanden.

"The new cooperative will be known as the 'Boone Valley Cooperative Processing Association' with the following officers in charge of its affairs.

"President, Edw. Olson, Manager, Farmers Cooperative Elevator Co., Woolstock; Vice President, M.K. Frey, President, Farmers Cooperative Co., Eagle Grove; Secretary-Treasurer, Glenn Pogeler, Manager, Farmers Elevator Co., Badger."

The plant will have the capacity to process 1,500 to 1,800 bushels/day of soybeans. "Last year Wright county farmers planted 40,000 acres to soy beans and the acreage is larger this year." The price last year was \$1.66/bushel and is expected to be about \$1.80/bushel this year.

Note: This is the earliest document seen (Sept. 2005) concerning Glenn H. Pogeler and soybeans.

33. *Eagle Grove Eagle (Iowa)*.1943. Soybean mill officers named (Photo caption). June 24. p. 1.

• **Summary:** Photos show (left to right): (1) Glenn Pogeler, Secretary-Treasurer. Manager, Farmers Elevator Co., Badger. (2) Edward Olson, President. Manager, Farmers Cooperative Elevator Co., Woolstock. (3) M.K. Frey, Vice President. President, Farmers Cooperative Co., Eagle Grove.

Note: Pogeler is by far the youngest of the 3 men.

34. *Eagle Grove Eagle (Iowa)*.1943. Merge Stratford-Eagle Grove soybean plants: 12 more ask to join local cooperative. Approval for their request expected to be granted at joint meeting here tomorrow night. July 1. p. 1.

• **Summary:** A big page-width banner headline. These 12

cooperative companies had planned to have a soybean processing plant to be located at Stratford, Iowa; now they have asked to merge with the company here. The 12 are located in Highview, Webster City, Stratford, Boxholm, Gowrie, Palm Grove, Ellsworth, Radcliffe, Garden City, Kamrar, Randall, and Stanhope. "A joint meeting of the two groups will be held here tomorrow (Friday) evening..." The Hobarton Cooperative Elevator Co. has also joined the original group, bringing the total actual and interested members to 26. The plant's first machine, a double roller mill, arrived Wednesday morning.

35. *Eagle Grove Eagle (Iowa)*.1943. Soybean processing plant building (Photo caption). July 1. p. 1.

• **Summary:** A large photo shows the Boone Valley soybean processing plant which, until a year ago, was used as a machine shop by the railroad. To its left is a towering smokestack, which alone cost about \$3,500 when the complex was built in 1918.

36. *Eagle Grove Eagle (Iowa)*.1943. Consolidation of soybean plants completed: Highview man is selected as vice-chairman. Details of merging Stratford-Eagle taken care of at meeting here Friday night. July 8. p. 1, 8.

• **Summary:** A big page-width banner headline. "Consolidation of the proposed Soybean mills for Stratford and Eagle Grove was effected at a joint meeting of the interested cooperatives held at Eagle Grove last Friday night" [July 2].

"Albert Koolhoff, manager of the Farmers Elevator at Highview, was elected vice chairman of the new cooperative which will be known as the 'Boone Valley Processing Association.'" He was formerly "president of the Stratford association. The association now has 26 members who have paid their initial assessment of \$1,000 or more." A list of the current members is given. Most are farmers' cooperatives and many farmers' cooperative elevator companies. The 26 cooperatives come from the following towns and cities: Highview, Webster City, Stratford, Boxholm, Gowrie, Palm Grove, Ellsworth, Radcliffe, Garden City, Kamrar, Randall, Stanhope, Woolstock, Badger, Iowa Falls, Fort Dodge, Humboldt, Gilmore City, Bradgate, Ottosen, Goldfield, Belmond, Whittemore, Blanden, Eagle Grove, and Hobarton.

37. *Eagle Grove Eagle (Iowa)*.1943. Manage soybean mill (Photo caption). July 15. p. 1.

• **Summary:** A photo shows Ed Olson, of Woolstock, dressed in a dark hat and two-piece suit. He was "named manager of the Boone Valley Soybean mill at a meeting of the directors at the Kenefick Hall in Eagle Grove Monday evening. Mr. Olson is manager of the Farmers Cooperative Company at Woolstock."

38. *Eagle Grove Eagle (Iowa)*.1943. Ed Olson buys MacNaughton home. July 29. p. 1.

• **Summary:** Last Friday he completed “the purchase of the residence on North Iowa avenue now occupied by the Merry MacNaughton family. Possession is given on Sept. 1.” He sold his home in Woolstock to the Woolstock Farmers Elevator company, which will keep the residence and lease it to its managers.

39. *Eagle Grove Eagle (Iowa)*. 1943. Soybean plant offices rented. Aug. 12. p. 1.

• **Summary:** Rooms formerly occupied by the ration board have been leased “as offices for the Soybean plant until quarters are provided nearer to the plant... Miss Lois Donaldson of Woolstock has been employed as Mr. Olson’s secretary.”

40. *Eagle Grove Eagle (Iowa)*. 1943. Soybean mill contracts have been let: Jesse Watson to build the scales and office building. Other firms get various parts of the work. Aug. 26. p. 1.

• **Summary:** The contracts are for a new roof, construction of a new office building and scales on the grounds near the present building, remodeling the present building and installing new machinery, doing the wiring and furnishing motors, power fixtures and other equipment. “All contracts carry a time limit and the plant is expected to be in operation this fall in time for processing this season’s crop.”

Victor Claude of Woolstock has been elected secretary in place of Glenn Pogeler, of Badger, who resigned. Mr. Pogeler goes to Manly where he is to manage the new [soybean processing] plant being built there.

41. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** West Bend Elevator Company.

**Manufacturer’s Address:** West Bend, Iowa.

**Date of Introduction:** 1943. August.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Mason City Globe-Gazette* (Mason City, Iowa). 1944. \$110,000 soybean plant at Manly prepares to open. Sept. 29? “There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and Eagle Grove.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 4. West Bend Elevator Company (West Bend, Iowa, 1943).

42. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmers Regional Cooperative (Fort Dodge, Iowa, Big 4 Division).

**Manufacturer’s Address:** Sheldon, Iowa.

**Date of Introduction:** 1943. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Mason City Globe-Gazette* (Mason City, Iowa). 1944. \$110,000 soybean plant at Manly prepares to open. Sept. 29? “There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and Eagle Grove.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 3. Farmers Regional Cooperative (Fort Dodge, Iowa, Big 4 Division). (Sheldon, Iowa, 1943). Footnote: Big 4 Cooperative Processing merged with Farmers Regional in 1967. In 1970 Farmers Regional merged with Land O’Lakes.

43. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmers Cooperative Elevator.

**Manufacturer’s Address:** Martelle, Iowa.

**Date of Introduction:** 1943. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Mason City Globe-Gazette* (Mason City, Iowa). 1944. “\$110,000 soybean plant at Manly prepares to open.” Sept. 29? “There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and Eagle Grove.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 “Cooperative soybean processing plants that had ceased operations as of 1970.” 4. Farmers Cooperative Elevator (Martelle, Iowa, 1943).

44. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmers Cooperative Association.

**Manufacturer’s Address:** Ralston, Iowa.

**Date of Introduction:** 1943. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Mason City Globe-Gazette* (Mason City, Iowa). 1944. “\$110,000 soybean plant at Manly prepares to open.” Sept. 29? “There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and Eagle Grove.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean

processing associations operating in 1970.” 5. Farmers Cooperative Association (Ralston, Iowa, 1944).

45. *Eagle Grove Eagle (Iowa)*. 1943. Soybean mill will be ready. Oct. 7. p. 1.

• **Summary:** “All machinery for the soybean mill has been ordered, the orders accepted and much of it has been received at the plant. The mill will be ready to process this year’s crop.”

46. **Product Name:** Soy Bean Oil, and Soy Bean Meal.

**Manufacturer’s Name:** Ford Motor Company.

**Manufacturer’s Address:** Dearborn, Michigan.

**Date of Introduction:** 1943. November.

**Ingredients:** Soybeans.

**New Product–Documentation:** USDA Northern Regional Research Laboratory. 1943. “Soybean processing mills in the United States.” *USDA Bureau of Agricultural and Industrial Chemistry*. AIC-26. 10 p. Nov. See p. 2. Dearborn, Michigan: “Ford Motor Company. Valley Soy Bean Cooperative Association.” (M = Medium capacity, between 50 and 200 tons/day of soybeans). Solvent extraction plant.

Note: In Sept. 1934 the Ford Motor Co. began crushing soybeans using solvent extraction at a small solvent extraction plant located in “The Industrialized American Barn,” on Ford property. It is not clear whether this is: (1) The same plant in the same place; (2) The same plant in a different place run by a cooperative; (3) A different plant in a different place run by a cooperative.

47. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Pennsylvania Soy Bean Cooperative Association.

**Manufacturer’s Address:** Jersey Shore, Pennsylvania.

**Date of Introduction:** 1943. November.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** USDA Northern Regional Research Laboratory. 1943. “Soybean processing mills in the United States.” *USDA Bureau of Agricultural and Industrial Chemistry*. AIC-26. 10 p. Nov. See p. 3. Jersey Shore, Pennsylvania: “Pennsylvania Soy Bean Cooperative Association.” (Small = capacity of less than 50 tons/day of soybeans).

48. USDA Northern Regional Research Laboratory. 1943. Soybean processing mills in the United States. *USDA Bureau of Agricultural and Industrial Chemistry*. AIC-26. 10 p. Nov. Revised edition, 1948. CA-5, 14 p.

• **Summary:** “The following list of soybean processing mills is divided into three parts: (1) mills in which soybeans regularly constitute the bulk of the throughput, (2) mills which are currently under construction or whose construction is being seriously considered, and (3) mills which are

engaged in soybean processing temporarily or part time, or which have otherwise participated in the soybean program by signing a soybean processor contract. It must be realized that changes are occurring very rapidly at the present time, throughout the entire soybean processing industry.

“Solvent extraction plants in group No. 1 are designated with an asterisk (\*). Many of the solvent type mills also contain expellers and screw presses. After the name of each mill in group No. 1, the letter S, M, or L is used to designate whether it is a small, medium, or large installation. These ratings are only approximate and divide mills into three capacity groups: S (small), capacities less than 50 tons of soybeans per day; M (medium), capacities between 50 and 200 tons per day; and L (large), capacities over 200 tons per day.”

(1) Mills specializing in soybeans:

Arkansas: West Memphis–Arkansas Mills, Inc. (S).

Wilson–Wilson Seed and Feed Company (S).

California: Oakland–Albers Brothers Milling Company (S).

Illinois: Bloomington–Funk Brothers Seed Company (M). Cairo–Swift and Company (M). Champaign–Swift and Company (L). Chicago–Archer-Daniels-Midland Company (M)\*; The Glidden Company (L)\*; Norris Grain Company (S); Spencer Kellogg and Sons (L). Decatur–Archer-Daniels-Midland Company (L)\*; Decatur Soy Products Company (M); Spencer Kellogg and Sons (L)\*; A.E. Staley Manufacturing Company (L). Galesburg–Galesburg Soya Products Company (M). Gibson City–Central Soya Company, Inc. (L). Monmouth–Ralph Wells and Company (S). Peoria–Allied Mills, Inc. (L). Quincy–Quincy Soybean Products Company (M). Springfield–Illinois Soy Products Company (M). Taylorville–Allied Mills, Inc. (M).

Indiana: Decatur–Central Soya Company, Inc. (L)\*.

Indianapolis–Evans Milling Company (M). Lafayette–Ralston Purina Company (M). Marion–Hoosier Soybean Mills, Inc. (M). Windfall–Elevators and Mills, Inc. (S).

Iowa: Cedar Rapids–Honeyamead Products Company (M)\*; Iowa Milling Company (M). Centerville–Standard Soybean Mills (M). Clinton–Clinton Company (M)\*. Des Moines–Spencer Kellogg and Sons (M); Swift and Company (M). Fayette–Wilbur Bell, Inc. (S). Fort Dodge–Plymouth Processing Mills (M [co-op]). Gladbrook–Central Iowa Soybean Mill (S). Iowa Falls–Ralston Purina Company (M). Quimby–Simonsen Soybean Mill (M). Sioux City–Sioux Soya Company (S). Waterloo–Soy Bean Processing Company (M)

Kansas: Emporia–Kansas Soy Bean Mills, Inc. (M).

Kentucky: Henderson–Ohio Valley Soy Bean Cooperative Association (M). Louisville–Buckeye Cotton Oil Company (L)\*. Owensboro–Owensboro Grain Company (S).

Michigan: Dearborn–Ford Motor Company (M)\*. Milan–Ford Motor Company (S)\*. Saline–Ford Motor Company (S)\*.



Minnesota: Mankato–Mankato Soya Products Company (S). Minneapolis–Archer-Daniels-Midland Company (S).

Missouri: Galesburg–Spring River Mill (S). St. Joseph–Dannen Mills (M). St. Louis–Ralston Purina Company (M).

Nebraska: Fremont–Pete Marr Soybean Processing Company (S). Omaha–Allied Mills, Inc. (M).

New York: Buffalo–Spencer Kellogg and Sons (M). Oswego–Oswego Soybean Products Corporation (M).

Ohio: Berea–Berea Milling Company (M). Cincinnati–Drackett Company (M)\*. Circleville–John W. Eshelman and Sons (M); Ralston Purina Company (M). Fostoria–Swift and Company (M). Marion–Old Fort Mills, Inc. (M). New Washington–Ohio Soya Company (S). Painesville–A.E. Staley Manufacturing Company (L). Toledo–Archer-Daniels-Midland Company (L); Toledo Soybean Products Company (M). Wooster: Soya Processing Company (M).

Pennsylvania: Jersey Shore–Pennsylvania Soy Bean Cooperative Association (S).

Tennessee: Memphis–Buckeye Cotton Oil Company (M).

Virginia: Norfolk–Davis Milling Company (S). Portsmouth–Allied Mills, Inc. (M); I.F. Laucks, Inc. (S).

Wisconsin: Milwaukee–Archer-Daniels-Midland Company (M).

Note 1. This is the earliest document seen (Dec. 2005) that mentions Dannen Mills (St. Joseph, Missouri) in connection with soybeans.

Note 2. This is the earliest document seen (June 2005) that mentions Honeymead Products (Cedar Rapids, Iowa) in connection with soybeans.

Note 3. This is the earliest English-language document seen (Sept. 2003) that contains the term “screw presses” (or “screw press”) in connection with mechanical pressing of soybeans to give oil and meal (one of two documents).

49. *Eagle Grove Eagle (Iowa)*. 1943. Soybean plant rapidly nears completion: Expect processing to start right after the first of the year. More machinery is purchased. Dec. 2. p. 1.

• **Summary:** “The Boone Valley Cooperative Soybean mill is expected to be in operation shortly after the first of the year. Ed Olson, manager of the mill, was in Minneapolis [Minnesota] Tuesday and bought some more machinery...” including a “hammer mill, percentage feeder, and an electric hoist.

“Purchase of [soy] beans from the member cooperatives has been going on for quite a while. Already over 350,000 bushels of beans have been purchased and are being stored in the elevators from whom the purchases were made. The buying is done from the 32 cooperative elevators who are members of the Boone Valley Cooperative.”

Note: Soybean plants typically start processing / crushing soybeans in October. So Boone Valley is several months late.

50. *Eagle Grove Eagle (Iowa)*. 1943. Soybean plant office moved. Dec. 9. p. 1.

• **Summary:** Last Friday the Boone Valley Cooperative

office was moved into the new, finished building on the grounds near the soybean plant.

51. *Eagle Grove Eagle (Iowa)*. 1943. Soybean office open (Photo caption). Dec. 16. p. 1.

• **Summary:** Photos show: (1) Ed Olson with his secretary, Lois Donelson. (2) Olson and Donelson joined by Russell Smith, assistant manager of the War Hemp plant.

52. *Eagle Grove Eagle (Iowa)*. 1943. Soybean plant directors meet. Dec. 16. p. 1.

• **Summary:** “A meeting of the directors of the Boone Valley Soybean Processing Company was held here Tuesday.” Two new cooperatives, from Renwick and Hampton, were admitted to membership. The cooperative now has 30 members.

53. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Coshocton Farmers Exchange.

**Manufacturer’s Address:** Coshocton, Ohio.

**Date of Introduction:** 1943.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 “Cooperative soybean processing plants that had ceased operations as of 1970.” 2. Coshocton Farmers Exchange. (Coshocton, Ohio 1943).

54. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmers Cooperative Company.

**Manufacturer’s Address:** Dike, Iowa.

**Date of Introduction:** 1943.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Eagle Grove Eagle (Iowa)*. 1944. “Soybean ‘open house’ a gala celebration.” March 30. p. 1. Guests included the Farmers Cooperative Co. (Dike, Iowa). Each of these organizations was processing soybeans into soybean meal under the Service Company’s trade mark “Felco.”

*Soybean Digest*. 1965. “C.M. Gregory, leading Iowa processor, gone.” Jan. p. 22. “Clifford M. Gregory, 51, manager of the Farmers Cooperative Co., Dike, Iowa, elevator and processor of soybeans, for 26 years,... died at his home at Dike Nov. 30 after a lengthy illness.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 “Cooperative soybean processing plants that had ceased operations as of 1970.” 4. Farmers Cooperative Company. (Dike, Ohio [sic, Iowa],

1943).

*Dike Centennial*. 2000. Dike, Iowa: Centennial History Book Committee. The long entry for "Farmers Cooperative Company" states (p. 77-80): "The Dike Soybean Processing plant was completed in 1943."

**55. Product Name:** Soybean Oil, and Farm Bureau Soybean Oil Meal.

**Manufacturer's Name:** Ohio Farm Bureau Cooperative Association

**Manufacturer's Address:** Springfield, Ohio.

**Date of Introduction:** 1943.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Digest*. 1947. "Expansion of plant facilities of Farm Bureau Cooperative Association (Columbus, Ohio) during the past 2 years." Jan. p. 30. It "has included a soybean processing plant at Springfield, Ohio, and an oil refinery at Louisville, Kentucky."

*Soybean Blue Book*. 1947. "Processors of soybeans." p. 62. Ohio–Springfield: Farm Bureau Cooperative Assn, Inc. 442 N. Limestone St. (Office 246 N. High St., Columbus, Ohio). (1) President: M.D. Lincoln; (3) Secretary: K.N. Probasco; (5, 6) Head soybean buyer and oil sales manager: M.D. Losey; (9) Plant manager: M.C. Langdon. 3 expellers, capacity 60 tons/day. Trichloroethylene solvent capacity 25 tons/day. Storage capacity 325,000 bushels. "Farm Bureau" soybean oil meal. "Cooperative Mills" feeds.

Goss, Warren H. 1952. "Trends in the oilseed industry." *J. of the American Oil Chemists' Soc.* 29(7):253-57. July. See p. 255. "Trichloroethylene extraction of soybeans:... The Detrex extractor was one of the first" and two small extractors were installed during World War II in Danville, Indiana, and Springfield, Ohio.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 3. Ohio Farm Bureau Cooperative Assoc., Columbus, Ohio (Springfield, Ohio 1943).

**56. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Hendricks County Farm Bureau Co-op. Assn. Later renamed Indiana Farm Bureau Cooperative Assn. (Indianapolis).

**Manufacturer's Address:** Danville, Indiana.

**Date of Introduction:** 1943.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Blue Book*. 1947. "Processors of soybeans." p. 50. Indiana–Danville: Hendricks County Farm Bureau Co-op. Assn. Owned by Indiana Farm Bureau Co-op. Assn. Manager George W.

Hadley. Trichloroethylene solvent capacity 12½ tons/day. Storage capacity 50,000 bushels. "Indiana Farm Bureau" soybean oil meal. "Farm Bureau" feeds.

Goss, Warren H. 1952. "Trends in the oilseed industry." *J. of the American Oil Chemists' Soc.* 29(7):253-57. July. See p. 255. "Trichloroethylene extraction of soybeans:... The Detrex extractor was one of the first" and two small extractors were installed during World War II in Danville, Indiana, and Springfield, Ohio.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 6. Indiana Farm Bureau Cooperative Assn. (Indianapolis) (Danville, Indiana, 1943).

**57. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Missouri Farmers Association Cooperative Grain & Feed Co.

**Manufacturer's Address:** Mexico, Missouri.

**Date of Introduction:** 1944. February.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Photo captioned "Missouri soybean mill." 1946. *Soybean Digest*. Oct. p. 15. The lower caption reads: "This is a closeup of the new two expeller soybean mill of the M.F.A. [Missouri Farmers Association] Cooperative Grain & Feed Co., at Mexico, Missouri. Capacity of the 19 bins is 300,000 bushels. Fire destroyed the firm's original mill in March 1944, shortly after it had gone into operation."

Talk with Bill Lester of Omaha, Nebraska. 2008. Jan. 13. Bill, an old-timer in the cooperative soybean processing industry, is certain that MFA began processing soybeans before the fire on 17 March 1944. He heard this more than once (during the 1960s) from his close friends and hunting partners Kermit Head and John Botkin. Kermit came to MFA in about the mid-1950s and was general manager of the soybean processing plant for more than 20 years. John was production manager of the same plant. The plant used expellers to crush the soybeans, and the fire started in the room where the expellers were located. Bill does not know how long before the fire the plant began processing soybeans.

*58. Soybean Digest*. 1944. Expansion by General Mills. Feb. p. 18.

• **Summary:** "Whitney Eastman, president of the vegetable oil and protein division of General Mills, Inc., has announced the appointment of two executives to his staff. They are Walter E. Flumerfelt as manager of the Belmond, Iowa extraction soybean processing plant, and Wilbur L. Taylor as technical director of the vegetable oil and protein division.

“Mr. Flumerfelt, who joined the GMI organization in July, 1943, has been in the soybean business for about 15 years. He operated his own solvent extraction soybean processing plant—a batch arrangement—at Monticello, Illinois, starting in 1929. He was a director in the National Soybean Processing Association for eight years.”

59. *Eagle Grove Eagle (Iowa)*. 1944. Soybean plant directors are entertained: Hear reports on progress made at plant and other details at C. of C. meeting Tuesday night. March 16. p. 1.

• **Summary:** “Directors of the Boone Valley Soybean Processing Cooperative were guests at the Chamber of Commerce meeting Monday night. Albert Koolhoff of Highview, president of the cooperative, explained the purposes of the project...”

“Ed Olson, plant manager, said the mill would be under-way shortly [about 5 months late] and would be formally opened next Friday.” A list is given of the directors and elevator members of the various member cooperatives who were present.

Note: This is the earliest document seen (July 2005) concerning the Boone Valley Cooperative Processing Association (Eagle Grove, Iowa).

60. M.F.A. [Missouri Farmers Association] Cooperative Grain & Feed Co. 1944. Fire or explosion in soybean crushing plant. Mexico, Missouri. March 17.

• **Summary:** *Mexico Evening Ledger (Missouri)*. 1944. “Fire destroys M.F.A. [Missouri Farmers Association] mill and elevator here Friday night with estimated \$280,000 loss: 42 thousand bushel of grain, machinery, much feed are lost.” March 18. p. 1. The fire, whose cause is unknown, started on Friday, March 17. Note: An article in this same newspaper on March 21 (p. 1; “Post says MFA may not build mill in Mexico”) strongly suggests that MFA has not yet started to process soybeans in this plant.

*Soybean Digest*. 1944. “Fire destroys Missouri Farmers Association feed and soybean mill at Mexico, Missouri.” April. p. 22. The fire on March 17 caused \$250,000 in damage, wiped out months of work in preparing the property for active operation.

*Soybean Digest*. 1946. “Missouri soybean mill.” Oct. p. 15. A photo shows a grain storage elevator with many towering concrete bins. The lower caption reads: “This is a closeup of the new two expeller soybean mill of the M.F.A. [Missouri Farmers Association] Cooperative Grain & Feed Co., at Mexico, Missouri. Capacity of the 19 bins is 300,000 bushels. Fire destroyed the firm’s original mill in March 1944, shortly after it had gone into operation.” Address: Mexico, Missouri.

61. *Mexico Evening Ledger (Missouri)*. 1944. MFA hopes to rebuild here, official says: A.J. Loutch of Kansas City arrives

in Mexico Saturday. March 18. p. 1.

• **Summary:** Loutch is director of the Cooperative Feed and Grain Division of the Missouri Farmers Association. “‘We hope to go ahead with our program,’ Mr. Loutch said, ‘but nowadays you don’t know what you are liable to run into. If it takes as long to get the materials for rebuilding as it took to get materials for our remodeling, we’ll all have long whiskers.’”

“Whether MFA will be able to obtain priorities for rebuilding the mill and soybean plant is problematical.” The losses were fairly well covered by insurance—including the buildings and grain in the elevator.

62. White, L. Mitchell. 1944. The M.F.A. mill fire. *Mexico Evening Ledger (Missouri)*. March 18. p. 1.

• **Summary:** “The plant will no doubt be rebuilt, but whether it will be rebuilt on the present site or in another part of the state has not yet been decided.

“Mexico, Audrain county and all this section of Missouri have found the mill a great impetus for the development of the soybean here as well as an economic convenience that cannot be discounted.

“For years we have wanted such a mill in Mexico. Then it materialized. Now it is gone... We hope the M.F.A. will rebuild the mill here. We know the community will cooperate in every way to make this possible.”

63. *Mexico Evening Ledger (Missouri)*. 1944. Complete original milling plant (Illustration caption). March 18. p. 1.

• **Summary:** “The above is a woodcut of the Pollock Milling Co. buildings [in Mexico, Missouri] made many years ago before it had been purchased by the MFA as a soybean processing plant.”

64. *Mexico Evening Ledger (Missouri)*. 1944. Fire destroys M.F.A. [Missouri Farmers Association] mill and elevator here Friday night with estimated \$280,000 loss: 42 thousand bushel of grain, machinery, much feed are lost. One of the worst fires in Mexico’s history destroys former Pollock Mill—Cause of fire unknown—Other departments assist. March 18. p. 1.

• **Summary:** The fire, whose cause is unknown, was one of the worst in the history of Mexico. Missouri. It completely destroyed the main feed mill and the elevator building, and the soybean processing plant of the Missouri Farmers Association.

The fire started on Friday, March 17, at about 8:45 p.m., “in the northwest corner of the top floor of the main four-story building which housed the feed mill and the office of the MFA plant.” A high wind fanned the flames, and “carried sparks to the old wooden elevator frame building about 50 feet west of the main building. Fire soon broke out in the elevator building, which had a storage capacity of 65,000 bushels. The building, one of the oldest landmarks in



Mexico, had been well constructed with 6 by 6 timbers laid on top of each other, this causing a larger conflagration.”

Maurice Maze, manager of the mill, said the elevator building contained 18,000 bushels of soybeans, 16,000 bushels of wheat and 8,000 bushels of corn, all of which were destroyed and were still burning Saturday forenoon.

“Also destroyed with the main building was \$10,000 worth of newly manufactured commercial feed and \$80,000 worth of new equipment and machinery which the MFA had purchased for remodeling and expanding the mill and soybean processing plant. Some of the equipment and machinery had already been installed, Mr. Maze said, while some of it was stored awaiting installation.” One person, Nelson Fittner, a volunteer fire fighter, was injured in the blaze.

Note: The full name of this company is Missouri Farmers Association Cooperative Grain & Feed Co. This is the earliest document seen (March 2008) concerning MFA and soybeans. However, this plant had apparently not yet begun to process soybeans (see article of March 21, p. 1).

65. *Mexico Ledger (Missouri)*. 1944. Salvaging of MFA [Missouri Farmers Association] grain to start Tuesday: No official estimate made yet of loss in Friday’s fire. March 20. p. 1, col. 1.

• **Summary:** “Quite a bit of the grain is still good for hog feed and will be sold to farmers for that purpose. Wheat won’t burn at all and soybean and corn do not burn very much.”

66. *Mexico Evening Ledger (Missouri)*. 1944. M.F.A. mill and elevator destroyed by fire (Photo caption). March 21. p. 1.

• **Summary:** This photo shows the “Missouri Farmers Association feed mill and elevator last Friday night while the destructive fire was at its height... To the right can be seen the huge wooden-frame elevator, entirely enveloped in flames. Local firemen said the fire was the worst in the history of Mexico. Loss was estimated at \$280,000.”

67. *Mexico Evening Ledger (Missouri)*. 1944. Post says MFA may not build mill in Mexico: St. Louis paper says inadequate fire protection is one reason. March 21. p. 1.

• **Summary:** An article is yesterday’s *St. Louis Post-Dispatch* is reprinted in full. “Mexico, Missouri. March 19... H.E. Kleinfelter of the Missouri Farmers Association at Columbia said today there was some doubt as to whether the plant, which was bought by the co-operative last summer and was being converted into a soybean processing mill, would be rebuilt here because of inadequate fire protection. He said 25 minutes passed before sufficient water pressure could be developed to send jets to the fourth floor of the building where the fire broke out and added that the plant might have been saved in that time.”

“The mill here, one of the oldest in the State, had been scheduled to start producing feeds for 60 local co-operatives in East and Central Missouri within two weeks, Klinefelter said, asserting that the fire was a major setback to plans to enlarge feed and protein supplies in the area.”

“Under the original plans, the mill was to have processed soybeans produced in six Northeast Missouri counties, the oil going to feed industries, the proteins to livestock raisers and the feeds to the farmer-members of the cooperatives. The M.F.A. has feed mills at Springfield and Aurora serving other parts of the State.”

68. *Eagle Grove Eagle (Iowa)*. 1944. You are invited to visit the Boone Valley Cooperative Processing Association plant on Friday, March 24, and see Felco soy bean meal in the making. March 23. p. 4. Thursday. Special 4-page section.

• **Summary:** This invitation has a big page-width banner headline across the top half of the first page of this 4-page special issue of the newspaper. Below that, in smaller letters, we read: “Starting at 10:00 a.m. Friday, March 24th there will be regularly conducted tours through the plant for everyone. Officers and directors who are acquainted with the operation will serve as guides. From 11 a.m. until 4 p.m. the Eagle Grove Chamber of Commerce will serve coffee and doughnuts to the visitors. You will have an opportunity to see one of the newest developments in agricultural processing in operation. You will see soy beans raised in North Central Iowa made into Felco Quality Bean Meal (a protein feed) and Soy Bean Oil—the base of oleomargarine, cooking fats, and other food products. Don’t miss this opportunity to see your home grown products processed at home.”

Three boxes at the bottom of the page show: (1) Officers and Directors of the Boone Valley Co-op, incl. the executive board and advisory board. (2) “Our operations: We have in storage and under contract for future delivery 243,355 bu. of soy beans, all 1943 crop. This represents about 9% of total production of our Member Cooperative Farmers. From this we expect to process 40 tons of Bean Meal daily during the coming year. Our member cooperatives will receive approximately 70% of this Felco [Soy] Bean Meal to distribute among their farmer members. We will also produce approximately 1,500 gallons of bean oil daily. Bean oil at present is allocated entirely to food processing companies. The daily consumption of beans is 1,800 bushels. During war time the soy beans and the processed products from the beans are controlled both as to price and distribution by Commodity Credit and War Food Administration. While this plant was built by farmers to relieve a shortage of protein feed caused by the war, our unusual 30-member company organization assures us of successful peace time operation.

(3) Farmer cooperative stockholders companies [alphabetical by city in Iowa]: Hobarton Cooperative Elevator Co., Algona. Badger Cooperative Elevator Co., Badger. Farmers Grain Company, Belmond. Farmers Cooperative Elevator

Co., Blairsburg. Bradgate Cooperative Exchange, Bradgate. Farmers Cooperative Elevator Co., Boxholm. Farmers Cooperative Elevator Co., Eagle Grove. Farmers Cooperative Co., Ellsworth. Farmers Cooperative Grain & Coal Co., Fort Dodge. Palmgrove Cooperative, Fort Dodge. Farmers Cooperative Co., Garden City. Gilmore Cooperative Co., Gilmore City. Farmers Elevator Co., Goldfield. Farmers Cooperative Grain & Lumber Co., Gowrie. Farmers Elevator Co., Hampton. Hardy Cooperative Elevator Co., Hardy. Farmers Cooperative Association, Humboldt. Farmers Cooperative Elevator Co., Iowa Falls. Farmers Elevator & Supply Co., Kamrar. Blandin Farmers Cooperative Society, Manson. Farmers Cooperative Elevator, Ottosen. Farmers Cooperative Elevator Co., Radcliffe. Farmers Cooperative Grain Co., Randall. Farmers Cooperative Co., Renwick. Farmers Elevator & Livestock Co., Stanhope. Stratford Grain & Supply Co., Stratford. Community Cooperative Association, Webster City. Highview Cooperative Elevator, Webster City. Whittemore Elevator Co., Whittemore. Farmers Cooperative Elevator Co., Woolstock.

“30 farmer cooperative owners with a membership of 11,000 north central Iowa farmers.”

On page 2, which has a page-width banner headline across the top (“Soybean plant open house Friday”) are large messages of congratulations from almost every organization on the small town of Eagle Grove, plus some from nearby cities. One article titled “Invite public to see mill in operation,” states that “The mill will be in full operation,” explains how the soybeans are processed and the oil and meal used, and adds that “At present two shifts of 4 men are employed on each shift.”

On page 3 is a long article titled “Soybeans and world trade, by Robert M. Walse, two short articles (“Do soybeans hurt the soil?,” by Enoch M. Norum, and “Bean support at \$2.04” from *Wallace’s Farmer*), and more large messages of congratulations.

Page 4, titled “Welcome–Boone Valley Cooperative Processing Association,” expresses appreciation from the residents of Eagle Grove and gives “A picture story of Felco Bean Meal in the making,” with 4 photos.

Note 1. The Boone Valley plant is now apparently in operation.

Note 2. This is the earliest document seen (March 1944) that mentions the word “Felco” in connection with soybean meal.

69. *Mexico Evening Ledger (Missouri)*. 1944. MFA [Missouri Farmers Association] directors decide to continue milling operations in Mexico for present time on temporary basis: Board undecided as a rebuilding here or another location. Farmers asked to meet here next Wednesday to give opinions regarding plant—Many other towns want MFA to locate there. March 23. p. 1.

• **Summary:** The board plans to meet again, at the call of

president Heinkel, within 15 days from the time of the fire.

70. *Eagle Grove Eagle (Iowa)*. 1944. Looking down from 1000 feet (Photo caption). March 23. p. B1.

• **Summary:** This aerial photo shows the Boone Valley Cooperative Processing Association soybean plant. “The C.&N.W. round house and turn table can be seen in the upper right hand corner.” Note: The plant is apparently not yet operating.

71. *Eagle Grove Eagle (Iowa)*. 1944. Soybean “open house” a gala celebration: Plant thronged with visitors throughout opening day last Friday. 1500 attend. March 30. p. 1.

• **Summary:** Open house at the Boone Valley soybean mill was held last Friday [March 24] afternoon. Guides took the many visitors around the plant and explained the various operations in making soybeans into oil and meal (which is sacked before shipping). The Chamber of Commerce was in charge of serving coffee and doughnuts to the visitors.

“The Farmers Elevator Service Co., Ralston, Iowa, an agency with the ‘Felco’ trademark made up by the membership of over 300 Farmers Elevators over the state of Iowa with a combined membership of over 100,000 farmer members, held a district meeting and banquet at the Eagle Grove American Legion hall Friday evening...”

About 85 members were present. They had as their honored member guests the officers and managers of the Boone Valley Cooperative Processing Association (Eagle Grove, Iowa), Big 4 Cooperative Processing Association (Sheldon, Iowa), North Iowa Processing Association (Manly, Iowa), West Bend Elevator Co. (West Bend, Iowa), and the Farmers Cooperative Co. (Dike, Iowa). Each of these organizations was processing soybeans into soybean meal under the Service Company’s trade mark “Felco.”

Other special guests and visitors are listed. “During the forenoon a meeting of the Board of Directors of the Boone Valley Cooperative was held. Every member was present”—for the first time since the cooperative was organized.

72. **Product Name:** Soybean Oil, and Soybean Meal.

**Manufacturer’s Name:** Boone Valley Cooperative Processing Association.

**Manufacturer’s Address:** Eagle Grove, Iowa.

**Date of Introduction:** 1944. March.

**Ingredients:** Soybeans.

**New Product–Documentation:** *Eagle Grove Eagle (Iowa)*. 1944. March 23. p. 4. Thursday. “You are invited to visit the Boone Valley Cooperative Processing Association plant on Friday, March 24, and see Felco soy bean meal in the making.” Special 4-page section. One article titled “Invite public to see mill in operation,” states that “The mill will be in full operation,” explains how the soybeans are processed and the oil and meal used, and adds that “At present two shifts of 4 men are employed on each shift.”



Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 2. Boone Valley Cooperative Processing Association (Eagle Grove, Iowa, 1943).

Crabbe, Carolyn; McCutcheon, Connie. eds. 1981. *Eagle Grove, Iowa 1881-1981 centennial*. Eagle Grove, Iowa: Eagle Grove Centennial Committee. vi + 218 p. See p. 21. A half-page detailed chronology of "Boone Valley Cooperative Processing Association." "1943 April 12—First meeting at City Hall in Eagle Grove; adopted name of Boone Valley Cooperative Processing Association; 13 cooperatives, membership \$1,000.00... June 17—Ed Olson appointed chairman; Purchased Northwestern Railroad Building for \$1,500.00. "July 16—Ed Olson resigned as chairman to become manager at \$350.00 per month. "1944 March 4—Plant started operation."

73. *Soybean Digest*. 1944. Grits and flakes from the industry: Fire destroys Missouri Farmers Association feed and soybean mill at Mexico, Missouri. April. p. 22.

• **Summary:** The fire on March 17 caused \$250,000 in damage, wiped out months of work in preparing the property for active operation, and destroyed 18,000 bushels of soybeans, 16,000 bushels of wheat, and 8,000 bushels of corn. The MFA, which does a large feed business in Missouri, has not announced plans to replace the property.

Note: The full name of this company is Missouri Farmers Association Cooperative Grain & Feed Co.

74. *Soybean Digest*. 1944. Grits and flakes from the industry: \$6,000 mill to process soybeans and flax will be erected by Consumers Cooperative Association at Coffeyville, Kansas. April. p. 22.

• **Summary:** The mill will be constructed near the association's refining facilities at Coffeyville as soon as equipment is obtained under its priority rating. An expeller type plant which will process 1,600 bushels/day of soybeans, it will be another step in the wholesale association's plan to build a complete feed program.

Note: This is the earliest document seen (March 2008) concerning the Consumers Cooperative Association, which began operating this soybean processing plant at Coffeyville, Kansas (its first) in 1945. On 1 Sept. 1966 the Consumers Cooperative Association changed its name to Farmland Industries, Inc.

75. *Soybean Digest*. 1944. Co-op processing mill (Photo caption). April. p. 10.

• **Summary:** This large photo shows the mill next to a railroad siding. The caption reads: "This farmer-owned soybean processing plant at Ralston, Iowa, is one of eight

such plants in the state, and is owned by 481 Carroll and Greene County farmers. Karl Nolin is the manager. Capacity is 300,000 bushels annually."

76. *Fort Dodge Messenger and Chronicle (Iowa)*. 1944. One killed and eight injured by whirlwind. May 20. p. 1, 14. Saturday evening.

• **Summary:** A large page-width banner headline across the front page reads: "Heavy tornado damage." One person was killed and at least 8 injured in accidents resulting from the twister last night (Friday, May 19) shortly after 7:00 p.m. Guy Hanson, a trucker, suffered fractures of both arms and a shoulder when he was hit by a section of brick wall that fell when the twister hit Cargill's plant at First street and Central avenue in Fort Dodge. The roof and third story of the building were destroyed, and a large section of the east wall caved in. Eight employees at the soybean mill were uninjured, despite heavy damage to the building.

A smaller article just to the right of this one, titled "Six calls for city firemen during storm," states that a man was reported buried in debris following the collapse of a portion of the Cargill mill. But he had been rescued when firemen arrived. The mill is still without power.

77. *Mason City Globe-Gazette (Mason City, Iowa)*. 1944. \$110,000 soybean plant at Manly prepares to open: Set to operate 24 hours daily. Equipment is modern; serves 25 elevators. Sept. 6 (probably), or Sept. 25 to 29.

• **Summary:** "Manly—After many delays in getting material, the soybean plant at Manly has been completed to the extent that it may be going full blast by Monday, it was announced by the manager, Glenn Pogeler." "The construction program has been under the supervision of Engineer M.L. Todd and associates of Waterloo." "Fourteen men will be employed outside of the office."

"The ownership of this plant is in the hands of 25 co-operative elevators, within a radius of 50 miles of Manly. The outlet from Manly is excellent because of the 3 railroads, the Rock Island, M. & St. L. and Great Western.

"There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and Eagle Grove.

"Manager Pogeler has had 12 years experience in the grain and elevator business. He is married and has 2 children."

78. *Manly Signal (Manly, Iowa)*. 1944. Soy bean plant open house will be Monday: Plans for soy bean processing plant were started in April, 1943. Sept. 28. p. 1.

• **Summary:** Farmers started this plant because they felt they were being "gyped" in the way they had to buy back the "soy bean meal, a valuable protein feed supplement, after shipping their beans to the big processors.

"The government had placed a ceiling [price, during

World War II] on soy bean meal, but had neglected to control mixed feeds. Consequently the processors, instead of turning back the meal, would sell it to mixers who would add other ingredients and then would sell an oftentimes inferior product under a fancy label, back to the farmers at greatly increased prices.

"The injustice of the procedure was realized by all connected with the farming industry, and officers on the Manly Farmers Elevator talked over the proposition of getting a processing plant. Messrs. Randall, Barker, Bosworth and County Agent Nelson went to Fort Dodge to see further about it. There a federation of elevators was suggested as it was felt that it would be too big a proposition for any one elevator to handle.

"In May [1943] a meeting of the elevators in Worth and Cerro Gordo counties was held and Messrs. Earl Dean and Marion Olson of Cerro Gordo and Messrs. Barker, Lawyer, and Nelson of Worth county were named to contact additional elevators in this territory. Much interest was manifested and a meeting was held a week later with representatives of 25 elevators present. At this time \$47,000 was subscribed and a temporary organization was completed with Courtney Lawyer of Manly as chairman and Joe Gallagher of Mason City as secretary.

A committee was appointed to find a location, and the present site was secured from the Rock Island Railroad on a long term lease. A temporary board of directors was named; they purchased equipment, which included expellers from the French Oil Machinery Co. of Piqua, Ohio. They also hired Mr. Glenn Pogeler as manager; he took active charge about Sept. 1.

"A permanent organization was later completed. A charter was drawn up and capitalization of \$100,000 was authorized. The following permanent officers were elected: Courtney Lawyer, of Manly, Chairman. Earl Dean, Mason City, Ch'n. [Vice Chairman]. Joe Gallagher, Mason City, Sec'y. Directors—Martin Fabricius, W.J. Taylor, Clint Daniels, Elmer Appell.

"Construction of the plant was started in December [1943] and in spite of many delays caused primarily by present war conditions and restrictions, it is now in operation. With one or two exceptions it is as large as any plant in the state at the present time.

"The following elevators are members of the organization: Northwood, Grafton, Hanlontown, Little Cedar, Osage, Stacyville, Nora Springs, Rudd, Rockford, Rockwell, Sheffield, Thornton, Clear Lake, Garner, Klemme, Woden, Forest City, Thompson, Leland, Lake Mills, Burchinal, Portland, Scarville, Plymouth, Manly."

A photo shows the new soy bean plant "now in operation in Manly." To the left is the office building and to the right are two large storage bins, each with a capacity of 14,000 bushels of soy beans. The oil storage tanks, each holding 12,000 gallons, are in the center. "The building containing

the expellers and other necessary equipment for the extracting of oil is in the rear."

Note: This is the earliest document seen (March 2008) concerning the North Iowa Cooperative Processing Association (Manly, Iowa)—however that name does not appear in this document.

79. *Manly Signal (Manly, Iowa)*. 1944. Visitors invited to make inspection of new equipment: Business men will furnish refreshments during the day. Sept. 28. p. 1.

• **Summary:** "Open house will be held next Monday, October 2nd at the Manly Soy Bean Plant, and all residents of this and neighboring communities are invited to take the opportunity to make an inspection of the plant and learn just what operations are necessary for the extraction of oil from the beans. Manager plans to have everything in operation by October 2nd and he will have guides to help explain the various parts of the plant.

Manly business and professional men will join with the North Iowa Co-operative Processing Association "in making the open house a success by serving free coffee and doughnuts to visitors.

"The Manly plant, which is equipped with the latest machinery, has a capacity of processing approximately 1,500 bushels of beans each 24 hours and from this amount of beans they will make about 35 tons of meal and from 1,600 to 1,700 gallons of oil. The soy bean meal is available to customers of the member elevators and will be distributed through these elevators." The oil is shipped to soy bean oil refineries; about 85% of it is used in food products.

The plant is presently equipped with 2 large circular bins, each holding 14,000 bushels of soy beans. "Automatic elevators both fill the bins and later carry the beans to the plant for processing. There are also two oil tanks of 12,000 gallons capacity each which hold the oil until it is shipped in regular tank cars of the same type that is used in shipping crude oil [petroleum].

The plant is also equipped with a 100 horse power coal-fired boiler, which furnishes steam to operate the plant. Manager Pogeler and his secretary, Miss Barbara Deninger, are in charge of the business end.

Note: This is the earliest document seen (March 2008) that uses the name "North Iowa Co-operative Processing Association."

80. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Hubbard Soy Bean Mill. Later renamed Farmers Cooperative Elevator.

**Manufacturer's Address:** Hubbard, Iowa.

**Date of Introduction:** 1944. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Mason City Globe-Gazette* (Mason City, Iowa). 1944. \$110,000 soybean plant at Manly

prepares to open. Sept. 29? "There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and Eagle Grove."

*Soybean Digest*. 1946. "The Hubbard, Iowa, soybean mill has been bought by W.J. Hershberger and Forest Miller, both of Omaha" [Nebraska]. Dec. p. 28. "... Lee Hershberger will continue as manager." *Soybean Blue Book*. 1947. "Processors of soybeans" [USA and Canada]. See p. 54. "Iowa-Hubbard. Hubbard Soybean Mill, Inc. (Affiliate of F.R. Miller Feed Mills.) President & head soybean buyer: W.J. Hershberger. Secretary & oil sales manager: F.R. Miller. Plant manager: Lee Hershberger. 2 expellers. Processing capacity: 35 tons/day. Storage capacity 89,000 bushels. 'Hubbard' soybean oil meal."

*Eagle Grove Eagle* (Iowa). 1948. "Bulletin." Jan. 1, p. 1. "Ed Olson notified the Eagle late yesterday that the Boone Valley Cooperative Processing Association had purchased the Hubbard Soy Bean Mill, Inc. at Hubbard, Iowa. Purchase was made from F.R. Miller and W.J. Hershberger. Possession will be given Wednesday night, December 31 [1947] at midnight."

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 11. Farmers Cooperative Elevator (Hubbard, Iowa, 1945).

**81. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** North Iowa Cooperative Processing Association.

**Manufacturer's Address:** Manly, Iowa.

**Date of Introduction:** 1944. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product-Documentation:** *Eagle Grove Eagle* (Iowa). 1943. "Soybean mill contracts have been let: Jesse Watson to build the scales and office building. Other firms get various parts of the work." Aug. 26. p. 1. Victor Claude of Woolstock has been elected secretary in place of Glenn Pogeler, of Badger, who resigned. Mr. Pogeler goes to Manly where he is to manage the new [soybean processing] plant being built there.

*Manly Signal* (Manly, Iowa). 1944. "Soy bean plant open house will be Monday: Plans for soy bean processing plant were started in April, 1943." Sept. 28. p. 1. A photo shows the new soy bean plant "now in operation in Manly." To the left is the office building and to the right are two large storage bins, each with a capacity of 14,000 bushels of soy beans.

National Soybean Processors Association. 1944. *Year book, 1944-1945* (Association year). Chicago, Illinois. 71 p. Sept. Handwritten: New members added since publication of

the Trading Rules Book... North Iowa Cooperative Processing Association, Manly, Iowa (Glenn Pogeler, Mgr., Nov. 1944).

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 1. Farmers Grain Dealers Association (Des Moines, Iowa, Soybean Division) (Mason City, Iowa, 1943). Footnote: "Located at Manly, Iowa, 1943-1951; Moved to Mason City in 1951; merged in 1967 with Farmers Grain Dealers Association."

82. Ostrander, W.A. 1944. It's fun to remember [the birth of the American Soybean Assoc.]. *Soybean Digest*. Sept. p. 16-17.

• **Summary:** One of the best early histories of the A.S.A. It all began on the Fouts Bros. farms near Camden, Indiana. The author, now a farm manager, was formerly a member of the Purdue University faculty. He was one of the founding spirits of ASA and served as its secretary for the first four years. "The American Soybean Association grew out of the soybean campaign that was started in 1920 in Indiana because we needed a larger acreage of legumes in the cornbelt rotation. Clover was failing us possibly because of soil acidity, its biennial growth, or things we didn't know anything about. Soybeans looked like an answer."

"It was in the fall of 1920 that we in Indiana decided to have a sort of statewide get-together to see where we stood on the soybean situation, appraise what we had, and outline where we were going. We had had county soybean field meetings over the entire state and it seemed right that we hold a big get-together to finish it up. As we worked out the plan for this meeting it occurred to us that a good neighbor policy would be to invite the growers and experiment station men from our surrounding states to join us. Start it off with a bang. So out of that which started to be a state meeting was a Cornbelt meeting and out of it the American Soybean Association. All this on the Fouts Bros. farms near Camden, Indiana. Our idea was to take the soybeans to the farmer and the farmer to the fields of soybeans in his country. Conversion on the ground.

"The response to this meeting was away above what A.L. Hodgson, County Agricultural Agent of Carroll County, and I had any reason to expect. Illinois, Ohio, Michigan, Wisconsin, and Kentucky sent growers, county agents and men from the experiment stations. Over a thousand came. We fed them well. The start was made.

"All speeches were limited to three minutes; it shut off some of the long-winded folks but it gave all a chance.

"G.I. Christie reported for Indiana. He said we had 200,000 acres and thought he had the record stopped and I guess it was for the day. No one dared to go higher, but this year it is just 10 times that amount, 2 million acres. In those



days we counted every acre that had a bean on it, in the corn, for hay and for seed.

“W.L. Burlison of Illinois said there were 25,000 acres in his state and more in sight. He was right. Last year they had 4 million acres.

“George Briggs was modest in reporting 4,000 acres for Wisconsin and he still is modest for they had 115,000 acres there last year.

“Wallace Hanger of Ohio surmised that Ohio had 15,000 acres and there the acreage is now 1,500,000.

“Iowa reported 50,000 acres and now has 2,200,000 acres and still going strong.

C.R. McGee [Megee] of Michigan said they were just getting going with 5,000 acres but they now have 150,000 acres.”

“After visiting the soybean fields on the three Fouts Bros. farms, eating soybeans and talking our heads off and making many new friends, it was decided to hold a winter meeting at the time of the International Hay & Grain Show at Chicago, to keep the iron hot and to carry on. The first meeting was held on the bridge connecting the two exhibit rooms as we were not considered important or big enough to rate a room. Each year our numbers grew until we had to have the largest room they had. At these winter meetings we hashed over the latest soybean findings, worked on standards for the grading of the crop, talked over certification rules and always as a final job selected the state in which was to be held the summer meeting. Each year it was to be a different state.

“Our first big problems were better varieties, methods or harvesting, and the utilization of the crop.

“Just by a lucky break we brought the Manchu down from Michigan and this was our first unintentional success, a bean that was a ‘natural’ for the Cornbelt at that time. It did well most anywhere for hay or grain and did not shatter as did those we had. We were growing largely the old so-called Hollybrook (the Association changed its name to the Midwest) and the Ito San was our early variety. Our big headache was the harvesting of the crop... A combine seemed to be the answer.

“Then came the utilization of the crop. Up to 1920 we had been using all soybeans produced in the Cornbelt for seed, for hay, hogging off and seed again. It was not a grain crop yet. We went to the oil extraction companies and they said sure we will put in additional machinery to take care of them as soon as you have the quantity to make it worth while. Back to the farmers we went but they came right back and said sure we will put in more acreage and glad to as soon as we are certain we can get rid of the crop at a fair price. So—there we were. It is too long a tale to tell all that came and went until the oil plant at Chicago Heights was taking all beans offered. It was the old hydraulic system and it worked fairly well. The late Russel East and I got the corn starch plant at Edinboro, Indiana, to try some beans through their Anderson Expellers. It worked. It wasn’t long then before

Bloomington, Monticello, and Taylorville, Illinois, had plants and that chapter was ended.

“It had not been hard to sell the idea to our farmers that they were wise to grow their own protein feed. That was a natural. When we fed the soybeans alone as a supplement the oil in the beans gave us soft pork and that was a black eye for a few years but now that, too, has been eliminated.

“Where we fell down the worst, as I see it now, was that we did not stress the human food side stronger. We talked about it enough but got nowhere. The principal reason, I believe, was in our shortsightedness in not dropping the word ‘bean’ and just using the word ‘soy.’ Let’s give away half of the name after we work on the grain and open up the road to unlimited food uses of this best of all protein grains raised on our farms.

“Many still with us: One of the fine things as we look back over the past 25 years is that so many of the boys that were with us at that first meeting are still going strong for soys. I don’t believe the old mainspring, W.J. Morse of the U.S. Department of Agriculture, has missed a single meeting, at least not of his own volition. Probably the ones we miss most are the two Fouts Bros., Noah and Finis, Charles Meharry and Dean J.H. Skinner. They were always on hand. You can not meet Burlison, Hackleman or Bill Riegel of Illinois without talking soybeans. George Briggs of Wisconsin is still his old soybean story self.

“Helms of Missouri, McGee [Megee] of Michigan, and Hanger of Ohio still talk of that first meeting under the trees on the Fouts farm. Hughes of Iowa is as strong as ever for the beans and Christie, while he has been gone to Canada, this some time, can still tell a tall soybean story. Our own A.T. Wiancko here in Indiana, who guided us so well from behind the scenes, is still the active pusher for soys that he always was.

“We have been making soybean history in the Association for the past 25 years. If we can go on as much farther in the next 25 years—soybean history will have been made.”

Photos show: (1) “The birthplace of the A.S.A.” The three Fouts brothers, Taylor, Finis, and Noah (from left to right, each wearing a hat, coat, and tie) standing in front of a barn on which is written “Soyland—Taylor Fouts,” at the first meeting of the ASA, September 1920. (2) “1,000 at first meeting.” The top half of this photo shows hundreds of attendees seated on the grass under trees in the yard at Soyland listening to a speech. “Attendance was far beyond that expected, with representatives from many states.” The bottom half shows 25-30 men and women standing in a soybean field at Soyland. Address: Lafayette, Indiana.

83. National Soybean Processors Association. 1944. Year book, 1944-1945 (Association year). Chicago, Illinois. 71 p.  
 • **Summary:** Contents: Constitution and by-laws (incl. committees, code of ethics). Officers, directors and committees for 1944-45. Membership of the National Soybean

Processors Association. Trading rules governing the purchase and sale of soybean oil meal. Appendix to trading rules on soybean oil meal: Official methods of analysis (moisture, protein, oil, crude fiber—official). Trading rules on soybean oil. Appendix to trading rules on soybean oil: Uniform sales contract, refining loss method (cup refining test, tentative official centrifugal refining test), soybean oil bleach test—refined oils, free fatty acids, tentative method of grading soybean oil for green color, official method for oil sampling, standard specifications for crude soybean oil for technical uses, moisture and volatile matter (vacuum oven method, hot plate method), modified Gardner break test, iodine number—Wijs method, unsaponifiable matter, official chemists and samplers for oil.

Article IX, Committees, lists and describes each.

The section titled “Officers, directors, and committees” (p. 13-20) states: President: Edward J. Dies. V.P., Chairman Executive Committee: E.K. Scheiter. Secretary: C.E. Butler. Treasurer: E.F. Johnson. Ass’t. Treasurer: F.G. Duncanson. Executive Committee: E.K. Scheiter, Chairman, D.J. Bunnell, C.E. Butler, Edward J. Dies, Jasper Giovanna, S.F. Johnson, Mr. June S. Mitchell, H.R. Scroggs.

Board of Directors (Term expiring Sept. 1945): C.E. Butler, H.L. Dannen, Roger Drackett, Howard Kellogg, Jr., W.H. Knapp, H.R. Scroggs. (Term expiring Sept. 1946): H.A. Abbott, D.J. Bunnell, H.E. Carpenter, J.B. DeHaven, Philip S. Duff, P.M. Jarvis. (Term expiring Sept. 1947): J.H. Caldwell, Jasper Giovanna, Mr. June S. Mitchell, E.K. Scheiter, H.R. Schulze, P.E. Sprague.

Standing committees: For each committee, the names of all members (with the chairman designated), with the company and company address of each are given—Traffic and transportation. Research. Technical. Soybean grades and contracts. Oil trading rules. Meal trading rules. Soy flour. Crop improvement. Soybean research council. Trade development. Edible soybean. Handwritten on blank facing pages: Contract. Margarine. Wartime exports (11 March 1945). Soybean oil meal industry advisory committee. Nominating committee (16 July 1945). Uniform rules and standards committee for soybean oil meal (14 Sept. 1945). Urea yield committee (14 Sept. 1945).

The following organizations, and individuals are members of NSPA: Albers Milling Co., Seattle, Washington (W.P. Kyle). Allied Mills, Inc., Board of Trade Bldg., Chicago, Illinois (6 members). Archer-Daniels-Midland Co., Box 839, Minneapolis, Minnesota; Chicago, Illinois; Decatur, Illinois; Toledo, Ohio (5 members). Berea Milling Co. (The), Lexington, Ohio. Blanton Mill (The), St. Louis, Missouri. Boone Valley Cooperative, Eagle Grove, Iowa. Buckeye Cotton Oil Co. (The), Cincinnati, Ohio; Louisville, Kentucky; Memphis, Tennessee. Cairo Meal & Cake Co., Cairo, Illinois. Cargill, Inc., Minneapolis, Minnesota (Julius Hendel); Springfield, Illinois (Eric Nadel); Cedar Rapids, Iowa (L.O. Hauskins); Fort Dodge, Iowa (H.E.

Marxhausen). Central Iowa Bean Mill, Gladbrook, Iowa. Central Soya Co., Inc., Chicago, Illinois; Gibson City, Illinois; Decatur, Indiana (3 members). Clinton Co., Clinton, Iowa (E.W. Myers). Concord Soya Corporation, Concord, Michigan (W.C. Whittecar). Dannen Grain & Milling Co., St. Joseph, Missouri. Decatur Soy Products Co., Decatur, Illinois (Jasper Giovanna). Drackett Co. (The), Cincinnati 32, Ohio (Roger Drackett). Elevators & Mills, Inc., Windfall, Indiana (Mr. June S. Mitchell). Fairfield Soy Mill, Fairfield, Iowa (Jos. Sinaiko). Farmers Cooperative Assn., Ralston, Iowa (Karl Nolin). Farmers Cooperative Co., Dike, Iowa (C.M. Gregory). Farmers Cooperative Elevator, Martelle, Iowa (C.K. Gordon -> H.B. Lovig). Fayette Soy Bean Mill, Fayette, Iowa (J.M. Durfey -> W.V. Clark). Funk Bros. Seed Co., Bloomington, Illinois (H.A. Abbott). Galesburg Soy Products Co., Galesburg, Illinois (Max Albert). General Mills, Inc., Vegetable Oil and Protein Div., Minneapolis, Minnesota (W.H. Eastman); Belmond, Iowa (W.E. Flumerfelt). Glidden Co. (The), Cleveland, Ohio (P.E. Sprague); Chicago, Illinois (A.A. Levinson -> R.R. Stegler). Gooch Milling & Elevator Co., Lincoln, Nebraska (M.R. Eighthmy). Hemphill Soy Products Co., Kennett, Missouri (W.A. Hemphill). Hiawatha Soybean Mill, Hiawatha, Kansas (A.G. Thomson). Honeymead Products Co., Cedar Rapids, Iowa (D.O. Andreas -> Osborn Andreas); Spencer, Iowa (J.M. Wilson -> Steve Burke); Washington, Iowa (Hugo Lensch). Hoosier Soybean Mills, Marion, Indiana (J.H. Caldwell, Jr.). Huegely Elevator Co., Nashville, Illinois (J.W. Huegely). Hulcher Soy Products, Virden, Illinois (Norman E. Hulcher). Iowa Soy Co., Redfield, Iowa (E. Lyster -> H.R. Straight). Kansas Soybean Mills, Inc. (The), Emporia, Kansas (Ted W. Lord). Laucks (I.F.), Inc., Portsmouth, Virginia (H.F. Armstrong). Mankato Soybean Products Inc., Mankato, Minnesota (Frank J. Bergman -> W.A. Berge). Marr (Pete) Soybean Mills, Fremont, Nebraska (Pete Marr). Mellott Grain Co., Mellott, Indiana (Milford Knowles). Muscatine Processing Corp., Muscatine, Iowa (G.A. Kent). Old Fort Mills, Inc., Marion, Ohio (Ralph Kail). Owensboro Grain Co., Owensboro, Kentucky (William M. O’Bryan). Pillsbury Soy Mills, Clinton, Iowa (Raymond C. Ilstrup); Centerville, Iowa (H.R. Schultz). Procter & Gamble Distributing Co., Cincinnati, Ohio. Procter & Gamble, Ivorydale, Ohio (W.H. Knapp). Producers Cooperative Oil Mill, Oklahoma City, Oklahoma (O.K. Winterringer). Quincy Soybean Products Co., Quincy, Illinois (Irving Rosen). Ralston Purina Co., St. Louis, Missouri (E.F. Johnson); Kansas City, Missouri (G.H. Banks); Lafayette, Indiana (Ralph Guenther); Iowa Falls, Iowa (H.N. Johnson); Circleville, Ohio (Hal Dean). Shellabarger Soybean Mills, Decatur, Illinois (W.L. Shellabarger). Simonsen Brothers, Quimby, Iowa (W.E. Simonsen). Sioux Soya Co., Sioux City, Iowa (H.R. Scroggs). Southern Cotton Oil Co. (The), Goldsboro, North Carolina (C.S. Ragan); Tarboro, North Carolina (W.A. Moore). Soya Processing Co., Wooster, Ohio

(H.H. Heeman). Soy Bean Processing Co., Waterloo, Iowa (C.E. Butler). Soy-Rich Products, Inc., Wichita, Kansas (B.S. Brooks). Spencer Kellogg & Sons, Buffalo, New York; Chicago, Illinois; Decatur, Illinois; Des Moines, Iowa (Howard Kellogg, Jr.). Staley (A.E.) Mfg. Co., Decatur, Illinois (E.K. Scheiter); Painesville, Ohio (H.D. Egly -> Thomas Longbons). Swift & Co., Chicago, Illinois (P.M. Jarvis). Swift & Company Oil Mill, Cairo, Illinois (W.B. Stone). Swift & Company Soybean Mill, Champaign, Illinois (N.P. Noble). Swift & Company Soybean Mill, Des Moines, Iowa (A.F. Leathers). Swift & Company Soybean Mill, Fostoria, Ohio (S.D. Hollett -> H.S. Byrd). Toledo Soybean Products Co., Toledo, Ohio (J.H. Brown). Wells (Ralph) & Co., Monmouth, Illinois (Ralph Wells). West Bend Elevator Co., West Bend, Iowa (R.W. Jurgens). Western Soybean Mills, Sioux Falls, South Dakota (E.A. Woodward). Williams Milling Co., Sac City, Iowa (Leo W. Williams).

Organizations represented on committees: American Soybean Association, Hudson, Iowa (George Strayer, Howard Roach). Illinois College of Agriculture, Urbana, Illinois (Dr. W.L. Burlison, J.W. Lloyd). U.S. Regional Soybean Laboratory, Urbana, Illinois (Dr. R.T. Milner).

Handwritten: New members added since publication of the Trading Rules Book—Big 4 Cooperative Processing Assn., Sheldon, Iowa (Morel M. Stientjes, Mgr., April 1945). Delphos Grain & Milling Co., Delphos, Ohio (Floyd E. Hiegel, Pres., Aug. 1945). Haynes Soy Products Inc., Portland, Indiana (W.V. Helfiker, Office Mgr., May 1945). Holland Pioneer Mills Inc., Ohio City, Ohio (G.A. Holland, Pres., March 1945). Jamesville Mills, Inc., Jamesville, Wisconsin (A. Roger Hook, Mgr., Oct. 1945). Kansas Soya Products Inc. (The), Kansas City, Kansas (Richard Lord, V.P. & Treas., Oct. 1943). North Iowa Cooperative Processing Association, Manly, Iowa (Glenn Pogeler, Mgr., Nov. 1944). Honeymead plant in Spencer, Iowa, bought Doughboy Mills, Inc., New Richmond, Wisconsin (4 Dec. 1945). Washington Soy Mill: Name changed by Joe Sinaiko from Honeymead's plant in Washington, Iowa (19 Dec. 1945).

Note: This is the earliest document seen (March 2008) that uses the name "North Iowa Cooperative Processing Association." The word "Cooperative" is spelled without a hyphen. Address: 3818 Board of Trade Building, Chicago 4, Illinois.

**84. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Farmers Cooperative Elevator.

**Manufacturer's Address:** Dyke, Iowa.

**Date of Introduction:** 1944. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Mason City Globe-Gazette* (Mason City, Iowa). 1944. \$110,000 soybean plant at Manly prepares to open. Sept. 29? "There are 7 other such [co-operative soybean] plants in the state [of Iowa] located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon, and

Eagle Grove."

Strayer, George M. 1981. "Cooperative soybean processing in America" (Interview). Conducted by William Shurtleff of Soyfoods Center, Sept. 15. 1 p. transcript. The "co-ops" first started crushing soybeans during World War II, and by the end of the war there were about 40-50 crushing plants in operation. Soybean crushing plants were set up by already established cooperative grain elevators. There were about ten in Iowa, in places like Dyke, Sac City, and Manly. Originally, most of the plants were small expeller plants.

85. *Manson Journal (Iowa)*. 1944. Glenn Pogeler managing Manly soy bean plant. Oct. 12. p. 1.

• **Summary:** "Manson residents should find the following article from the Mason City Globe-Gazette of September 6 particularly interesting inasmuch as Glenn Pogeler, manager of the new plant, is the son of Mr. and Mrs. John Pogeler of this city. Following his graduation from the local schools, he entered the grain field, first managing the elevator at Richards and then moving to the Badger Co-operative Elevator."

"The plant will operate 24 hours daily with three shifts seven days a week. The construction program has been under the supervision of Engineer M.L. Todd and associates of Waterloo." The plant equipment cost about \$110,000.

The plant's two silos have a capacity of 28,000 bushels of soybeans. There are also 3 large tanks for storage of at least 36,000 gallons of the oil.

"Fourteen men will be employed outside of the office. Manager Pogeler, with Miss Barbara Denninger as secretary, expects to handle that end of the work for the present."

"The ownership of the plant is in the hands of 25 co-operative elevators within a radius of 50 miles of Manly," which was chosen because of the "three railroads, the Rock Island, M. & St. L., and Great Western. Seven hundred feet of track has been laid to the plant."

"There are seven other plants in the state located at Martelle, Dyke, Hubbard, Ralston, West Bend, Sheldon and Eagle Grove.

"Manager Pogeler has had 12 years of experience in the grain and elevator business. He is married and has two children." A portrait photo shows Glenn Pogeler. Address: Manson, Iowa.

86. *Soybean Digest*. 1944. Grits and flakes from the industry: Courtney Lawyer of Iowa killed by bull. Oct. p. 16.

• **Summary:** "Courtney Lawyer, 42, president of the North Iowa Cooperative Processing Co., at Manly, Iowa, was gored to death by a bull September 30. The fatal accident occurred just before the formal opening of the cooperative's new soybean processing plant."

87. Portrait photograph of Glenn Pogeler in Iowa dressed in a coat and tie. 1944.





• **Summary:** A stamp on the rear of the photo shows that it was taken at Russell Studio in Mason City, Iowa; Glenn lived at the time in Manly, a small town, about 10 miles from Mason City. Manly was so small that there was probably no photography studio in town. This same

photo appeared on 12 Oct. 1944 in the *Manson Journal*. A digital scan of this black-and-white photograph was sent to Soyfoods Center on 16 June 2005 by Allen Pogeler of Encinitas, California.

**88. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Indiana Farm Bureau Cooperative Assn. (Indianapolis).

**Manufacturer's Address:** Vincennes, Indiana.

**Date of Introduction:** 1944.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 6. Indiana Farm Bureau Cooperative Assn. (Indianapolis) (Vincennes, Indiana, 1944).

**89. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Indiana Farm Bureau Cooperative Assn. (Indianapolis).

**Manufacturer's Address:** Wabash, Indiana.

**Date of Introduction:** 1944.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table

5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 6. Indiana Farm Bureau Cooperative Assn. (Indianapolis) (Wabash, Indiana, 1944).

**90. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Alhambra Grain and Feed Company.

**Manufacturer's Address:** Alhambra, Illinois.

**Date of Introduction:** 1944.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 7. Alhambra Grain and Feed Company. (Alhambra, Illinois, 1944).

**91. Markley, Klare S.; Goss, Warren H.** 1944. Development of the soybean processing industry (Document part). In: K.S. Markley & W.H. Goss. 1944. *Soybean Chemistry and Technology*. Brooklyn, New York: Chemical Publishing Co. vii + 261 p. See p. 137-43. [190 ref]

• **Summary:** "The first soybean crushing in the United States, for which records are available (Footnote: L.W. Eilertsen, personal communication) however, appears to have been on Manchurian beans in about 1911. The soybeans were imported by the Albers Brothers Milling Company and sold to a Mr. Herman Meyer who operated a small hydraulic press oil mill in Seattle, Washington. The establishment was later known as Pacific Oil Mills, but it is no longer in existence. The meal, produced in these operations, was sold as a feed ingredient under the name of 'Proteina.' It was found, however, that the oil and meal could be imported more cheaply than they could be domestically produced from imported raw materials, and the crushing operations were, therefore, discontinued after the initial shipment of beans had been processed" Note: This is the earliest document seen that mentions Albers Brothers Milling Company, and states that they imported the first soybeans crushed in America—by Herman Meyer.

"The earliest recorded crushing of American-grown soybeans took place at the cottonseed oil mill of the Elizabeth City Oil and Fertilizer Company in Elizabeth City, North Carolina. This mill was later operated by the Eastern Cotton Oil Company, but its operation were discontinued in the early 1930's. The first soybean crush was largely a test run, extending from December 13 to 20, 1915. During that time, 10,000 bushels of local soybeans were pressed in the six expellers with which the mill was equipped, and the resulting meal was reported to be of excellent quality, containing 5.0 to 5.5% oil. The test was conducted by Mr. W.T. Culpeper [sic, Culpepper], manager of the firm, as part

of his activities toward encouraging local soybean production. The experiment was so successful that the company continued to process local soybeans, as supplies became available, and they reportedly offered production contracts with the growers in advance in order to induce farmers to grow more of this crop. In spite of their efforts to develop the production of soybeans sufficiently to assure regular operations, difficulties were encountered, from time to time, in obtaining enough beans to warrant crushing them. In 1916, for example, it is said that German interests bought and exported the entire available supply, at prices as high as \$4.50 per bushel.

"In late 1917 or early 1918, the Chicago Heights Oil Manufacturing Company (Footnote: \*"E.J. Dies, *Gold From the Soil*, The Macmillan Co., New York, 1942") experimentally processed a small amount of soybeans in expellers which were originally designed for crushing corn germs. During 1918, this company is said to have added two expellers specifically for crushing soybeans. These expellers had a combined capacity of 600 bushels per day and were used intermittently during the ensuing years as supplies of beans became available. In the fall of 1922, the same company is said to have experimented with hydraulic press equipment which had been used for producing linseed oil. The Chicago Heights Oil Manufacturing company continued its pioneering efforts toward the establishment of a soybean industry in the present 'soybean belt' until August 1923, when it went out of business. The equipment was purchased by Funk Brothers Seed Company of Bloomington, Illinois, during the following year, and the latter company has been continuously engaged in the soybean processing business.

"On September 30, 1922, the A.E. Staley Manufacturing Company of Decatur, Illinois, commenced operations in a mill which was equipped with expellers designed for crushing soybeans. This company has been in the soybean processing business continuously since that date. The Staley development was soon followed by others of a similar nature, and the early twenties saw the establishment of a permanent soybean processing industry.

"Not all the earlier ventures proved successful. For example, the Piatt County Soybean Cooperative Company (sometimes referred to as the Monticello Grain Company) was organized in 1922 in Monticello, Illinois, and installed batch solvent extraction equipment for processing 300 bushels of soybeans per day. The solvent is said to have been benzol. This ill-fated undertaking was apparently unable to cope with the scarcity of beans and was in operation for only about six months during the period 1923 to 1924.

"Another early attempt, at solvent extraction of soybeans, was undertaken during the years of 1924 and 1925 by the Eastern Cotton Oil Company of Norfolk, Virginia. A Bollmann type of continuous extractor, having a capacity of approximately 80 tons per day, was used on soybeans obtained from North Carolina, but the supply proved to be

inadequate. Difficulty was also encountered in adapting the German-manufactured equipment to the processing of American-grown soybeans. After exhausting the available stocks of soybeans, the mill's operations were transferred to the extraction of Argentine flaxseed, but this was said to have been found unprofitable.

"At about the same time, soybeans were solvent-extracted by the Prossco Oil Company, also in Norfolk, using Scott rotary extractors. Their operations, however, consisted mainly in the extraction of cocoa butter and other fats, and only a small amount of soybeans is said to have been processed. Others, who engaged in soybean processing during the early twenties, include the Seeds Oil Company in Indianapolis [Indiana] and the Jonathan Havens Oil Company at Washington, North Carolina." Address: 1. Principal Chemist, Southern Regional Research Lab., New Orleans, Louisiana; NRRL 2. Senior Chemical Engineer, NRRL, Peoria, Illinois.

92. Burlison, W.L. 1945. Some observations on the development of soybeans in Illinois. *Soybean Digest*. Jan. p. 13-14.

• **Summary:** "Soybeans were being studied at the Univ. of Illinois Agricultural Experiment Station before the turn of the 20th century. In April, 1896, Dr. C.G. Hopkins wrote a bulletin entitled 'Composition and Digestibility of Corn Ensilage, Cowpea Ensilage, Soja Bean Ensilage and Corn Fodder.' This was Bulletin 43 and was the first official publication distributed by the Illinois Agricultural Experiment Station in which soybeans were discussed. In 1897 the University of Illinois issued a circular entitled 'The cowpea and the Soybean.'

Not much on soybeans was published for the next 20 years, yet research on both cowpeas and soybeans continued, with the emphasis gradually shifting to soybeans. As early as 1903 six soybean varieties were planted in trial plots. Today, soybean yield is practically double what it was in the early years in Illinois. Dr. C.M. Woodworth selected Illini as a promising variety as early as 1923. Researchers have also worked toward the improvement of cultural practices, including thorough inoculation, which is essential. "It not only contributes to improved subsequent crop yields, but immediate benefit is obtained in the form of increased yield of beans. Furthermore, the bean crop itself contains a higher percentage of protein than the uninoculated crop.

Machinery: "The mechanics of planting soybeans has never been a very serious problem. The wheat drill and the corn planter have both been used effectively. The University of Illinois agricultural engineers are now working with a farm implement company on the development of a tractor drawn combination seeder and cultivator, a one man outfit" [a combine].

"We at Illinois have been particularly interested in the development of edible soybeans, that is, soybeans particularly adapted for use as human food in the green state." Dr.



Sibyl Woodruff did important early work on the “development of so-called edible soybeans.” Tests on 466 varieties were tested and 6 were found to be of special merit.

The soybean appears to have a bright future. “In 1925 the United States produced 4,875,000 bushels of soybeans as compared to the world’s production of 179 million bushels or about 2.7% of the world’s production. Fifteen years later the U.S. production was 87,409,000 bushels as compared to the world’s production of 285,000,000 or 30.7% of the world’s production for 1939.”

Photos show: (1) W.L. Burlison. (2) The Boone Valley Co-op Processing Association facility at Eagle Grove, Iowa.

Note: This is the earliest document seen (June 2005) showing a soybean processing plant at Eagle Grove, Iowa. Address: Head, Dep. of Agronomy, Univ. of Illinois.

93. *Soybean Digest*. 1945. A cooperative mill roundtable. Feb. p. 13.

• **Summary:** “The managers of Iowa’s seven soybean cooperatives take part in a panel discussion at the Farmers Grain Dealers Association of Iowa convention at Des Moines January 18.” A large photo shows 6 of the panelists seated at a table. Standing at the lectern and microphone is M.M. Stientjes, manager of the Big 4 Cooperative Processing Association at Sheldon. Behind him on the wall is a map of the United States and many flags. The map’s title appears to be “WDI’s Market News Service brings you market reports. From USDA-WFA Office of Marketing Services.”

The other panelists are: (1) Clifford Gregory, Farmers Cooperative Co., Dike, Iowa. (2) Glenn Pogeler, North Iowa Cooperative Processing Association, Manly. (3) Karl Nolin, Farmers Cooperative Association, Ralston. (4) R.W. Jurgens, West Bend Elevator Co., West Bend. (5) Edward Olson, Boone Valley Cooperative Association, Eagle Grove. (6) C.K. Gordon, Farmers Cooperative Elevator, Martelle.

Stientjes told his audience, more than 500 cooperative grain dealers, that the co-op soybean processing plants “came in as an emergency proposition to help out with war production. He admitted that the group may have to scrap their equipment after the war in favor of more efficient outfits. ‘We rode in on this war and we may ride out with this war. If we can’t meet competition we will go by the wayside.’” Stientjes said he hoped the co-ops would be in a financial position to make the changeover without loss.

The co-ops plan to obtain the soybeans they process from members, and to market the oil meal through member organizations. Presently, only about 15-30% of U.S. soybean production passes through elevators owned by farmers or cooperatives.

Note: This is the earliest document seen (June 2005) that mentions Glenn Pogeler or the North Iowa Cooperative Processing Association.

94. Schiffman, Edward G. 1945. Cooperative soybean

processing mills. *Soybean Digest*. Feb. p. 12-13.

• **Summary:** “Farmers’ cooperative associations, long well established in processing many farm products, have only recently entered the soybean processing field, the first cooperative mill having been organized at Henderson, Kentucky, in 1940. [Note: It began operation on 18 June 1941]. Since this date, there has been a rapid expansion and on December 1, 1944, 14 cooperative mills were in operation and 6 were under construction.

“Of the 20 mills in operation or under construction, 18 use screw press equipment, one uses both solvent and screw press equipment, and one uses solvent equipment only. The capacity of these mills varies from 10 to 75 tons per day. The mills in operation on December 1 had an estimated annual capacity, based on 346 days of operations, of 5,640,000 bushels, which, with 2,216,000 bushels of capacity now under construction, will bring the total capacity of cooperative soybean mills to 7,856,000 bushels. This represents approximately 4.6 percent of the annual capacity of 172 million bushels of all soybean mills.

“As to organization, cooperative soybean mills are of four general types: (1) those owned and operated as an integral part of a local cooperative elevator; (2) local mills owned and operated independently of any other cooperative activity; (3) mills owned and operated by a federation of cooperative elevators; and (4) those owned and operated by and for a cooperative located outside the territory in which the mill secures its beans...

“The recent rapid expansion of farmers cooperative soybean oil mills can be chiefly attributed to the inability of farmers to obtain soybean meal other than in mixed feeds.” Address: Senior Agricultural Economist, Farm Credit Administration.

95. Schiffman, Edward G. 1945. Cooperative soybean mills need to plan now for the future. Washington, DC: USDA Farm Credit Administration, Cooperative Research and Service Div. 9 p. March 1.

• **Summary:** Contents: Introduction. Form of organization: Four general groups. Equipment used. Present equipment will be obsolete. Factors affecting operations: Size of plant. Capacity operations. Handling charges. Diversification of activities. Labor cost and utilization. Oil yields. Moisture content of meal. Cost of plant. Distribution of savings (patronage dividends). Summary.

“The purpose of this report is to discuss the present status of cooperative soybean oil mills, some of the factors which should be considered in organizing and operating such a mill, and the nature of the problems these mills are likely to be confronted with in the future.

“The experience of cooperatives in operating soybean oil mills is rather limited. The first such mill was organized in Henderson, Kentucky, in 1940. Rapid expansion took place [during World War II] and on January 1, 1945, 20 such mills

were either in operation or under construction by cooperatives. Much of this expansion was the direct result of farmers' inability to purchase protein feed concentrates. To alleviate this shortage, farmers in many areas acquired their own mills on a cooperative basis to process their own beans." Relatively little consideration seems to have been given to the financial outcome of these mills or to various organizational and operating problems. "The large net savings resulting from present wide processing margins guaranteed by the Federal Government, cannot be expected to continue beyond the present war emergency period."

"Cooperative soybean mills can be roughly classified into four general types as to their form of organization. These are: (1) those owned and operated as an integral part of a local cooperative elevator; (2) local mills owned and operated independently of any other cooperative activity; (3) mills owned and operated by a federation of cooperative elevators; and (4) those owned and operated by and for a cooperative located outside the territory from which the mill obtains its beans. Method of organization in itself may not be important but it is important that the type of organization be suited to the size and type of plant needed, available capital, available supplies of beans, sales outlets for meal, methods of distributing patronage dividends, location, transit privileges, and other related matters."

Of the 20 cooperative soybean oil mills in operation or under construction as of January 1, 1945, 18 use screw press or expeller equipment, 1 uses both screw press and solvent extraction equipment, and 1 uses solvent equipment only. Address: Senior Agricultural Economist, Cooperative Research and Service Div.

**96. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Farmers Union Jobbing Association.

**Manufacturer's Address:** Girard, Kansas.

**Date of Introduction:** 1945. April.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Kansas Business Magazine*. 1945. June. p. 10. A table shows: Farmers Union Jobbing Assn. (a cooperative), of Girard, started operation in April 1945. They now have 1 expeller with an estimated capacity of 600 bushels. A photo (p. 9) shows the soybean mills.

Note: The relationship between this cooperative soybeans processor and Producers Cooperative Association, which started operation in the same town (Girard, Kansas) in April 1948, is not clear. Did the same cooperative change names? Did one co-op acquire or merge with another?

97. *Kansas Business Magazine*. 1945. Soybean processing. June. p. 8-10, 22-23.

• **Summary:** This well-illustrated article lists 8 Kansas

soybean processing plants and the annual soybean acreage in the state for the past 6 years. It contains much interesting information about Kansas soybean history since 1939.

Photos (p. 8) show: (1) Soybean field of Harry Paris in Ottawa County, Kansas, planted June 15; photo taken Aug. 15. (2) Storage bins and elevator at a Kansas soybean mill. (3) Soybean oil storage tanks. (4) Soybean cake coming from an oil expeller after the oil is extracted. (5) Bins (house shaped) for soybean storage (140,000 bu capacity). (6) Main barrel of oil expeller showing oil extruding from slits. (7) Cascade of soybeans from car to storage. (8) Filter press to clarify crude soybean oil.

Photos (p. 9) show: (1) Kansas Soybean Mills, Inc., Emporia, Kansas. (2) Kansas Soya Products Inc., Kansas City, Kansas. (3) Soy-Rich Products Inc., Wichita, Kansas. (4) Farmers Union plant, Girard (cooperative).

Tables show: (1) Soybeans harvested for beans in Kansas (Source: Federal-state agricultural statistician): Acreage increased from 8,000 acres in 1939 to 24,000 in 1940, to 47,000 in 1941, to 212,000 in 1942, to a local peak of 244,000 in 1943. Corresponding production and yield figures are also given.

(2) Kansas Soybean Processing Plants: Kansas Soybean Mills, Inc., of Emporia (Ted W. Lord, president), began operation in Nov. 1941—the first soybean processor in Kansas. They now have 3 expellers with an estimated capacity of 1,600 bushels/day. Kansas Soya Products, Inc., Kansas City, Kansas (Ted W. Lord, president), began operation in March 1944. They now have 3 expellers with an estimated capacity of 2,700 bushels. Forbes Bros. in Topeka has 1 expeller with 400 bushels capacity; temporarily operating on corn; no starting date is given. J.J. Thompson [sic, Thomson] & Son, of Hiawatha, began operation in April 1944. They have 1 solvent plant with an estimated capacity of 900 bushels. Soy-Rich Products, Inc., of Wichita, began operation in Feb. 1944. They now have 3 expellers with an estimated capacity of 2,350 bushels. Farmers Union Jobbing Assn. (a cooperative), of Girard, started operation in April 1945. They now have 1 expeller with an estimated capacity of 600 bushels. Consumers Cooperative Soybean Co., of Coffeyville, Kansas, expect to start operation in June 1945. They now have 2 expellers with an estimated capacity of 1,800 bushels. Archer Daniels Midland Co., of Fredonia, has been in operation since Feb. 1945. They use a hydraulic press for processing mostly linseed, but also some soybeans. The present plant capacity in 4,200 bushels/day. The number "3,000" is included in the table in the wrong column in a confusing way. It might refer to soybean processing capacity.

A chart titled "Uses of the soybean" shows the many different ways in which soybeans can be used.

Gives a brief history of the Lord family in Kansas, and the pioneering work of three generations (C.W. Lord, T.B. Lord, and Ted W. Lord) with grains and soybeans. "The Lord boys

had incorporated their business in October 1940 with Ted W. Lord as president, Philip R. Lord as vice-president and secretary, and Richard W. Lord, now in the Army, as vice-president and treasurer." They started operating Kansas Soybean Mills, Inc. in Emporia in Nov. 1941 with only one expeller that handled 400 bushels/day. Two more units were added to the plant there in 1942, bringing the capacity to 1,600 bushels/day by the summer of that year. "Later additional grain storage tanks were added."

With the successful operation of the Emporia plant as a background, the Lord brothers purchased an old mill, including large bins and a large building in Kansas City, Kansas, operating first with two units and then installing a third in March 1944, bringing it to 2,700 bushels daily capacity. The Emporia mill also makes its own brand of feeds for beef and dairy cattle, hogs, sheep and poultry. Mr. Lord sees a bright future for his soybean products after the war; he plans to reach new markets and anticipates "a big demand from export areas." One big problem is jackrabbits, which jump fences to eat the tender, flavorful beans. Soybean production is expected to "grow as means of combatting rabbits is found..." Note: This March 1944 date is given in the table as the date the company began operation; one must be mistaken.

"The increase in the demand for soybean oil has accompanied the decreased output in cotton oil. Many makers of margarine and shortening are today utilizing soybean oil instead of cotton oil or peanut oil.

Most soybean processing plants are in the eastern half of Kansas since most of the soybeans are produced east of the Flint Hills. In 1944, counties with the largest production are: Cherokee—277,920 bushels, 23,160 acres; Anderson—220,480 bushels, 13,780 acres; Franklin—216,770 bushels, 12,980 acres.

**98. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Consumers Cooperative Association (Kansas City, Missouri).

**Manufacturer's Address:** Coffeyville, Kansas.

**Date of Introduction:** 1945. July.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Soybean Digest*. 1944.

"\$6,000 mill to process soybeans and flax will be erected by Consumers Cooperative Association at Coffeyville, Kansas." April. p. 22.

*Kansas Business Magazine*. 1945. June. p. 10. A table shows: Consumers Cooperative Soybean Co., of Coffeyville, expect to start operation in June 1945. They now have 2 expellers with an estimated capacity of 1,800 bushels. *Soybean Digest*. 1945. "Coffeyville, Kansas, plant in operation." Aug. p. 27. The plant went into operation on July 1.

*Soybean Digest*. 1947. Jan. "Consumer Cooperative

Association's processing plant at Coffeyville, Kansas..." Jan. p. 30 "... processed one-half million bushels of soybeans during its first year's operation, the company reports." Note: In Oct. 1945 Cargill purchased the Nutrena Mills feed mill in Coffeyville, Kansas.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 8. Consumers Cooperative Association (Kansas City, Missouri) (Coffeyville, Kansas, 1945).

Fite, Gilbert C. 1978. *Beyond the fence rows: A history of Farmland Industries, Inc., 1929-1978*. Columbia, Missouri and London, England: University of Missouri Press. xxii + 404 p. In 1944 CCA began construction of a soybean mill near its refinery at Coffeyville, Kansas. This mill began operation on 3 July 1945 (p. 189).

Letter from Linda McFall of Coffeyville Public Library. CCA's 16th Annual Report, presented at its Sept. 1944 annual meeting, mentioned construction of the soybean mill (p. 20). CCA's 17th Annual Report, presented at its Sept. 1945 annual meeting, mentioned completion and start-up (p. 16). CCA's mills, including Coffeyville, were operated under the heading of Cooperative Soy Processing Inc. The Coffeyville soybean mill was unprofitable and was closed in about 1970.

99. *Soybean Digest*. 1945. Grits and flakes... from the world of soy: Soybean plant in Mexico, Missouri. July. p. 22.

• **Summary:** "Excavation has started for the construction of a soybean plant and elevator in Mexico, Missouri, for the Missouri Farmers Association, with priorities having been granted by the WPB [War Production Board]. The soybean plant will crush about 500,000 bushels annually, and the storage will hold about 275,000 bushels. The plant... replaces the mill owned by MFA, but never placed in operation, which burned more than a year ago."

100. *Soybean Digest*. 1945. Coffeyville, Kansas, plant in operation (Photo caption). Aug. p. 27.

• **Summary:** This 1/3 page photo (from the *Cooperative Consumer*) shows the soybean processing plant of the Consumer Cooperative Association (Coffeyville, Kansas) went into operation on July 1. "It was built adjacent to the refining properties of C.C.A. Manager E.L. McIntosh estimates capacity at 2,200 gallons of oil and 45 tons of oil meal daily."

101. *Mason City Globe Gazette (Iowa)*. 1945. Soy bean plant sales hit million first year: Ships meal, oil to many states. Over \$35,800 paid in patronage dividends. Sept. 29?

• **Summary:** "Manly—The soybean processing plant at Manly ended its first year of operation with gross sales amounting



to \$1,090,425.23. The net savings [profit] was \$43,533.16 of which \$35,857.63 was allocated to patronage dividends, the balance legal reserve.

"The plant began operation Sept. 18, 1944, and processed 471,875 bushels of soybeans, equivalent to 315 carloads." The amount of soybean meal and oil produced during the 1st year, and the states to which each was shipped is given. "Twenty carloads of coal were used to produce steam to dry the beans.

"Glenn Pogeler was re-elected manager of the plant at the annual meeting of the North Iowa Processing association in Manly. The association has 28 member companies. More than 125 persons attended the annual meeting." All officers were re-elected as follows: "Earl M. Dean, Mason City, president; M.G. Fabromus, Osage, vice president; Earl Dickenson, Manly, secretary-treasurer." Names of other members of the executive committee are given. "Harold Tietjens is mill foreman and Miss Barbara Deninger office secretary. A work force of 16 persons is on the payroll."

102. Fetrow, Ward Willard; Scarce, Jane L. 1945. Working manual for cooperative soybean oil mill operators. Washington, DC: USDA Farm Credit Assoc. Nov. \*

103. **Product Name:** Soybean Oil, and Soybean Oil Meal. **Manufacturer's Name:** Jersey Shore Cooperative Soybean Association.

**Manufacturer's Address:** Jersey Shore, Pennsylvania.

**Date of Introduction:** 1945.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75.* 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 9. Jersey Shore Cooperative Soybean Association (Jersey Shore, Pennsylvania, 1945). Note: See Pennsylvania Soy Bean Cooperative Association (Nov. 1943).

104. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Northwest Cooperative Mills (St. Paul, Minnesota).

**Manufacturer's Address:** Menomonie [Menominie], Wisconsin.

**Date of Introduction:** 1945.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Blue Book.* 1948. p. 74. "Processors of soybeans." Wisconsin–Menomonie: Northwest Cooperative Mills. (Offices, 635 N. Fairview Ave., St. Paul, Minnesota). President: E.A. Syftestad. Vice president: A.J. Haynes. Secretary-treasurer: A.J. Smaby.

Head soybean buyer, etc.: A.H. Roffers. Plant superintendent: Leland Bandelow. 2 expellers. Processing capacity: 35-40 tons/day. Storage capacity: 160,000 bushels. "Coop" soybean oil meal, mixed feeds and pellets.

*Dawson Sentinel* (Minnesota). 1951 "Soy bean stock sales soar following annual meeting." Oct. 12. p. 1, 7. "Bert Dahl was called on to give highlights of an annual report of a soy bean plant at Menomonie, Wisconsin, which had just been organized"—but was owned by several co-operatives and is somewhat larger than the Dawson plant.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75.* 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 10. Northwest Co-op Mills (St. Paul, Minnesota) (Menominie [Menomonie], Wisconsin, 1945).

105. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Indiana Farm Bureau Cooperative Assn. (Indianapolis).

**Manufacturer's Address:** Rushville, Indiana.

**Date of Introduction:** 1945.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75.* 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 6. Indiana Farm Bureau Cooperative Assn. (Indianapolis) (Rushville, Indiana, 1945).

106. *Mason City Globe-Gazette* (Mason City, Iowa). 1946.

Pogeler leads soybean parley: To appear in session at Purdue University. Aug. 26.

• **Summary:** "Manly–Glenn Pogeler, manager of the North Iowa Co-operative Processing association at Manly, will take part in the 18th annual session of the American Institute of Co-operation at Purdue University, Lafayette, Indiana," from Monday to Friday.

"Pogeler will lead a discussion on the subject 'New Problems Ahead for Vegetable Oil Mills.' Before coming to Manly 3 years ago, Pogeler was manager of the Co-operative Elevator company at Badger for 3 years and prior to that he was manager of the Co-operative Elevator at Richards for 5 years."

"This will be the first such national gathering in 4½ years and will provide an opportunity for agriculture leaders and educators to exchange ideas and experiences developed under the stress of wartime production and to look ahead at ways of meeting the impacts of peacetime readjustments."

A portrait photo shows Glenn Pogeler. Note: An almost identical article titled "Convention speaker," with the same



photo, appeared in *The Manson Journal* at about this time.

107. *Mexico Evening Ledger (Missouri)*. 1946. MFA [Missouri Farmers Association] to dedicate soybean mill here. Oct. 31. Section II—Mill edition. p. 1.

• **Summary:** This is the title of a special 6-page section in the newspaper focusing on the upcoming dedication of the new cooperative soybean mill in Mexico, Audrain County, Missouri. It consists of many short articles about different aspects of the mill, some photos, plus many ads in which local businesses are congratulating the mill.

Titles of articles and photos on page 1 (left to right): “Mexico’s farmer owned—farmer controlled soybean mill” (aerial photo taken from top of new mill shows many trucks lined up to be weighed unloaded. “Despite the modern unloading facilities that can dump a truck in a few seconds, the trucks just couldn’t be handled as fast as they arrived”). “Heinkel reveals Cannon’s aid to new plant here: Helped MFA get two of only four Missouri expellers” (Congressman Clarence Cannon helped obtain priorities from the War Production Board). “Ladonia has MFA exchange in Central chain.” “Columbia exchange has daily radio broadcast.” “Processing plant is one of about 100 in the United States” (continued on page 3). “You gotta hang on tight when riding straight-up ‘elevator.’” “MFA launches state-wide pure seed program.” “Maze heads staff of 18 mill workers; all live in Mexico” (Maurice Maze; lists names of all 18 workers). New MFA mill here in Mexico (photo, ground level). “Soybean faces rosy farm, factory future: Development of products from the crop will benefit both grower and ultimate consumer; to extract oil at plant here.” “MFA dues called state’s biggest dollar bargain: Some of benefits of membership are outlined” (Annual dues are \$1). “New \$500,000 plant will be open to public inspection Nov. 2 and 3: Modern mill, virtually ready after 16 months of construction work, located in Mexico—‘Center of soybean industry.’” (Mexico, Missouri, is now one of “more than 100 communities of the nation where facilities are capable of processing large quantities of protein-rich soybeans...” “Mexico is the focal point of a great soybean growing area.” During the past few weeks trucks have come from a radius of 60 miles, and more “than 4,000 loads of soybeans have been emptied into the huge storage bins of the new elevator.” The new mill has storage capacity for 300,000 bushels of soybeans, consisting of “ten silo type bins 18 feet in diameter and 119 feet high with interlocking smaller beans in between the two rows of silo bins. The headhouse is 161 feet high and houses all the elevating machinery, a hopper scale which can weigh a carload,...” a cleaner for soybeans, a grain dryer [with a capacity of 550 bushels / hour for drying high moisture soybeans], and several storage bins. “The plant will process approximately 500,000 bushels of soybeans annually.” It will operate 24 hours a day, 7 days a week, year around, processing 2,000 bushels of soybeans every 24 hours into 1,000

hundred pound bags of soybean meal and 16,000 pounds of soybean oil).

“Brief program will mark new plant’s opening: Portion of talks, program will go on air over KFRU” radio station (1:00 to 1:45 p.m.). “Plant manager” (Photo and brief biography of Maurice Maze).

Page 2: “Beans to importance here in only 4 years: Will remain a major crop as good farming continues. Production locally has jumped from 7 bushels per acre in 1935’s small crop to an estimated 20 bushels per acre average in ’46.” “Audrain County has 2,382 MFA members.” “Producers grain company has long record.” “Centralia MFA provides feed, oil service.” “M.F.A. founder William Hirth” (portrait photo).

Page 3: “MFA offers farmers expert tire service.” “Pioneer bean grower glad plant is here” (E.W. Leirheimer planted his first soybeans here in 1923. Also a pioneer M.F.A. member, for the past few years he has produced about 75 acres of soybeans on his 300-acre farm northeast of Mexico, Missouri). Ad by Producers Creamery Co. “Soybean meal from the new MFA soybean mill means better feed for Missouri milk cows.”

Page 4: “MFA founder is also an ‘Audrain product’: William Hirth came here with parents as small boy.” “Hirth’s boyhood home near Rush Hill” (photo). “Where William Hirth went to school” (photo of the old Walker school near the farm in Rush Hill community).

Page 5: “Soybeans rank third as Audrain crop: Ability to fit into crop rotation makes importance. Only corn and oats exceed acreage given to beans here; little or no extra machinery needed and its easy to grow” (by A.W. Klemme, Extension specialist in soils, Univ. of Missouri, College of Agriculture).

Page 6: “Now—Missouri soybean meal for Missouri livestock: An essential ingredient of M.F.A. Feeds. Made in Mexico, Missouri at the new soybean mill of the M.F.A. Cooperative Grain and Feed Co.” (3/4 page ad). “You’re invited to our two-day open house... Dedication ceremonies 1 P.M., Saturday, November 2. Hear: F.V. Heinkel, president, Missouri Farmers Association. Mitchell White, editor *Mexico Ledger*. Robert Finley, Mayor of Mexico. E.W. Lierheimer, Audrain Co. farmer. George Sparks, general manager, MFA Coop. Grain and Feed Co. Maurice Maze, manager MFA soybean mill.”

Note: There is no early history of this cooperative in this special issue, and no mention of the large fire on 17 March 1944 that destroyed the feed mill and elevator. It is not clear when this mill first began processing soybeans, but it was probably in Oct. or Nov. 1946.

108. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Missouri Farmers Association Cooperative Grain & Feed Co.

**Manufacturer’s Address:** Mexico, Missouri.

**Date of Introduction:** 1946. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Photo captioned “Missouri soybean mill.” 1946. *Soybean Digest*. Oct. p. 15. The lower caption reads: “This is a closeup of the new two expeller soybean mill of the M.F.A. [Missouri Farmers Association] Cooperative Grain & Feed Co., at Mexico, Missouri. Capacity of the 19 bins is 300,000 bushels. Fire destroyed the firm’s original mill in March 1944, shortly after it had gone into operation.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 6. Missouri Farmers Association (Columbia, Mo., Soybean Division) (Mexico, Missouri, 1946).

Young, Raymond A. 1995. *Cultivating Cooperation: A History of the Missouri Farmers Association*. Columbia, Missouri: Univ. of Missouri Press. xiv + 246 p. After delays caused by a shortage of materials during World War II and a fire in 1944, “the plant finally started operation in late [Oct. or Nov.] 1946” with a capacity of 1,800 bushels/day (p. 147). In 1962 a new solvent extraction soybean plant began operation in Mexico, Missouri, under the management of Kermit Head. This new plant had a capacity of 15,000 bushels/day; the previous expeller plant had crushed 3,000 bushels/day (p. 167).

Letter (e-mail) from William Lester (Omaha, Nebraska). 2005. Sept. 11. The MFA plant in Mexico, Missouri, operated as MFA until the mid-1980s, when it was sold to the A.E. Staley Mfg. Co. They operated it for a few years, then sold their entire soybean processing operation to ADM in about 1985. The fire in 1970 didn’t do a lot of damage to the plant. Kermit Head was the general manager through the MFA years and for part of the time that Staley owned the plant. He died very unexpectedly after what was thought to be a routine knee surgery, of a blood clot, in the early 1990s. He was a dear friend and hunting companion.

109. *Soybean Digest*. 1946. Missouri soybean mill (Photo caption). Oct. p. 15.

• **Summary:** This photo shows a grain storage elevator with many towering concrete bins. The lower caption reads: “This is a closeup of the new two expeller soybean mill of the M.F.A. [Missouri Farmers Association] Cooperative Grain & Feed Co., at Mexico, Missouri. Capacity of the 19 bins is 300,000 bushels. Fire destroyed the firm’s original mill in March 1944, shortly after it had gone into operation.” Note: The head house, even taller than the circular concrete bins, is visible at the far right.

110. *Soybean Digest*. 1946. Grits and flakes... from the world

of soy: The Hubbard, Iowa, soybean mill has been bought by W.J. Hersherberger and Forest Miller, both of Omaha [Nebraska]. Dec. p. 28.

• **Summary:** “... Lee Hersherberger will continue as manager.”

111. *Soybean Digest*. 1946. Grits and flakes... from the world of soy: Plant facilities of Ohio Soy Bean Cooperative at Henderson, Kentucky... Dec. p. 28, 30.

• **Summary:** “... have been expanded with the addition of a 125,000 bushel Quonset type warehouse. A new boiler also has been added to the plant.”

112. *Soybean Digest*. 1947. Grits and flakes... from the world of soy: Expansion of plant facilities of Farm Bureau Cooperative Association (Columbus, Ohio) during the past 2 years. Jan. p. 30.

• **Summary:** “... has included a soybean processing plant at Springfield, Ohio, and an oil refinery at Louisville, Kentucky.”

113. *Soybean Digest*. 1947. Grits and flakes... from the world of soy: Consumer Cooperative Association’s processing plant at Coffeyville, Kansas... Jan. p. 30.

• **Summary:** “... processed one-half million bushels of soybeans during its first year’s operation, the company reports.”

114. *Soybean Blue Book*. 1947. Processors of soybeans [USA and Canada]. p. 44-64.

• **Summary:** Processors are listed by state (alphabetically), and within each state alphabetically by city. For each firm is given the officers, brand names, type of processing equipment, processing capacity, and storage capacity. “Information was obtained through questionnaires sent directly to the processing companies.

Arkansas–Blytheville: Swift & Co. Little Rock: Rose City Cotton Oil Mill. West Memphis: Arkansas Mills.

California–Fresno: Oil Seed Products Co. Oakland: Albers Milling Co.

Illinois–Alhambra: Alhambra Grain & Feed Co.

Bloomington: Funk Bros. Seed Co. Cairo: Cairo Meal and Cake Milling Co. Cairo: Swift & Co. Champaign: Swift & Co. Chicago: Allied Mills, Inc. Chicago: Central Soya Co., Inc. Chicago: The Glidden Co. Chicago: Spencer Kellogg & Sons. Chicago: Swift & Co. Decatur: Decatur Soy Products. Decatur: Spencer Kellogg & Sons. Decatur: A.E. Staley Mfg. Co. Galesburg: Galesburg Soy Products Co. Gibson City: McMillen Feed Mills. Kankakee: Bordens Soy Bean Products Co. Mascoutah: Ph.H. Postel Milling Co. Monmouth: Ralph Wells & Co. Nashville: Huegely Elevator Co. Pana: Shellabarger Soybean Mills. Peoria: Allied Mills, Inc. Quincy: Quincy Soybean Products Co. Roanoke: Eureka Milling Co. Rock Falls: Sterling Soybean Co. Springfield: Cargill, Inc. Taylorville: Allied Mills, Inc. Virden: Hulcher

Soya Products.

Indiana—Bunker Hill: Ladd Soya Co. Danville: Hendricks County Farm Bureau Co-op. Assn. Decatur: Central Soya Co. Ft. Wayne: Central Soya Co. Frankfort: Swift & Co. Lafayette: Ralston Purina Co. Marion: Hoosier Soybean Mills. Portland: Haynes Soy Products. Rushville: Rush County Farm Bureau Co-op. Assn.

Iowa—Belmond: General Mills, Inc., Chemical Div. Cedar Rapids: Cargill, Inc. Centerville: Pillsbury Mills, Inc. Clinton: Pillsbury Mills, Inc. Des Moines: Spencer Kellogg & Sons, Inc. Des Moines: Swift & Co. Dike: Farmers Cooperative Co. Dubuque: E.E. Frith Co. Eagle Grove: Boone Valley Cooperative Processing Assn. Fairfield: Doughboy Industries. Fort Dodge: Borden's Soybean Processing Co. Fort Dodge: Cargill, Inc. Gladbrook: Central Iowa Bean Mill. Hubbard: Hubbard Soybean Mill, Inc. Iowa Falls: Ralston Purina Co. Manly: North Iowa Cooperative Processing Assn. Marshalltown: Marshall Mills, Inc. Martelle: Farmers Cooperative Elevator. Muscatine: Hawkeye Soy Products. Muscatine: Muscatine Processing Corp. Plainfield: Roach Soybean Mills. Quimby: Simonsen Mill—Rendering Plant. Ralston: Farmers Cooperative Assn. Redfield: Iowa Soya Co. Sac City: Williams Milling Co. Sheldon: Big 4 Cooperative Processing Assn. Sioux City: Sioux Soya Co. Spencer: Cargill, Inc. Washington: Cargill, Inc. Waterloo: Borden's Soy Bean Processing Co. West Bend: West Bend Elevator Co.

Kansas: Coffeetown [Coffeyville]: Consumers Cooperative Assn. Soybean Mill. Emporia: Kansas Soybean Mills, Inc. Girard: Farmers Union Jobbing Assn. Hiawatha: Thomson Soy Mill. Kansas City: Kansas Soya Products Inc. Wichita: Soy-Rich Products, Inc.

Kentucky—Henderson: Ohio Valley Soybean Cooperative. Louisville: Buckeye Cotton Oil Co. Owensboro: Owensboro Grain Co.

Louisiana—Alexandria: Red River Cotton Oil Co.

Michigan—Concord: Concord Soya Corp. Saline: Soybrands, Inc.

Minnesota—Mankato: Mankato Soybean Products, Inc. Minneapolis: Archer Daniels Midland Co. Minneapolis: Cargill, Inc. Minneapolis: General Mills, Inc. Minneapolis: Spencer Kellogg & Sons, Inc. Preston: Hubbard Milling Co.

Missouri—Kansas City: Ralston Purina Co. Kennett: Hemphill Soy Products Co. Mexico: M.F.A. Cooperative Grain & Feed Co. St. Joseph: Dannen Grain & Milling Co. St. Louis: Blanton Mill, Inc. St. Louis: Ralston Purina Co. Trenton: Central Farm Products Co.

Nebraska—Fremont: Fremont Cake & Meal Co. Lincoln: Gooch Milling & Elevator Co. Omaha: Allied Mills, Inc.

New York—Buffalo: Spencer Kellogg & Sons, Inc. Oswego: Oswego Soy Products Corp.

North Carolina—Clayton: Central Oil & Milling Co. Farmville: Farmville Oil & Fertilizer Co. Hartford: Southern Cotton Oil Co. New Bern: New Bern Oil & Fertilizer Co.

North Dakota—Grand Forks: North Dakota Mill & Elevator.

Ohio—Bellevue—Spencer Kellogg & Sons, Inc. Circleville: John W. Eshelman & Sons. Circleville: Ralston Purina Co. Cortland: Richards Milling Co. Delphos: Delphos Grain & Milling Co. Fostoria: Swift & Co. Lexington: Lexington Soy Products Co. Marion: McMillen Feed Mills, Inc. Ohio City: Holland Pioneer Mills, Inc. Painesville: A.E. Staley Mfg. Co. Springfield: Farm Bureau Cooperative Assn. Toledo: Toledo Soybean Products Co. Wooster: Soya Processing Co.

Oklahoma—Oklahoma City: Producers Cooperative Oil Mill.

Pennsylvania—Jersey Shore: Penna Soy Bean Co.

South Dakota—Sioux Falls: Western Soybean Mills.

Tennessee—Memphis: Buckeye Cotton Oil Co. Tiptonville: West Tennessee Soya Mill, Inc.

Virginia—Norfolk: Davis Milling Co., Portsmouth: Allied Mills, Inc. Portsmouth: Monsanto Chemical Co.

Wisconsin—Janesville: Janesville Mills, Inc.

Canada—Toronto: Dominion Linseed Oil Co. Toronto: Toronto Elevators Ltd. Toronto: Victory Mills, Ltd.

Note: This is the earliest document seen (Nov. 2007) which appears to show clearly that M.F.A. [MFA; Missouri Farmers Association] is now processing soybeans in Mexico, Missouri.

115. *Soybean Blue Book*. 1947. Soybean processors that make soybean pellets (Document part). p. 46-64.

• **Summary:** In the 1947 issue of the *Soybean Blue Book*, the section titled "Processors of soybeans" (p. 46-64) shows that the following companies make soybean pellets. They are listed alphabetically by state, and within each state, alphabetically by city: California: Oakland—Albers Milling Co. "Albers Quality Controlled" feeds and pellets.

Illinois: Chicago—Central Soya Co. "Master Mix" feeds and pellets. Chicago—Swift & Co. "Swifts" soybean oil meal and pellets. Decatur—Spencer Kellogg & Sons. "Spencer Kellogg's" 44% protein pellets. Decatur—A.E. Staley Mfg. Co. "Staley's" oil meal and pellets. Gibson City—McMillen Feed Mills. "Master Mix" feeds and pellets.

Indiana: Decatur—Central Soya Co. "Master Mix" feeds and pellets. Fort Wayne—Central Soya Co. "Master Mix" feeds and pellets. Rushville—Rush County Farm Bureau Co-op Assn. "Farm Bureau" soybean oil meal, mixed feeds, and pellets.

Iowa: Cedar Rapids—Cargill, Inc. "Cargill-Nutrena" feeds and pellets. Cedar Rapids—Iowa Milling Co. "Honeyhead" and "Cremo" feeds and pellets. Centerville—Pillsbury Mills, Inc. "Pillsbury's Best" feeds and pellets. Clinton—Pillsbury Mills, Inc. "Pillsbury" soybean oil meal, feeds and pellets. Des Moines—Spencer Kellogg & Co. "Spencer Kellogg's" 44% Protein Toasted soybean oil meal and pellets. Des Moines—Swift & Co. "Swifts" soybean oil meal and pellets. Eagle Grove—Boone Valley Cooperative Processing Associa-



tion. "Co-op" soybean oil meal, feeds and pellets. Fairfield-Doughboy Industries. "Doughboy" oil meal, feeds and pellets. Fort Dodge-Cargill, Inc. "Cargill-Nutrena" feeds and pellets. Ralston-Farmers Cooperative Association. "Farmers" soybean oil meal and pellets. Sac City-Williams Milling Co. "Williams" soybean oil meal, feeds and pellets. Sioux City-Sioux Soya Co. "Su Soy" soybean oil meal and pellets. Spencer-Cargill, Inc. "Cargill-Nutrena" pellets and feeds. Washington-Cargill, Inc. "Cargill-Nutrena" pellets and feeds.

Kansas: Coffeerville-Consumers Cooperative Processing Association. "Co-op" soybean oil meals and pellets. Emporia-Kansas Soybean Mills, Inc. "Sunflower" soybean oil meal, pellets, and feeds. Hiawatha-Thomson Soy Mill. "Scotch" soybean oil meal and pellets. Kansas City-Kansas Soya Products, Inc. "Sunflower" soybean oil meal and pellets. Wichita-Soy-Rich Products, Inc. "Four Leaf Clover" soybean oil meal and pellets.

Minnesota: Minneapolis-Archer-Daniels-Midland Co. "Archer Brand" soybean oil meal, pellets and feeds. Minneapolis-Cargill, Inc. "Cargill-Nutrena" feeds and pellets. Preston-Hubbard Milling Co. "Sunshine" feeds and pellets.

Missouri: Kennett-Hemphill Soy Products. "Circle H" soybean oil meal and pellets. Mexico-M.F.A. Cooperative Grain & Feed Co. "M.F.A. oil meal, feeds and pellets. St. Joseph-Dannen Grain & Milling Co. "Dannen" soybean oil meal, feeds and pellets.

Nebraska: Fremont-Fremont Cake & Meal Co. "Pete Marr" soybean oil meal and pellets.

North Dakota: Grand Forks-North Dakota Mill & Elevator. "Dakota Maid" soybean oil meal, feeds and pellets.

Ohio: Circleville-John W. Eshelman & Sons. "Eshelman Red Rose" soybean oil meal, feeds and pellets. Marion-McMillen Feed Mills, Inc. "Master Mix" feeds and pellets. Ohio City-Holland Pioneer Mills. "Lucky Strike" soybean oil meal, feeds and pellets. Wooster-Soya Processing Co., "Wooster" soybean oil meal, feeds and pellets.

Oklahoma: Oklahoma City-Producers Cooperative Oil Mill. "Co-op" soybean oil meal and pellets.

South Dakota: Sioux Falls-Western Soybean Mills. "Sioux" soybean oil meal, feeds and pellets.

116. Farmers Cooperative Association. 1947. Manufacturers of expeller process soybean oil meal and soybean pellets (Ad). *Soybean Blue Book*. p. 62.

• **Summary:** A simple 1/2-page ad. Address: Ralston, Iowa.

117. *Eagle Grove Eagle (Iowa)*. 1947. Boone Valley fire loss set at \$175,000: Resolution passed by executive board favors rebuilding. Origin of oil fed blaze undetermined, spreads over factory in matter of minutes. Aug. 28. p. 1, 12.

• **Summary:** The fire, whose cause is unknown, started on Saturday, Aug. 23, at about 7:15 p.m., on the north side of the cupola on top of the Boone Valley Cooperative Process-

ing Association soybean crushing plant. Insurance adjusters have been in town since Monday. "There were 500 tons of finished feed in the warehouse, 300 bushels of oats, 200 of corn and 5,000 bushels of [soy] beans. There were also 112,000 pounds of soy bean oil, not all of which was lost..." The fire department and "volunteers did an excellent job of saving machinery and equipment in the expeller room where most of the hard to get and valuable machinery is located. Rubber belts in the expeller were not even burned. The expellers and cookers will probably be salvageable with very little damage.

Boone Valley, with 23 employees, is owned by 43 cooperative elevators in this section of Iowa. The manager is Ed Olson. Two large photos show the burning building.

118. *Eagle Grove Eagle (Iowa)*. 1947. Business men ask firm to rebuild plant: Resolution expressing sympathy and pledging aid given to Boone Valley. Aug. 28. p. 1.

• **Summary:** "At a special meeting of the Board of Directors of the Eagle Grove Chamber of Commerce the following resolution was adopted and given to Ed Olson, manager of the soy bean plant."

119. MacGee, A. Ernest. 1947. Vegetable oil extraction solvents; History and general chemical composition. *Oil Mill Gazetteer* 52(1):17-21. July; 52(2):35-43. Aug. [53 ref]

• **Summary:** The growth of the vegetable and animal oil extraction industry since 1930 has been rapid and astonishing. Many parallels can be found with George Stephenson's invention and persistent development of the locomotive in England in the early 1800s. In 1930 Clarence F. Eddy predicted a bright future for larger oil mills using continuous, counter-current solvent extraction. In 1933 David Wesson recounted the history of his work with cottonseed oil (from 1889) and with solvent extraction of cottonseed oil (from about 1900 to 1917), using benzine and low end point-high test gasoline. A mill in New Orleans (Louisiana) ran from 1917-1919, first using aviation type gasoline, later using benzol.

Concerning early solvent extraction of soybeans: Piatt County Soybean Cooperative Co., Monticello, Illinois, operated a batch plant with a capacity of 8 tons/day for about 6 months in 1923-24 using benzol as a solvent. In 1924 the Eastern Cotton Oil Co., Norfolk, Virginia, used a continuous extractor of about 80 tons/day capacity.

Solvent extraction was apparently patented in England in 1856 and had become fairly well established in Europe by about 1870. However these early solvent extraction plants were of the "batch" type and had fairly small capacities, with no means of agitation. In about 1900 the solvent countercurrent principle was introduced in Europe by combining several consecutive batch extractors. Next came the introduction of the "continuous" type extractor. The first two successful continuous extraction plants processing large



volumes in the 1920s were: (1) The Hansa-Muehle, A.G., Hamburg, Germany, using the “Bollmann” extractor, and (2) the Extractochemie, A.G., Zurich, Switzerland (but originally of Harburg, Germany) using the “Hildebrandt” extractor. At Hansa-Muehle in 1928 the central plant, consisting of four extractor units with a combined capacity of over 1,000 tons/day, was put into operation. By 1934 a number of continuous solvent plants were operating in Europe.

In the USA, the first large-scale plant of this type was that of the Archer-Daniels-Midland Company, Chicago, Illinois. In March 1934 it began operating using a “Hildebrandt” extractor to process 100 tons/day of soybeans. The solvent was petroleum naphtha of the hexanes type. As of 1947, this plant is still in operation.

The ADM plant in March 1934 represented a “turning point and marked the beginning of the large scale edible oil extraction industry as it is known today.” Installations of other large-capacity continuous solvent extraction plants followed in rapid succession:

1934 Nov.—The 100 tons per day soybean plant of The Glidden Company, Chicago, Illinois, began operating.

1937 Nov.—the 400 tons per day plant of the Central Soya Co., Decatur, Indiana, began operation.

1938 Oct.—The 100 tons per day soybean plant of Honeymead Products Co. (Cargill, Inc. by Aug. 1947), Cedar Rapids, Iowa, began operation. By 1947 an estimated 33% of the soybean processing capacity operating in the USA used the solvent extraction process. Schiffman (1945) reported that of the estimated 4.25 million tons soybean processing capacity on 1 Oct. 1945, only 27% of the capacity in operation was of the solvent type, but 64% of the total capacity under construction on that date was of the solvent type.

Table 1 shows the tonnage and percentage of soybeans processed by expeller, solvent and hydraulic methods from 1936 to 1940. Expeller increased from 68.5% to 74.2%. Solvent increased from 13.2% to 23.1%. Hydraulic decreased from 18.5% to 2.7%.

The largest soybean solvent plant in the USA today is that owned by A.E. Staley Manufacturing Co., Decatur, Illinois. Costing \$2 million and having a capacity of 650 tons per day, it went on stream in March 1945. The extraction tower was supplied by French Oil Mill Machinery Co. and it used a “petroleum hexane-type solvent of 146 to 156 degrees F. general boiling range.”

Two events that occurred during the 1930s were of vital importance to the rapid growth and widespread application of the solvent extraction process in the oil and fat industries: (1) The perfecting of large volume, continuous processing equipment, and (2) the development of light petroleum naphthas of the hexane and heptane types. Address: Manager Skellysolve Sales, Skelly Oil Co., Kansas City, Missouri.

120. Boone Valley Cooperative Processing Association.

1947. Fire or explosion in solvent extraction plant. Eagle Grove, Iowa. Aug. 23.

• **Summary:** Crabbe, Carolyn; McCutcheon, Connie. eds. 1981. *Eagle Grove, Iowa 1881-1981 centennial*. Eagle Grove, Iowa: Eagle Grove Centennial Committee. vi + 218 p. See p. 21. “1944 March 4—Plant started operation... 1947 Aug. 23—Fire which almost completely destroyed processing plant.” Address: Eagle Grove, Iowa.

121. *Eagle Grove Eagle (Iowa)*. 1947. Boone Valley factory is to be rebuilt: President Koolhof writes letter to citizens of Eagle Grove announcing decision. Sept. 4. p. 1.

• **Summary:** The directors of Boone Valley Cooperative Processing Association voted unanimously last Friday to rebuild their plant at its present location. Koolhof’s letter to the public is reprinted here.

122. *Eagle Grove Eagle (Iowa)*. 1947. Rebuilding plans conference Saturday. Sept. 11. p. 1.

• **Summary:** The Weitz Company of Des Moines, Iowa, has been retained by the Boone Valley Assoc. to examine their plant after the fire. Weitz officials and the board of the soybean processing firm will meet Saturday afternoon to hear the report and make plans for rebuilding. The board will decide whether or not the contract to rebuild the plant will be awarded to Weitz.

123. *Eagle Grove Eagle (Iowa)*. 1947. Start work rebuilding soybean plant: Estimate cost to be \$175,000 for new plant. Weitz Company has contract, set February 1, 1948 as date for operation. Sept. 25. p. 1.

• **Summary:** Boone Valley has awarded the contract for rebuilding the soybean plant to Weitz Company of Des Moines. Work started Monday. It is a cost plus contract making it impossible to set a definite cost figure.

“The soybean plant had originally been built around on the north and east of the old C&NW machine shop which served as the main part of the processing plant.” The new plant will have about 1/3 more operating and storage space than the old. Boone Valley intends “to erect a completely modern soybean processing plant. The mixed feed department of the business will be expanded considerably...”

124. *Soybean Digest*. 1947. Grits and flakes... from the world of soy: A \$225,000 fire destroyed the soybean plant of the Boone Valley Cooperative Association at Eagle Grove, Iowa, August 23. Sept. p. 80.

• **Summary:** Losses included about \$75,000 worth of soybeans and oil. Officials said the fire apparently started from spontaneous combustion at the top of the plant.

125. *Soybean Digest*. 1947. Grits and flakes... from the world of soy: The Big Four Cooperative Processing Association, Sheldon, Iowa, closed its plant for the season in August.

Iowa, August 23. Sept. p. 80.

• **Summary:** "... after processing 600,000 bushels of soybeans during the past year."

126. *Eagle Grove Eagle (Iowa)*. 1947. Boone Valley holds annual meeting Wed.: With Koolhof presiding, Olson gives report on year's operation. Oct. 9. p. 1.

• **Summary:** Officers, directors, and stockholders were present at the meeting last night at Legion hall. Boone Valley's fiscal year "ended August 31, or just a few days after the fire which destroyed the plant."

"The report indicated that the company had a very good operating year. Total sales reached \$2,288,282.42. Of this \$938,115.46 was from the sale of [soy] bean meal, \$828,906.62 from [soybean] oil and \$521,258.34 was from the sale of mixed feeds."

For the soybean they spent \$1,446,673, which was paid to the 43 elevators who are members of the association. The company processed 501,772 bushels of soybeans.

Note: No information is given about profits.

127. *Soybean Digest*. 1947. Grits and flakes... from the world of soy: Boone Valley Cooperative Association rebuilds after fire. Oct. p. 22.

• **Summary:** Directors of the Boone Valley Cooperative Association in Eagle Grove, Iowa, have voted to build a larger soybean processing plant than the one which was destroyed on 23 Aug. 1947 by a fire of undetermined origin. Work on the new plant will get under way as soon as men and materials are available.

128. *Soybean Digest*. 1947. Grits and flakes... from the world of soy: Consumers Cooperative Association, Coffeetown, Kansas. Nov. p. 30.

• **Summary:** The Association has completed a \$130,000 expansion program at their soybean processing plant in Coffeetown [Coffeyville]. "The plant now has storage facilities for 232,800 bushels and will be able to process 700,000 bushels annually."

129. *Soybean Digest*. 1947. Iowa processing plant burns [Boone Valley] (Photo caption). Nov. p. 24.

• **Summary:** This photo—taken at the height of the fire—shows the Boone Valley Cooperative Processing Association plant burning at Eagle Grove, Iowa on Aug. 23. Exploding barrels of soybean oil fed the flames. Damage was estimated at \$225,000. The Association plans to rebuild the plant. A contract has been let to Weitz Co., Des Moines, Iowa. Officials hope to resume processing by 1 Feb. 1948.

130. *M.F.A. Cooperator*. 1947-1951. Serial/periodical. Missouri: American Farmers Association. Vols. 1-5. \*

• **Summary:** Discusses the work of Missouri Farmers Association, a cooperative soybean processor in Mexico,

Missouri. See also the periodicals *Missouri Ruralist* (1910-1994) and *Missouri Farmer* (1912-1967).

131. Ruble, Kenneth D. 1947. Men to remember: How 100,000 neighbors made history. Chicago, Illinois: Printed by R.R. Donnelley & Sons. xv + 318 p. Illust. by Lyle Justis. No index. 21 cm. [25 ref]

• **Summary:** A history of the first 25 years of Minnesota Cooperative Creameries Association, Inc., which was established in 1921 and became Land O'Lakes.

1921 July 8—Origins of Land O'Lakes: Minnesota Cooperative Creameries Association is incorporated. This new cooperative had novel, creative ideas about producing butter. In those days most butter was made from sour cream and was scooped out of wooden tubs. The new cooperative made butter from fresh, sweet cream and sold it in pound packages with individually wrapped sticks. It soon set a new standard for butter quality and helped to implement grading standards for the industry.

1923—John Brandt becomes president of the cooperative association. 1924—The association decides to expand its butter market; a search is made for an appropriate brand name and trademark. A contest is announced with \$500 gold to the winner. Two contestants, Mrs. E.B. Foss and Mr. George L. Swift, submitted the winning name—Land O'Lakes—a tribute to Minnesota's thousands of sparkling lakes. 1926—The brand name becomes so popular that the association changes its corporate name to Land O'Lakes Creameries, Inc. Also, members from other states (especially North and South Dakota) had joined the cooperative. 1928—Land O'Lakes receives a painting from Walter Taube of an Indian maiden facing the viewer and holding a butter carton. During the 1924 search for a brand name, the idea of the now-famous Indian maiden started to be developed. Because of regions of Minnesota and Wisconsin were the legendary lands of Hiawatha and Minnehaha, the idea of an Indian maiden took form. That painting inspired a new design for the butter carton. Lakes, pines, flowers, and grazing cows decorated the background. The new design remained unchanged until the spring of 1939, when it was simplified and modernized by Jess Betlach, a nationally recognized illustrator. Fifty years later, with only minor changes, his design continued to capture the spirit of Land O'Lakes dairy products. Contains many good photos.

Note 1. This is the earliest document seen (June 2005) that mentions Land O'Lakes. Note 2. This book suffers from the lack of an index and a chronology.

132. *Eagle Grove Eagle (Iowa)*. 1948. Bulletin. Jan. 1. p. 1.

• **Summary:** "Ed Olson notified the Eagle late yesterday that the Boone Valley Cooperative Processing Association had purchased the Hubbard Soy Bean Mill, Inc. at Hubbard, Iowa. Purchase was made from F.R. Miller and W.J. Hershberger.

"Possession will be given Wednesday night, December 31 [1947] at midnight. The Boone Valley officials will start operation of the plant Friday morning, January 2. The deal involved approximately \$400,000 including the plant, equipment, inventory and soy bean commitments.

Note: Hubbard (in Hardin County) is located about 40 miles southeast of Eagle Grove (in Wright County), in central Iowa. The cooperative plant at Hubbard began operation in late 1944 or early 1945. It was purchased by Miller and Hershberger from the original owners in Dec. 1946.

133. *Soybean Digest*. 1948. Grits and flakes... from the world of soy: Big Four Cooperative Processing Association, Sheldon, Iowa. Feb. p. 26, 28.

• **Summary:** "... processed 600,000 bushels of soybeans last year, Manager Chas. W. Hanson announced at the annual meeting in December. Edward Dobbertin, Paullina, Iowa, was reelected president; Doores Waandes, Hull, Iowa, vice president; L.M. Penning, Ashton, Iowa, secretary-treasurer."

134. *Soybean Digest*. 1948. Grits and flakes... from the world of soy: North Iowa Cooperative Processing Association. Feb. p. 26.

• **Summary:** "Earl M. Dean, Mason City, Iowa, was re-elected president of the North Iowa Cooperative Processing Association, at the annual meeting in Mason City in December. Martin Fabricius was elected vice president. The association, which is owned by 31 member elevators, processed 500,000 bushels of soybeans during the past year, according to Manager Glenn Pogeler."

135. *Co-Op-Co News (Hudson, Iowa)*. 1948. Farmers keep control of soybean crop from combine to feedlot: Through Dike Co-op. 11(9):1, 4. Feb.

• **Summary:** The 315 members of the Farmers Cooperative Co. in Dike, Iowa, work together. They "went into the soybean processing business in 1943." Farmers in the area do considerable livestock feeding. But early in World War II "most Iowa soybean mills fell into the hands of the big feed mixers... Farmers could buy the mixed feeds but not the meal. And many of them preferred to feed the meal with their own grain to selling their grain then buying back from feed mixers at a fancy price.

"A number of Iowa farmers elevators investigated the idea of building their own processing plants. The plan seemed sound. So Dike and six other elevators began building soybean mills in 1942 and 1943.

"The Dike plant, a two-expeller outfit, was completed in 1943. In erecting this plant, the farmers in the Dike community acquired complete control over the soybeans they raise—from combine to processing plant to feedlot. Because of their ownership of the bean mill they now have a free choice- they can either feed their protein concentrate straight, or as part of

a commercially mixed feed.

"Felco Feeds: Last year the mill processed 400,000 bushels of soybeans. The meal goes to the co-op's line of Felco Feeds, and is also sold as Felco soybean oil meal.

"Last year the Farmers Cooperative Co.'s gross sales were 2 million dollars from its whole operations. The elevator does a big cash grain and feed business.

"In 1946 the co-op erected a huge concrete storage elevator, so that it now has a capacity of 310,000 bushels of soybeans and grain. This is one of the largest storage bins of a country elevator in the Midwest. The elevator looms high above the town of Dike and can be seen for miles in all directions. It has become a landmark of no mean proportions in this town of 500—a real monument to farmer enterprise.

"During recent weeks there has been a huge influx of soybeans into the storage bins. For some weeks at least 16 boxcars have been on siding every day. One morning recently there were 29. There are now 200,000 bushels of soybeans in storage, according to Manager Clifford M. Gregory."

Photos show: (1) An aerial view of the Farmers Cooperative Co. and the town of Dike. (2) Manager C.M. Gregory. (3) Dike office workers: Bookkeeper Joyce Nielsen, secretary Margaret Johnson, and office manager "Bud" Goetzinger. (4) Leo Knudsen standing between two expellers inside the soybean mill. (5) Carloads of soybeans on a rail siding at the big elevator. (6) President Heye Dieken. (7) Elevator worker Marcus Cole.

Note 1. The six other cooperative elevators that began building soybean mills (with expellers) in 1942 and 1943 were probably located in Iowa at: (1) Ralston. (2) West Bend. (3) Manly. (4) Sheldon. (5) Eagle Grove (Boone Valley). and (6) Martelle (just east of Cedar Rapids).

Note 2. Talk with Bill Lester of Omaha, Nebraska. 2007. Aug. 27. The plants at Ralston and West Bend are still in operation as independents and they still use expellers. They sell their soybean meal (which has a higher fat content than solvent extracted meal) as a specialty high-energy meal for swine and dairy cattle. The three plants at Manly, Sheldon, and Eagle Grove are now part of AGP. The mill at Martelle no longer exists; it's gone.

136. *Soybean Digest*. 1948. Grits and flakes... from the world of soy: Boone Valley. Feb. p. 26.

• **Summary:** "The Boone Valley Cooperative Association, Eagle Grove, Iowa, has bought the Hubbard Soybean Mill, Inc., Hubbard, Iowa, effective January 1 [1948]. Ed Olson, Eagle Grove, is the new manager of the two-expeller plant, succeeding Lee Hershberger."

137. *Eagle Grove Eagle (Iowa)*. 1948. Soybean plant to start September 24: Boone Valley spends \$225,000 on new plant. Public invited to attend opening day celebrations, coffee and doughnuts served. Sept. 16. p. 1.



• **Summary:** “President Albert Koolhoff announces that the Boone Valley Cooperative Processing Association plant will start its fall run in the newly rebuilt plant on Friday, Sept. 24.” Visitors are invited to an open house on that day to celebrate the plant opening.

“Boone Valley’s plant burned down on August 23, 1947 in Eagle Grove’s biggest fire. The loss was settled by insurance company payments totaling \$172,000. This went for damage to stock and equipment.”

Since that date the company has been rebuilding, making the plant as modern and fire-proof as possible. “Everything in the plant is new except the expellers and boiler.”

The current plant and equipment represents an investment of \$225,000; it is one of the city’s major industries. The feed mixing department has been greatly expanded, and there are plans to double its former capacity. “It is now possible to turn out 75 tons of mixed feed each 24 hour day... The soy bean operation will use 1500 bushels of beans a day, turning out 75,000 pounds of meal and 14,000 pounds of oil a day.

“Olson stated that 25 to 30 employees would be needed when the plant swings into continuous full capacity production about October 1.”

Everything will be ready for full time operation by the opening date of Friday, Sept. 24. Company officials expect the new crop of soy beans to be ready for processing about Oct. 1. “Boone Valley also operates a processing plant at Hubbard, Iowa. Paul Hudgins is the manager.”

138. Boone Valley Cooperative Processing Assn. 1948. You are invited to the opening of the new Boone Valley Cooperative Processing Assn. plant... (Ad). *Eagle Grove Eagle (Iowa)*. Sept. 23. p. B2.

• **Summary:** A full-page ad. “...Friday, September 24th, from 10 A.M. to 5 P.M.” All the people of Eagle Grove and the surrounding territory are invited. “Since our fire on August 23rd, 1947, we have worked hard to rebuild a bigger and more modern plant... Coffee and doughnuts will be served from 1 to 4 P.M.” “Co-op open formula feeds and co-op soybean meal.”

At each of the 4 corners of the ad is a logo which says: “Use Co-op products.” Near the bottom of the page is a large photo of the processing plant and feed mill.

139. *Unknown Mason City or Manly newspaper*. 1948. Manly soybean processing plant votes \$110,000 dividend. Sept.

• **Summary:** After closing the most successful year in the history of their company, stockholders of the North Iowa Co-Operative Processing association of Manly voted at their annual meeting at the Hotel Hanford in Mason City Monday to distribute approximately \$110,000 in deferred dividends.

“Since the company started its soybean operations Aug. 18, 1944, it has accumulated \$604,704.95 in deferred dividends, allocated but not paid to its 38 memberships

consisting mainly of cooperative grain elevators in North Iowa and southern Minnesota, according to the annual report prepared by Manager Glenn Pogeler. This has been accomplished while reducing the original capital investment of \$130,000 to \$38,000 of common stock.

“These participating dividends were accumulated as follows (table): 1945–\$35,858.75. 1946–\$103,183.86. 1947–\$200,137.83. 1948 \$265,560.51. Total–\$604,740.95.

“Not until this year did the membership decide to dip into this huge reservoir and pay dividends.”

“The largest participant in the earnings was Midland Co-Operative Wholesale, Minneapolis, which was allocated \$56,322.55 this year for a total deferred dividend account of \$125,242.30 before the dividend payment action taken Monday goes into effect.

“The action taken by stockholders Monday distributes the 1945 allocated dividends of \$35,858.75 and three-fourths of the \$103,183.86 allocation of 1946.

“The balance sheet of the association showed a net working capital of \$477,678.96, of which \$390,212.09 is cash in the bank. Fixed assets are on the books at \$169,449.33.

“Improvements in the past year included the construction of soybean storage bins for an additional 110,000 bushels, making total storage capacity 140,000 bushels. The bins, which are of steel, were built at an approximate cost of \$75,000.

“The plant operates 24 hours a day and 7 days a week with 15 employees... Manager Pogeler spends much of his time travelling over the territory from which the association draws its business.” His statement showed that 7 new participating members were added during the past year.

“Earl Dean, who presided at the all day meeting which was attended by 200, was re-elected president for the coming year. The other officers were also re-elected.

Photos show: (1) An external view of the plant, showing the company sign and the new steel bins. (2) Earl Dean. (3) “Glenn Pogeler–Processing plant manager.”

140. USDA Northern Regional Research Laboratory. 1948. Soybean processing mills in the United States. *USDA Bureau of Agricultural and Industrial Chemistry*. CA-5. 14 p. Sept.

• **Summary:** Footnote: “This is a revision of AIC-26 [Nov. 1943]–Revised June 1946 under the same title.”

“The following list of soybean processing mills is divided into three parts: (1) Mills specializing in soybeans. (2) Mills processing soybeans on part-time basis. (3) Distribution of soybeans processed by solvent extraction, screw press, and hydraulic press methods (Estimates based on data compiled by Bureau of the Census in cooperation with the Northern Regional Research Laboratory). A year by year table from crop year 1936-37 to 1946-47 (Oct. to Oct.) shows the number of tons processed and the percentage of the total processed by each of the three processes. The percentage



processed by solvent extraction doubled from 13.2% to 26.6% while the percentage processed by hydraulic press dropped by half from 18.4% to 9.5%. The total tons of soybeans processed rose 8.2 fold from 619 to 5,107 during the 11 year period.

Processors are listed by state (alphabetically), and within each state alphabetically by city. Three symbols are used (in parentheses) to express each plant's processing capacity in tons of soybeans per day: S = Small—less than 50. M = Medium—50 to 200. L = Large—more than 200. Three other symbols are used to express the type of soybean processing equipment used: X = Extraction (solvent). P = Screw press [or expeller]. H = Hydraulic press.

"1. Mills specializing in soybeans. Arkansas—West Memphis: Arkansas Mills, Inc. (MX). Wilson: Wilson Soya Corporation (MXP). Delaware—Laurel: Laurel Processing Co. (SX).

"Illinois—Alhambra: Alhambra Grain and Feed Co. (SP). Bartonville: Allied Mills, Inc. (LP). Bloomington: Funk Brothers Seed Co. (MP). Ralston Purina Co. (LX). Champaign: Swift and Co. (LXP). Chicago: Archer-Daniels-Midland Co. (MX). The Glidden Co. (LXP). Spencer Kellogg and Sons, Inc. (LP). Colchester: Colchester Processing Co. (SP). Decatur: Archer-Daniels-Midland Co. (LXP). Decatur Soy Products Co. (MP). Spencer Kellogg and Sons, Inc. (LXP). A.E. Staley Manufacturing Co. (LXP). Galesburg: Galesburg Soy Products Co. (MP). Gibson City: Central Soya Co., Inc. (LXP). Kankakee: Borden's Soy Processing Co. (MX). Mascoutah: Phillip H. Postel Milling Co. (SP). Monmouth: Ralph Wells and Co. (SP). Nashville: Huegly Elevator Co. (SP). Norris City: Norris City Milling Co. (SP). Pana: Shellabarger Soybean Mills (MP). Poplar Grove: Northern Illinois Processing Corporation (SP). Quincy: Quincy Soybean Products Co. (MP). Roanoke: Eureka Milling Co. (SP). Rock Falls: Sterling Soybean Co. (SP). Springfield: Cargill, Inc. (MP). Taylorville: Allied Mills, Inc. (MX). Virden: Hulcher Soy Products Co. (SP).

"Indiana—Bunker Hill: Ladd Soya, Inc. (MP). Danville: Hendricks County Farm Bureau Cooperative Association (SX). Decatur: Central Soya Co., Inc. (LXP). Frankfort: Swift and Co. (MX). Indianapolis: The Glidden Co. (LX). Lafayette: Ralston Purina Co. (MP). Marion: Hoosier Soybean Mills (MP). Oaktown: Knox County Farm Bureau Cooperative Association (SP). Portland: Haynes Soy Products, Inc. (MP). Rockport: Martin Serrin Co., Inc. (SP). Rushville: Rush County Farm Bureau Cooperative Association (SP). Wabash: Wabash County Farm Bureau Cooperative Association (SP).

"Iowa—Belmond: General Mills, Inc. (LX). Cedar Rapids: Cargill, Inc. (MX). Iowa Milling Co. (MP). Centerville: Pillsbury Mills, Inc. (MP). Clinton: Pillsbury Mills, Inc. (MX). Des Moines: Spencer Kellogg and Sons, Inc. (LX). Swift and Co. (MP). Dike: Farmers Cooperative Association (SP). Dubuque: E.E. Frith Co. (SP). Eagle Grove: Boone

Valley Cooperative Processing Association (SP). Fairfield: Doughboy Industries, Inc. (MP). Fayette: Fayette Soybean Mill (SP). Fort Dodge: Cargill, Inc. (LXP). Gladbrook: Central Iowa Soybean Mill (MP). Hubbard: Boone Valley [Cooperative] Processing Association (SP). Iowa Falls: Ralston Purina Co. (LXP). Manly: North Iowa Cooperative Processing Association (SP). Marshalltown: Marshall Mills, Inc. (SP). Martelle: Farmers Cooperative Elevator (SP). Muscatine: Hawkeye Soy Products Co. (SP). Muscatine Processing Corporation (MX). New Hampton: Eastern Iowa Milling Co. (SP). Plainfield: Roach Mills (SX). Quimby: Simonsen Mill Rendering Plant (MP). Ralston: Farmers Cooperative Association (SP). Redfield: Iowa Soya Co. (MX). Sac City: Williams Milling Co. (MP). Sheldon: Big Four Cooperative Processing Association (MP). Sioux City: Sioux Soya Co. (MP). Spencer: Cargill, Inc. (SX). Washington: Cargill, Inc. (MX). Waterloo: Borden's Soy Processing Co. (LXP). West Bend: West Bend Elevator Co. (SP).

"Kansas—Coffeyville: Consumers Cooperative Association Soybean Mill (MP). Emporia: Kansas Soya Products Co., Inc. (MXP). Girard: Farmers Union Jobbers Association (SP). Hiawatha: Thomson Soy Mill (SX). Kansas City: Kansas Soya Products Co., Inc. (MP). Wichita: Soy-Rich Products, Inc. (MXP). Kentucky—Henderson: Ohio Valley Soybean Cooperative (MXP). Louisville: Buckeye Cotton Oil Co. (LXP). Louisville Soy Products Corporation (MX). Owensboro: Owensboro Grain Co. (MXP).

"Maryland—Baltimore: Soya Corporation of America (MP). Michigan—Concord: Concord Soya Corporation (SP). Saline: Soybrands, Inc. (SX). Minnesota: Lakeville: Consumers Soybean Mills, Inc. (MP). Mankato: Honeymead Mankato, Inc. (LXP). Minneapolis: Crown Iron Works Co. (SX). Preston: Hubbard Milling Co. (SP).

"Missouri—Kansas City: Ralston Purina Co. (MP). Kennett: Hemphill Soy Products Co. (MP). Mexico: MFA Cooperative Grain and Feed Co. (MP). New Madrid: Buckeye Cotton Oil Co. (MX). St. Joseph: Dannen Mills, Inc. (MXP). St. Louis: Blanton Mill, Inc. (MP). Ralston Purina Co. (MP). Pennsylvania—Jersey Shore: Pennsylvania Soybean Cooperative Association (SP). Rossmyrne Processing Co. (?). Paoli: The Great Valley Mills (?). South Dakota—Sioux Falls: Western Soybean Mills (MP).

"Tennessee—Tiptonville: West Tennessee Soya Mill, Inc. (LXP). Virginia—Harrisonburg: Central Chemical Corporation of Virginia (SP). Norfolk: Davis Milling Co. (SP). Portsmouth: Allied Mills, Inc. (MP). Wisconsin—Janesville: Janesville Mills, Inc. (SP). Menomonie: Northwest Cooperative Mills (SP).

"Mills processing soybeans on part-time basis." Alabama (6 mills), Arkansas (13), California (7), Florida (1), Georgia (7), Illinois (2), Iowa (2), Kansas (1), Louisiana (9), Minnesota (2), Mississippi (13), Missouri (1), New York (2), North Carolina (14), North Dakota (1), Ohio (2), Oklahoma (13), Pennsylvania (2), South Carolina (4), Tennessee (4), Texas

(27), Wisconsin (1).

141. *Eagle Grove Eagle (Iowa)*. 1948. Boone Valley holds annual meeting here. Oct. 21. p. 1.

• **Summary:** “Albert Koolhoff, Webster City, was re-elected to the presidency of the Boone Valley Cooperative Processing Association, at the annual meeting of that cooperative on Wednesday evening, Oct. 13. The association is owned by 44 local farmer co-ops... and Consumers Cooperative Association, Kansas City, Missouri, operating two soybean plants, one at Eagle Grove and the other at Hubbard.” The names and towns of the newly elected officers and executive board members are given. Ed Olson is manager of the two plants. Paul Hudgins supervises the Hubbard plant.

142. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Producers Cooperative Association.

**Manufacturer’s Address:** Girard, Kansas.

**Date of Introduction:** 1948.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Northern Utilization Research Branch, Agricultural Research Service. 1954. “Seventh Annual Cooperative Soybean Oil Mills Conference on problems of cooperative soybean oil mills.” Peoria, Illinois. 19 p. Held 3-4 May 1954 at the Hanford Hotel, Mason City, Iowa. Publ: June 21. Among the panelists were: S.O. Frey, manager, Producers Cooperative Association, Girard, Kansas.

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 5. Producers Cooperative Association (Girard, Kansas, 1948).

Note: The relationship between this cooperative soybeans processor and Farmers Union Jobbing Association, which started operation in the same town (Girard, Kansas) in April 1945, is not clear. Did the same cooperative change names? Did one co-op acquire or merge with another?

143. Lewis, A.J. 1949. Paints from soybean oil. *Soybean Digest*. Jan. p. 16-17.

• **Summary:** Presented at Cooperative Soybean Oil Mills Conference, Northern Regional Laboratory, May 25-27, 1948. In the fall of 1936 NRRL’s work with soybean oil in protective coatings began; they “inherited the exposure test fences at the South Farm of the University of Illinois which had been constructed and used for testing the durability of interior and exterior paints containing up to 35 percent of soybean oil.” These were experimental paints made by various manufacturers at the request of Dr. W.L. Burlison. His work with interior paints began in 1931 and with

exterior paints in 1932. Address: Paint chemist, NRRL, Peoria, Illinois.

144. *Soybean Digest*. 1949. Grits and flakes... from the world of soy: Boone Valley Co-op Processing Association, Eagle Grove, Iowa. Feb. p. 26.

• **Summary:** “... recently held an open house celebrating the opening of its new soybean processing mill and feed-mixing plant. The fireproof structure was built by Weitz & Co., Des Moines, Iowa.”

145. Beckel, Arthur C. 1949. Alcoholic extraction of oil from soybeans. *Soybean Digest*. May. p. 20-21.

• **Summary:** The solvent extraction process using ethyl alcohol developed by the Northern Regional Research Laboratory produces superior products and also a whole series of new products. It is also a safer process. The development of the process stemmed from the original conviction of A.K. Smith, in charge of the protein section, that the type of solvent used has a considerable influence on both the oil and meal. Using ethyl alcohol produces an isolated soybean with a lighter color, more like that of casein.

This paper was presented at the Cooperative Soybean Oil Mills Conference, Northern Regional Research Laboratory, 25-27 May 1948. Address: NRRL, Peoria, Illinois.

146. *Soybean Digest*. 1949. M.F.A. mill at Mexico, Mo. [Missouri] (Photo caption). May. p. 30.

• **Summary:** This photo (4½ by 3 inches) shows the mill and concrete elevators from a small elevation. The lower caption reads: “You see the soybean processing plant and storage bins of Missouri Farmers Association of Mexico, Missouri. This firm is installing a new Anderson Expeller for the 1949 crop, in addition to the two now in operation. The firm has been obtaining 9.79 pounds of oil [per 60 lb bushel] from the soybeans crushed this season. Storage capacity is 300,000 bushels.”

147. *Soybean Digest*. 1949. Co-op processors meet at Peoria. June. p. 37.

• **Summary:** “Cooperative soybean oil mill operators, representing their organizations in 11 Midwestern, Southern, and Eastern states, held their second annual conference at the Northern Regional Research Laboratory in Peoria, Illinois, May 5-7. Representatives of the Northern Laboratory and the U.S. Department of Agriculture were also in attendance. The conference, arranged by the cooperative research and service division of the Farm Credit Administration and the Laboratory, dealt with oilseed processing, recent results of research on soybean varieties, and improvements in both soybean oil and oil meal for food and industrial uses.”

Those present included: Edward Olson, manager Boone Valley Cooperative Association, Eagle Grove, Iowa; Karl

Nolin, manager Farmers Cooperative Association, Ralston, Iowa; G.W. Allen, manager Ohio Valley Soybean cooperative, Henderson, Kentucky; Elmer H. Ruehrup, manager Alhambra Grain & Feed Co., Alhambra, Illinois.

148. National Soybean Processors Association. 1949. Year book, 1949-1950 (Association year). Chicago, Illinois. 73 p.  
 • **Summary:** On the cover (but not the title page) is written: "Year Book and Trading Rules, 1949-1950." Contents: Constitution and by-laws (incl. committees, code of ethics). Officers, directors and committees for 1949-50. Membership of the National Soybean Processors Association. Trading rules governing the purchase and sale of soybean oil meal. Appendix to trading rules on soybean oil meal: Official methods of analysis (moisture, protein, oil, crude fiber—official, sampling of soybean oil meal). Trading rules on soybean oil. Appendix to trading rules on soybean oil: Uniform sales contract, standard specifications for crude soybean oil for technical uses, methods of analysis (A.O.C.S. official methods): Refining loss (expeller and hydraulic soybean oil)—Ca 9a-41, refining loss (extracted soybean oil)—Ca 9b-46, refining loss (degummed hydraulic and extracted types soybean oil)—Ca 9c-49, refining loss (degummed expeller type soybean oil)—Ca 9d-49, bleaching test (refined soybean oil)—Cc 8b-49, grading soybean oil for color (N.S.P.A. tentative method), color—Wesson method using Lovibond glasses—Cc 13b-45, sampling—C 1-47, flash point (A.O.C.S. tentative method—Cc 9b-48). Moisture and volatile matter: Vacuum oven method—Ca 2d-25. Break test—Modified Gardner method—Ca 10-40. Iodine value—Wijs method—Cd 1-25. Unsaponifiable matter—Ca 6a-40.

Handwritten: *Soybean Farming* is now available; prices are given for non-members and members, for 100 to 1,000 copies. Assessments: Regular \$.0004 per bushel, 40 cents per 1,000, \$400 per million. Max. \$3,200 per year. Min. \$100 per year. July 6 meeting decreases the regular assessment to \$0.0003 per bushel.

The section titled "Officers, directors, and committees" (p. 12-15) states: President: R.G. Houghtlin. V.P., Chairman Executive Committee: G.G. Golseth. Secretary: W.L. Shellabarger. Treasurer: H.E. Carpenter. Executive Committee: R.G. Golseth, Chairman, H.E. Carpenter, E.A. Cayce, Philip S. Duff, W.H. Eastman, Jasper Giovanna, R.G. Houghtlin, W.L. Shellabarger.

Board of Directors (Term expiring Sept. 1950): D.O. Andreas, E.A. Cayce, Jasper Giovanna, R.G. Golseth, H.R. Schultz, H.R. Scroggs. (Term expiring Sept. 1951): Dwight Dannen, Roger Drackett, W.H. Eastman, R.B. Jude, W.H. Knapp, Karl Nolin. (Term expiring Sept. 1952): S.E. Kramer, Philip S. Duff, D.W. McMillen, Jr., Clarence E. Peters, J.J. Quinlan, Ralph Wells.

Standing committees: For each committee, the names of all members (with the chairman designated), with the company and company address of each are given—Traffic

and transportation. Technical. Soybean grades and contracts. Oil trading rules. Meal trading rules. Crop improvement. Soybean research council. Uniform rules and standards for soybean oil meal. Safety and insurance. Lecithin. Regional: Ohio, Michigan, and East; Illinois, Indiana, Kentucky, Wisconsin; Iowa, Minnesota, Nebraska, South Dakota; Missouri, Kansas, and Mississippi River Delta Sections. Handwritten on blank facing pages: Nominating committee. Reception committee. Official weights committee. Crop Improvement steering committee. Two new members (people; Francis E. Calvert, The Drackett Co., Oct. 1949).

The following organizations, and individuals are members of NSPA: Albers Milling Co., Los Angeles, California (W.P. Kyle). Allied Mills, Inc., Board of Trade Bldg., Chicago, Illinois; Peoria, Illinois; Taylorville, Illinois; Omaha, Nebraska; Portsmouth, Virginia. Archer-Daniels-Midland Co., Box 839, Minneapolis 2, Minnesota; Chicago, Illinois; Decatur, Illinois; Fredonia, Kansas. Big 4 Cooperative Processing Assn., Sheldon, Iowa (Chas. W. Hanson). Blanton Mill, Inc., St. Louis, Missouri (Ross A. Woolsey, Jr.). Boone Valley Cooperative Processing Assn. Eagle Grove, Iowa (Edward Olson); Hubbard, Iowa (D.E. Weld). Borden's Soy Processing Co., Chicago 4, Illinois (C.E. Butler -> J.R. Pentis); Kankakee, Illinois; Waterloo, Iowa. Buckeye Cotton Oil Co. (The), Cincinnati, Ohio (W.H. Knapp); Louisville, Kentucky; New Madrid, Missouri; Raleigh, North Carolina; Memphis, Tennessee. Cargill, Inc., Minneapolis, Minnesota (D.O. Andreas); Springfield, Illinois (Eric Nadel); Cedar Rapids, Iowa (C.W. Bohlander); Fort Dodge, Iowa (H.E. Marxhausen -> R.F. Hubbard); Spencer, Iowa (W.J. Wheeler); Washington, Iowa (Hugo Lensch). Central Iowa Bean Mill, Gladbrook, Iowa (Paul H. Klinefelter). Central Soya Co., Inc., Fort Wayne 2, Indiana (E.W. McMillen, Jr.); Gibson City, Illinois (T.H. Allwein); Decatur, Indiana (C.I. Finlayson); Marion, Ohio (R.W. Fay). Clinton Industries, Inc., Clinton, Iowa (E.W. Myers). Colchester Processing Co., E. St. Louis, Illinois (E.L. McKee). Concord Soya Corporation, Concord, Michigan (Harold K. Rapp; crossed out). Consumers Co-op Assn., Kansas City 13, Missouri (F. Dean McCammon). Consumers Soybean Mills, Minneapolis 15, Minnesota (Riley W. Lewis). Dannen Grain & Milling Co., St. Joseph, Missouri (Dwight L. Dannen). Decatur Soy Products Co., Decatur, Illinois (Jasper Giovanna). Delphos Grain and Soya Products Co., Delphos, Ohio (Floyd E. Hiegel). Doughboy Industries, Inc., Fairfield, Iowa. Drackett Co. (The), Cincinnati 32, Ohio (Roger Drackett). Eastern Iowa Milling Co., New Hampton, Iowa (G.A. Ward). Farmers Cooperative Assn., Ralston, Iowa (Karl Nolin). Farmers Cooperative Co., Dike, Iowa (C.M. Gregory). Farmers Cooperative Elevator, Martelle, Iowa (H.B. Lovig). Fayette Soybean Mill, Fayette, Iowa (L.A. Rose). Fremont Cake and Meal Corp., Fremont, Nebraska (Harry E. Wiysel). Frith (E.E.) Company Inc., Dubuque, Iowa (E.M. Weicher). Funk Bros. Seed Co.,



Bloomington, Illinois (H.A. Abbott). Galesburg Soy Products Co., Galesburg, Illinois (Max Albert). General Mills, Inc., Chem. Div., Minneapolis 1, Minnesota (W.H. Eastman); Belmond, Iowa (E.E. Woolley). Glidden Co. (The), Chicago 39, Illinois (R.G. Golseth). Gooch Milling & Elevator Co., Lincoln 1, Nebraska (M.R. Eighmy). Haynes Soy Products Inc., Portland, Indiana (Clarence E. Peters). Hemphill Soy Products Co., Kennett, Missouri (W.A. Hemphill). Holland Pioneer Mills, Inc., Ohio City, Ohio (G.A. Holland). Honeymead Products Co., Mankato, Minnesota (L.W. Andreas); Hoosier Soybean Mills, Inc., Marion, Indiana (J.H. Caldwell, Jr.). Huegely Elevator Co., Nashville, Illinois (J.W. Huegely). Hulcher Soy Products, Virden, Illinois (Norman E. Hulcher). Iowa Milling Co., Cedar Rapids, Iowa (Jos. Sinaiko). Iowa Soy Co., Redfield, Iowa (H.R. Straight). Ipava Farmers Processing Co., Ipava, Illinois (F.P. Brown). Janesville Mills, Inc., Janesville, Wisconsin (A. Roger Hook). Kansas Soya Products Co. (The), Emporia, Kansas (Ted W. Lord); Kansas City 3, Kansas (Richard W. Lord). Ladd Soya, Inc., Bunker Hill, Indiana (Wayne Ladd). Lexington Soy Products Co. (The), Lexington, Ohio (H.E. Carpenter). Louisville Soy Products Corp., Louisville, Kentucky (H.A. Miller). Marshall Mills Inc., Marshalltown, Iowa (J.I. Johnson). Muscatine Processing Corp., Muscatine, Iowa (G.A. Kent). North Iowa Cooperative Processing Association, Manly, Iowa (Glenn Pogeler). Northwest Cooperative Mills, St. Paul, Minnesota (Anthony H. Roffers). Ohio Valley Soybean Co-op, Henderson, Kentucky (G.W. Allen). Owensboro Grain Co., Owensboro, Kentucky (William M. O'Bryan). Pacific Vegetable Oil Corp., San Francisco 7, California (B.T. Rocca, Jr.). Pillsbury Soy Mills, Clinton, Iowa (H.R. Schultz); Centerville, Iowa (H.R. Schultz). Postel (Ph. H.) Milling Co., Mascoutah, Illinois (A.S. Lee). Quincy Soybean Products Co., Quincy, Illinois (Irving Rosen). Ralston Purina Co., St. Louis 2, Missouri (D.B. Walker); Kansas City, Missouri (F.G. Franze); Lafayette, Indiana (Ralph Guenther); Iowa Falls, Iowa (H.N. Johnson); Circleville, Ohio (A.V. Couch); Champaign, Illinois -> Bloomington, Illinois (N.B. Morey). Roach Soybean Mills, Plainfield, Ohio (Howard L. Roach). Shellabarger Soybean Mills, Inc., Decatur 30, Illinois (W.L. Shellabarger). Simonsen Mill Rendering Plant, Quimby, Iowa (W.E. Simonsen). Sioux Soya Co., Sioux City 2, Iowa (J.L. Ward). Southern Cotton Oil Co. (The), Goldsboro, North Carolina (W.V. Westmoreland); Tarboro, North Carolina (W.A. Moore). Southland Cotton Oil Co., Paris, Texas (Richard H. Blyth). Soya Processing Co., Wooster, Ohio (H.H. Heeman). Soya Extraction Div., Continental Grain Co., Columbus 9, Ohio (D.H. Wilson—company crossed out). Soy-Rich Products, Inc., Wichita, Kansas (Ralph S. Moore). Spencer Kellogg and Sons, Inc., Buffalo 5, New York (Robert B. Jude); Chicago, Illinois; Decatur, Illinois; Des Moines, Iowa; Bellevue, Ohio (Harry Stokely). Sterling Soybean Co., Inc., Rock Falls, Illinois (Edward J.

McGinn). Swift & Co., Union Stock Yards, Chicago 9, Illinois (S.E. Cramer). Thomson Soya Products, Hiawatha, Kansas (A.G. Thomson). Toledo Soybean Products Co., Toledo, Ohio (J.H. Brown). Wells (Ralph) & Co., Monmouth, Illinois (Ralph Wells). West Bend Elevator Co., West Bend, Iowa (R.W. Jurgens). Western Soybean Mills, Sioux Falls, South Dakota (E.A. Woodward). Williams Milling Co., Sac City, Iowa (Leo W. Williams).

Organizations represented on committees: U.S. Regional Soybean Laboratory, Urbana, Illinois (John C. Cowan, R.T. Milner).

Handwritten: New members added since publication of the Trading Rules Book—1949. Falk & Co., Pittsburgh, Pennsylvania (Willard Lighter, Jan. 1950). Minnesota Linseed Oil Co., Minneapolis 21, Minnesota (R.J. Lundquist, May 1950). Farmers & Merchants Milling Co., Glencoe, Minnesota (L.H. Patten, Mgr., May 1950). Riverside Oil Mill, Marks, Mississippi (William King Self, Aug. 1950). Planters Manufacturing Co., Clarksdale, Mississippi (A.K. Shaefer, Sept. 1950).

Associate Members: Arcady Farms Milling Co., Chicago 6, Illinois. Armour & Co., Chicago 9, Illinois (John H. Noble). Aubrey & Co., Louisville, Kentucky. Best Foods, Inc., New York, NY. Capital City Products Co., Columbus, Ohio. Cooperative Mills Inc., Baltimore 30, Maryland. Cox (Chas. M.) Co., Boston, Massachusetts. Foxbilt Inc., Des Moines, Iowa. Humco Co. (The), Memphis 1, Tennessee. Kraft Foods Co., Chicago, Illinois. Lever Bros Co., Lever House, Cambridge, Massachusetts. Pittsburgh Plate Glass Co., Paint Div., Pittsburgh, PA. Procter & Gamble Co., Cincinnati, Ohio. Spartan Grain & Mill Co., Inc., Spartanburgh, South Carolina. Tuckers (Mrs.) Foods, Inc., Sherman, Texas. Wilson & Co., Chicago, Illinois. Handwritten: New Associate Members: Clark Mills Inc., Minneapolis 15, Minnesota.

Note: This is the earliest document seen (July 2005) concerning Continental Grain Company's work with soybeans. Address: 3818 Board of Trade Building, Chicago 4, Illinois.

149. *Soybean Digest*. 1949. Grits and flakes... from the world of soy: Farmers Cooperative Elevator at Martelle, Iowa. Sept. p. 110.

• **Summary:** "Four new storage silos are under construction for the soybean processing plant of the Farmers Cooperative Elevator at Martelle, Iowa. They will give the plant and additional 75,000 to 80,000 bushels storage capacity."

150. *Grain & Feed Journals Consolidated*. 1950. Large elevator at Dike, Ia [Iowa]. Jan. 25. p. 14.

• **Summary:** "Growth of the Farmers Co-operative Co. at Dike, Iowa, is well indicated by the engraving on front cover.

"The completion of a 200,000 bushel reinforced concrete



annex this past summer brought the plant's total storage capacity up to 510,000 bus. [bushels], making this one of the largest country storage units in the middle west.

"The annex consists of six large bins and two interstice bins which are filled by means of a 30" [inch wide] belt conveyor ad tripper from the 250,000-bu. reinforced concrete elevator. The bins discharge to a 24" belt conveyor in the basement where the grain is carried to the elevator leg from where it is spouted to the soy bean processing plant or loaded into freight cars or trucks."

Much of the success of this co-op is due to the able management of C.M. Gregory, manager since 1938 and the progressiveness of the directors headed by H. Dieken, president. All of the storage facilities were designed and constructed over the past 13 years by the Tillotson Construction Co. of Omaha, Nebraska.

**151. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Farmers & Merchants Milling Co., Inc.

**Manufacturer's Address:** Glencoe, Minnesota.

**Date of Introduction:** 1950. April.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Digest*. 1950. "Two non-flammable solvent plants in Minnesota." Oct. p. 18-19. The Farmers & Merchants Milling Co. of Glencoe, Minnesota, has been in operation since 1 April 1950; L.H. Patten is plant manager. The plant uses the trichloroethylene solvent process developed at Iowa State College. Crown Iron Works Co. of Minneapolis built and installed the machinery for the plant under franchise rights from Iowa State College.

*Soybean Blue Book*. 1950. p. 70. "Processors of soybeans." Minnesota–Glencoe: Farmers & Merchants Milling Co., Inc., 1011 Elliot. President: Lars Liefson. Vice president: John Bednar. Secretary: Hubert Smith. Treasurer: Frank Heaney. Head soybean buyer, etc.: L.H. Patten. Plant superintendent: Warren Pleasels; ass't mgr. C.J. Olson. Trichlorethylene solvent. Processing capacity: 25 tons/day. Storage capacity: 20,000 bushels. "Glencoe" meals, feeds, pellets.

**152. Soybean Digest**. 1950. Co-op operators to meet in Peoria, Illinois. April. p. 33.

• **Summary:** A conference of cooperative soybean oil mill operators will be held on May 1 to 3 in Peoria, Illinois, at the Northern Regional Research Laboratory. The conference is being arranged jointly by the Laboratory and the cooperative research and service division, Farm Credit Administration, Washington, DC.

**153. Soybean Digest**. 1950. Operators from 10 states at Peoria [Conference of cooperative soybean oil mill operators]. June. p. 19.

• **Summary:** "What has developed into an annual conference of cooperative soybean oil mill operators was held again this year at the Northern Regional Research Laboratory, May 1-3."

**154. Columbia Missourian**. 1950. M.F.A. [Missouri Farmers Association] to build new soy storage. July 11. p. 2, col. 1.

• **Summary:** "Increased soybean production has made it necessary to expand storage facilities by 350,000 bushels at the M.F.A. Cooperative Grain and Feed Mill in Mexico, Missouri, officials said here today.

"Most Boone County soybeans will be processed by the Mexico plant. The Centralia region near Mexico is the largest producer of soybeans in Boone County and Audrain County [in which Mexico, Missouri, is located] is expected to market more than a million bushels.

"Cost of the new facilities by Jones and Hettlesater Construction Company of Kansas City [Missouri], is estimated at about \$195,000."

**155. Soybean Digest**. 1950. Iowa processing plant (Photo caption). July. p. 18.

• **Summary:** This ¼ page photo shows the soybean processing plant operated by the Farmers Cooperative Elevator at Martelle, Iowa. Using only one screw press, it makes Felco soybean oil meal and also uses this meal in the Felco line of mixed feeds. Henry B. Lovig is the firm's manager.

**156. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Farmers Cooperative Elevator Association.

**Manufacturer's Address:** Blooming Prairie, Minnesota.

**Date of Introduction:** 1950. August.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Digest*. 1950. "Two non-flammable solvent plants in Minnesota." Oct. p. 18-19. The Farmers Cooperative Elevator Co. in Blooming Prairie, Minnesota, formally celebrated their opening on Aug. 7. They use the trichloroethylene solvent process developed at Iowa State College. Note: The plant of 25 tons/day capacity was built and installed here in 1950 by Crown Iron Works.

*Soybean Blue Book*. 1951. p. 68. "Processors of soybeans." Minnesota–Blooming Prairie: Farmers Co-op Elevator Assn., Soybean Processing Div. President: Ormanzo Peterson. Vice president: Harold Symes. Secretary-treasurer: T.B. Peterson. Head soybean buyer, etc.: Wilbur P. Bidne. Plant superintendent: Don Sandberg. Trichlorethylene solvent. Processing capacity: 25 tons/day. Storage capacity: 120,000 bushels. "Prairie" 44% soybean oil meal. "Prairie" 44% soybean flakes. "Farmers Best" feeds.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." USDA

*Farmer Cooperative Service, FCS Information No. 75.* 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 12. Farmers Cooperative Elevator Association (Blooming Prairie, Minnesota, 1950).

157. *Soybean Digest*. 1950. Two non-flammable solvent plants in Minnesota. Oct. p. 18-19.

• **Summary:** The Farmers & Merchants Milling Co. of Glencoe, Minnesota, has been in operation since 1 April 1950; L.H. Patten is plant manager. The Farmers Cooperative Elevator Co. in Blooming Prairie, Minnesota, formally celebrated their opening on Aug. 7.

Both plants use the trichloroethylene solvent process developed at Iowa State College. This type of plants are the brainchild of Dr. O.R. Sweeney (head of the chemical engineering department for more than 25 years) and Dr. L.K. Arnold (research professor of chemical engineering). Crown Iron Works Co. of Minneapolis built and installed the machinery for both plants under franchise rights from Iowa State College. Details are given of the Glencoe plant and the Blooming Prairie plant. The process and flow of material through the plants. Photos show the plant at Blooming Prairie: (1) The outside from ground level. (2) The inside.

Note: This is the earliest document seen (June 2006) stating that Crown Iron Works Co. has installed a soybean solvent extraction plant.

158. *Dawson Sentinel (Minnesota)*. 1950. Plan construction of co-op soybean processing plant here next year. 67(11):1. Nov. 17. Friday.

• **Summary:** A meeting of a group of representative farmers of the Dawson trade area and the Service Club committee held in the Carnegie Library basement last Thursday evening (Nov. 9) resulted in assurances that a soybean processing plant, part of a new and important industry, will be established at Dawson next year. For about a month, Glen E. Blomquist, J.C. Hanson, Bert Dahl, and A.R. Lee, acting as a committee representing the farmers, together with the Service Club, have been making a thorough investigation as to the feasibility and cost of a plant for the extraction of oil from soybeans and production of feeds from the soybean meal. "They visited several large and small plants and inquired into manufacturing processes, plant costs, cost of operation, labor requirements, marketing, profits and other related questions and their report to the meeting indicates that such a plant is particularly adopted to a cooperative type of association, and it seems entirely reasonable that such a plant should return a net profit of fifteen or more cents per bushel, most of which can be prorated back to the [soybean] producers as patronage dividends." A major saving will be in the cost of shipping soybeans.

The new plant is estimated to cost about \$150,000 for building, machinery, and storage of about 50,000 bushels.

About \$20,000 was pledged at the meeting. Representatives of local elevators were present at the meeting and said they could make arrangements for handling beans and for additional storage. Initially, the plant will process about 835 bushels per day. A large photo shows the "Crown Iron soybean installation at Blooming Prairie, Minnesota."

Note 1. This is the earliest published document seen (March 2008) concerning the Tri-County Co-operative Soy Bean Association (Dawson, Minnesota)—although that name does not appear here. After late 1951 it was usually called the Tri-County Soy Bean Co-operative, then was renamed Dawson Mills in 1969. Note 2. This article is not continued on page 7—despite note at end of article on page 1.

159. *Dawson Sentinel (Minnesota)*. 1951. Contracts let for new soy bean plant; Construction to start at once. 67(25):1. Feb. 23.

• **Summary:** Ground was broken Monday (Feb. 19) for the new soybean plant to be built in Dawson on the railroad right of way just west of the Dawson Produce Elevator. "Mayor Gay Throndrud dug the first spadeful of dirt in the presence of about 50 men who have been interested in the promotion and organization of the new plant. Contracts were let last week, with all contracts going to local bidders."

"Nearly \$125,000 worth of stock has been sold up to the time of letting contracts, and activities will be stepped up during the next few weeks in disposing of the balance of the \$200,000 set as the goal."

A photo, titled "Directors and soy bean committee," shows standing outdoors (left to right): Mayor Throndrud, Melvin Knutson, Carl Barkeus, Merrill Lund, Carl Hanson, John Hanson, Art Lee, Glenn Blomquist, Bert Dahl.

160. Olson, Clarence E. 1951. Minutes of a special meeting of the City Council of the City of Dawson, Minnesota. Held March 30 at the City Attorney's Office. Dawson, Minnesota. 1 p. Unpublished typescript.

• **Summary:** "A petition from the Tri-County Soybean Ass. to use and connect to Judicial Ditch #4, for their disposal from their plant was presented and discussed. A motion was made by Borgendale and seconded by Dahl, that we grant this request. Was passed unanimously."

Note: Note: This is the earliest document seen (March 2008) in which a name for the new soybean processing plant appears—"Tri-County Soybean Ass." Address: Dawson, Minnesota.

161. *Eagle Grove Eagle (Iowa)*. 1951. Boone Valley to double plant capacity: Close Hubbard plant, move machinery here. Combined operation in Eagle Grove to be advantageous to firm Ralph Olson, president, announces. April 26. p. B1.

• **Summary:** A big page-width banner headline. Ralph Olson, president of the Boone Valley Cooperative Processing

Association made the announcement Tuesday. This decision was made at a meeting of the firm's executive board held at the plant office Tuesday afternoon. The two big expellers will be moved to Eagle Grove and set up there, doubling Boone Valley's processing capacity. The Hubbard plant is scheduled to be closed on May 1, and the dismantling and moving will be started soon after that.

"Olson said it would probably be August 1 before the machinery is in operation in Eagle Grove as several changes have to be made in the operation here to accommodate the new machinery. The present capacity of 1,500 bushels of [soy] beans and 39 tons of meal will be increased to 3,000 bushels of beans and 78 tons of meal [per day]. The oil output will be increased from 360,000 pounds a month to 720,000 pounds a month. Six freight cars a month are now handling the oil and it will take 12 cars a month when the increased operation gets under way."

There are 12 full time employees at Hubbard. Some of them will be given the opportunity to come to Eagle Grove. A portrait photo shows Ralph Oslen.

162. *Soybean Digest*. 1951. Missouri soybean plant (Photo caption). May. p. 20.

• **Summary:** This aerial photo (4½ by 2 inches) shows the processing plant of the MFA Cooperative Grain and Feed Co. at Mexico, Missouri. New storage tanks (right) with a capacity of 350,000 bushels, were built in the summer of 1950. They bring the firm's total storage capacity in this town to 650,000 bushels.

163. *Eagle Grove Eagle (Iowa)*. 1951. Will double output at Boone Valley (Photo caption). June 28. p. B1.

• **Summary:** This photo shows two expellers being installed in the Eagle Grove plant; they have been moved from the Hubbard plant. Manager Ed Olson and plant superintendent are standing on the floor watching. "At work on the ladders are Virgil Smith and Leonard Larson."

164. Tri-County Co-operative Soy Bean Association, Board of Directors. 1951. A statement regarding soy bean purchases (Ad). *Dawson Sentinel (Minnesota)* 67(47):10. July 27.

• **Summary:** "Conflicting statements have been circulated regarding the policy of the soy bean processing plant as to purchase of beans, and as to its relations with elevators in the community. We wish to clarify those policies by this statement.

"The association has forwarded to the elevators in Dawson, Boyd, Madison, and Marietta proposed contracts for those elevators to act as agents of the plant in buying beans for the association. The contracting elevators will buy beans from their patrons and pay for them with their own checks, but will receive payment daily by draft on the association for beans so purchased, and will store the beans

for the plant at regular storage rates. Each elevator will receive a fixed handling fee per bushel bought. No beans will be bought direct from the producer [farmer] at the plant. Beans will be hauled from elevator to bean plant, and by the bean plant trucks, when needed for processing.

"By this method, none of the elevators concerned should lose any volume of bean purchases or storage; in fact, their business on beans should increase..."

"It is to the advantage of the bean raiser to have at least one share of common stock to qualify for cash dividends and it is to the interest of every one in the community to have some preferred stock as an investment, and to assure sufficient working capital for the buying and processing of beans."

Note: This is the earliest published document seen (July 2005) that contains the name "Tri-County Co-operative Soy Bean Association" (Dawson, Minnesota). After late 1951 it was usually called the Tri-County Soy Bean Co-operative; it was renamed Dawson Mills in 1969.

165. Ohio Valley Soy Bean Co-operative. 1951. Documents from the Ohio Valley Soy Bean Co-operative (Overview). *SoyaScan Notes* Compiled by William Shurtleff of Soyinfo Center.



• **Summary:** (1) Common stock certificate for 9 shares in the Ohio Valley Soy Bean Co-operative (OVSC) issued to Morgan Jones. Dated Aug. 1, 1951.



(2) One certificate of 9 shares of OVSC stock owned by Morgan Jones. Note: Richard Morgan Jones was a farmer





(3) Letterhead of the OVSC, with the red cardinal logo, followed by the words "Cardinal Quality Soybean Products. Henderson, Kentucky. A typewritten letter dated February 20, 1952, to "Dear Patron" is signed "Yours truly, A.I. Reisz, Asst. Manager." Across the very top of the letterhead: "Charles B. Smith, President. G.W. Allen, Secretary-Manager. Oscar D. Keck, Vice-President." Just below words OVSC: "Directors: Charles B. Smith. Oscar D. Keck. Theodore Kols. Frederick Williams. A.G. Pritchett. O.C. Whitfield. John A. Gerhardt.



(4) Business size envelope postmarked Feb. 29, 1952, from the OVSC, P.O. Box 338, Henderson, KY, to Morgan Jones, Star Route, Sebree, Kentucky. On it is a preprinted 3-cent George Washington stamp. Inside was an OVSC "Patronage Dividend on soybeans delivered by you during the fiscal year ending July 31, 1951, as follows: Total Patronage on \$628.99 worth of [soy] beans delivered: \$14.06. Amount paid in stock: \$9.00. Operating reserve

allocated to you: \$5.06. We sincerely appreciate your patronage and support. A.I. Reisz, Ass't Secretary."

These color scans were sent to Soyinfo Center on 22 March 2007 by Mary Ellen Wagner (of Slaughters, Kentucky), granddaughter of Morgan Jones. Address: Henderson, Kentucky.

166. *Dawson Sentinel (Minnesota)*. 1951. Soy bean stock sales soar following annual meeting. 68(6):1, 7. Oct. 12.

• **Summary:** "About 250 stockholders of the Tri County Soy Bean Association met last Saturday evening for the first annual meeting of that organization at the armory." Rain and cold weather made it inadvisable to meet at the new soy bean plant as planned.

"Carl M. Hanson of Maxwell Township, Chairman of the Board of Directors, presided at the meeting, with Morris Enevoldson of Boyd as secretary."

"Incidentally, this fine new \$225,000 plant resulted from a discussion over morning coffee participate in by four men who have not only provided the idea, but gave of their time and effort to carry on investigations and to furnish the driving power which put the plan into motion. These four men, Glenn Bloomquist, Bert Dahl, Art Lee and John Hanson deserve much of the credit for doing the preliminary work and also for continuing their efforts in behalf of the plant from the very beginning.

"This idea, originating early in November [1950], resulted in another meeting, made up largely of businessmen, where initial stock was subscribed, and this in turn led to a mass meeting, at which time the prospects and the workings of a soy bean plant were discussed, and from which point the drive for finances got underway." The actual costs have exceeded estimates by about \$75,000.

"Bert Dahl was called on to give highlights of an annual report of a soy bean plant at Menomonie, Wisconsin, which had just been organized"—but was owned by several co-operatives and is somewhat larger than the Dawson plant. Note: The plant in Menomonie, Wisconsin, was built or acquired in 1945 by Northwest Cooperative Mills (St. Paul, Minnesota). It was never a competitor of Dawson Mills.

As of this writing, only \$7,000 of shares remain to be sold.

167. *Dawson Sentinel (Minnesota)*. 1951. Soy bean co-op has adequate financing for operation costs. 68(7):1. Oct. 19.

• **Summary:** "A committee of the Board of Directors of the Tri County Soy Bean Co-operative Association was in Minneapolis the fore part of this week making arrangements for a working capital loan from the Bank of Co-operatives. The group successfully negotiated a loan of about \$370,000 at a low rate of interest, a sufficient amount to enable the organization to buy soy beans and carry on its operations until its own working capital is established."

"Buying of soy beans at all of the cooperating elevators



began on Friday of last week." Crown Iron Works Co. is installing the machinery. Four large storage tanks for soy beans, and two for soy bean oil have been erected.

168. *Dawson Sentinel (Minnesota)*. 1951. Will hold first annual meeting tomorrow evening. 68(5):1. Oct. 5.

• **Summary:** "The first annual meeting of the Tri-County Soy Bean Co-operative will be held tomorrow evening, starting at 8 o'clock. The meeting will be held at the new soybean plant, which is nearing completion and is expected to be in operation around November 1.

"The main business of the annual meeting will be the election of seven directors." The present directors are: Carl M. Hanson of Maxwell, Melvin Knutson of Baxter, Morris Enevoldson of Boyd, Carl Barkeus of Cerro Gordo, Volney Peterson of Canby, John Lideen of Madison, and Merrill Lund of Providence (Minnesota, about 8 miles southwest of Dawson). "Installation of machinery is almost completed..."

169. *Dawson Sentinel (Minnesota)*. 1951. Start filling storage tanks at bean plant. 68(9):1. Nov. 2.

• **Summary:** "The first loads of soy beans were unloaded at the soy bean plant on Monday morning of this week, and will continue until the four huge storage tanks, with a total capacity of 83,000 bushels, are filled."

170. *Dawson Sentinel (Minnesota)*. 1951. Cedric Adams will have part in grand opening of soy bean plant December 8. 68(11):1. Nov. 16.

• **Summary:** Trial runs at the soy bean plant are expected to be made the latter part of this week. "Plans are underway for an Open House on Saturday, December 8, with the entire community joining in to celebrate the opening of this new industry." Tours of the plant for visitors will be a part of the program. The Cedric Adams Show will be the featured ending of the program, with Cedric's news broadcast at 10 p.m.

171. *Dawson Sentinel (Minnesota)*. 1951. 90 prizes, valued at \$850.00, offered in soy bean guessing contest now in progress. 68(12):1, 4. Nov. 23.

• **Summary:** "Over 80 business firms and individuals are contributing prizes in a community-wide guessing contest, as a part of the program for the grand opening of the new soy bean plant in Dawson on Saturday, December 8... contestants may win as many prizes as their guessing ability will permit.

"Jars of soy beans have been placed in each business place, along with a card stating the prize to be given at that place of business..." The rules and a list of the businesses and prizes is given.

172. **Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Tri-County Co-operative Soy Bean Association.

**Manufacturer's Address:** Dawson, Minnesota.

**Date of Introduction:** 1951. November.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Blue Book*. 1951 [March]. "Processors of soybeans." Minnesota–Dawson: Tri-County Cooperative Soybean Assn. President: Carl M. Hanson. Processing capacity: 50 tons/day.

*Dawson Sentinel (Minnesota)*. 1951. "Soy bean plant ready for trial runs next week." Nov. 9. p. 1. "By this time next week the new soy bean plant will have been in operation a day or so, with test runs being made to try out the machinery..." Note 1. Two solvent extraction plants of 25 tons/day capacity, built and installed here in 1950 by Crown Iron Works, initially used trichloroethylene solvent.

*Dawson Sentinel (Minnesota)*. 1951. "Open house at soy bean plant all day next Saturday." Dec. 7. p. 1. Section 1 of 3. "There will be open house all day Saturday at the new Tri-County Soy Bean Co-operative plant, with coffee and doughnuts served to all visitors. The plant will be in full operation... The plant is now operating 24 hours a day."

Note 2. In 1959 Crown Iron Works built and installed here a solvent extraction plant of 250 tons/day capacity.

173. *Dawson Sentinel (Minnesota)*. 1951. Soy bean plant ready for trial runs next week. 68(10):1. Nov. 9.

• **Summary:** "By this time next week the new soy bean plant will have been in operation a day or so, with test runs being made to try out the machinery..." "Plans are being formulated for an Open House at the soy bean plant soon after it is in full operation"—in late November or early December. "Mr. Givans [sic, Joe Givens], Crown Iron Works engineer, arrived on Tuesday of this week to supervise operation of the plant during the next two months."

Note: The soybeans were crushed initially using a solvent extractor and trichloroethylene solvent. Dawson never used expellers or screw presses. This is the earliest document seen (July 2005) that mentions Joe Givens in connection with Dawson.

174. *Dawson Sentinel (Minnesota)*. 1951. Dawson and soy bean plant given publicity. 68(15):1. Dec. 14.

• **Summary:** "Dawson and the new Tri-County Soy Bean plant have been receiving some very favorable publicity of late..." from Cedric Adams, the *Minneapolis Star and Tribune*, *St. Paul Pioneer Press and Dispatch*, *Soybean Digest*, and the *Grain and Feed Review*.

175. *Dawson Sentinel (Minnesota)*. 1951. Several thousand people visited Dawson last Saturday. 68(15):1, 12. Dec. 14.

• **Summary:** An estimated 6,000 people visited the soy bean plant during the day, which culminated "with a wonderful show at the armory with a capacity crowds in attendance." Many visitors came from out of town. People "began to

arrive at the soy plant before 9 a.m. on Saturday, and from that time on until late evening there was a constant stream of people inspecting the plant.” The Trinity Aid had prepared coffee and doughnuts for 2,500, but the supply was exhausted. Stu McPherson was master of ceremonies for the evening, with never a dull moment.

176. *Dawson Sentinel (Minnesota)*.1951. Sale of stock over wide area totals \$205,000, Nov. 24. 68(14):8. Dec. 7.

• **Summary:** Three tables show which communities the money came from to finance the new \$225,000 soy bean plant in Dawson: (1) Preferred stock sales (top 3 are Dawson, Madison, Boyd). Total \$150,700. (2) Common stock sales (top 3 Dawson, Appleton, Madison). Total \$45,800. (3) Combination of (1) plus (2) (top 3 Dawson, Madison, Boyd). Total \$205,000. The Dawson community purchased a total of \$121,700 or a little over half of the grand total.

177. *Dawson Sentinel (Minnesota)*.1951. Soy bean industry has tremendous growth in last decade. 68(14):8. Dec. 7.

• **Summary:** In the United States soy bean acreage increased from only about 25,000 acres in 1919, to 1,189,000 acres in 1924, to 13,291,000 acres in 1950. In 1924, when USDA began to recognize the importance of this new crop, its value was estimated at about 11 million dollars.

Since 1939 in Minnesota, there has been a huge increase in acreage and production. In 1938 Minnesota’s 30,000 acres produced 504,000 bushels of soybeans. By 1950, however, the state’s 1,057,000 acres produced 16,384,000 bushels. Comparable figures are also given for Lac qui Parle county, starting in 1947.

178. *Dawson Sentinel (Minnesota)*.1951. Soybean products have multitude of uses in many fields. 68(14):8. Dec. 7.

• **Summary:** “There is a saying in the Orient: ‘When you grow the soybean, you grow meat, butter and milk.’” But there are many other uses. They are summarized from a booklet prepared by ADM.

179. *Dawson Sentinel (Minnesota)*.1951. This is how it happened... 68(14):1, 3. Dec. 7. Section 3 of 3.

• **Summary:** The most detailed history seen of the origin of the soybean processing plant at Dawson, Minnesota. In Oct. 1950 several Dawson business men, active members of the Dawson Service Club, became interested in the possibility of securing a soy bean processing plant for Dawson. They heard that a new soybean processing plant was opening in Mankato, Minnesota. Mr. and Mrs. Glen Blomquist and Mr. and Mrs. Art Lee attended the Mankato open house, but after finding out that the cost was about \$2 million, they decided to let the matter drop for a while.

Several weeks later they heard about a new soybean processing plant operating at Blooming Prairie, Minnesota.

They aroused the interest of several other live-wire Service Club members, Bert Dahl and J.C. Hanson, and the four men decided to visit that plant in hopes of learning how the community had secured the plant. The people at Blooming Prairie were very cooperative and helpful during the first visit and subsequent visits. The Dawson men asked lot of questions and returned with information about the costs of the plant and operations, labor requirements, marketing, profits, etc. Blooming Prairie’s attorney Thorson even accepted invitations to meetings in Dawson to help provide the spark that would get the project started.

Back in Dawson the four men continued to discuss the project, including several meetings over cups of coffee. Not yet satisfied enough to present their ideas to a meeting, they spent much additional time visiting other plants, asking more questions, and investigating all the angles.

In early November, 1950, they decided to call a meeting of representative farmers from the Dawson and somewhat beyond. Dawson attorney R.M. Saltness, had been hired to help in preparing the proposal. Soon his enthusiasm for the project was as great as that of the four originators. The meeting took place on Nov. 9. Mr. Saltness presented the group’s findings and plan for the proposed plant in Dawson. After several hours of discussion, it was decided unanimously decided to incorporate immediately. Articles of incorporation were drafted and forwarded for filing; a temporary board of directors was elected. “This board consisted of Carl M. Hanson of Maxwell, Carl Barkeus of Cerro Gordo, Volney Peterson of Canby, Alfred Schmidtke of Maxell, Morris Enevoldson of Boyd, Melvin Knutson of Baxter, and Merrill Lund of Providence.”

On Armistice Day morning [Nov. 11, marking the official end of World War I in 1918] a meeting was called at the Carnegie library to advise local business men about the proposed plan; about 50 attended and gave enthusiastic support; by the end of the meeting \$20,000 in stock had been subscribed.

The next week two representatives of the Crown Iron Works of Minneapolis discussed the construction and operation of a soy bean processing plant to a well attended service club meeting. At this meeting, plans were laid to hold a series of township meetings at which the plant could be explained to farmers in those townships. This led to many question-filled evenings during the next few weeks. The temporary board visited the Blooming Prairie plant to learn more and stock sales progressed.

On Dec. 9, the biggest meeting to date was held at the Dawson armory, attended by over 600 interested farmers and business men. The project was explained by Mr. Glenn Blomquist and Attorney Thorson gave a history of the Blooming Prairie idea and its realization as a plant, discussed the importance of the soy bean as a crop to local farmers, business men, and the local economy, and detailed the many benefits of having a soybean crushing plant in Dawson.

By Christmas 1950 stock sales had reached \$80,000 and an order was placed with Crown Iron Works for the plant's machinery. At about the same time, the temporary board elected a temporary set of officers: Carl M. Hanson, president; Melvin Knutson, vice president; Morris Enevoldson, secretary; and Glenn Blomquist, treasurer. Issues of soy bean storage capacity and location were discussed and resolved, in part with local farmer-owned cooperatives.

On 9 Feb. 1951 (Monday), a group of about 50 business men and farmers gathered at the building site for the ground breaking ceremonies. Despite the snow on the frozen ground, Mayor G.C. Throndrud found a place to dig out a shovel full of dirt. Soon forms were in place and footings poured for the new plant. Following blizzards in March, work resumed in April as the steel arrived. Stock sales had slowed and salesmen began to devote full or part time to selling the balance of the stock needed to pay for the plant.

During the first in September, 1951, installation of machinery in the plant was started. From then on, things moved quickly; the site became a beehive of activity as electricians, plumbers, construction workers, engineers, etc. worked to complete the plant in time for the soy bean harvest.

The Dawson Service Club became the main organization responsible for developing, promoting and eventually concluding the project; members of the club took on the idea with enthusiasm and during the past year not a meeting has gone by without some discussion of its progress, sale of stock, and new ideas. Continued.

180. *Dawson Sentinel (Minnesota)*. 1951. This is how it happened... (Continued). 68(14):1. Dec. 7. Section 3 of 3.

• **Summary:** In early October, the two large (83,000 bushel capacity) soy bean storage tanks were erected; about a week later the soy bean oil storage tank (15,000 gallons capacity) was erected.

On 6 Oct. 1951, Saturday evening, the first annual meeting of the new co-operative was held at the Dawson armory; about 250 attended. Reports showed that the original goal of \$150,000 in stock sales had been exceeded; however rising costs and a change in plans had increased the total cost of the plant to about \$225,000. A concerted drive was started in each township to raise the \$60,000 balance. At the usual morning coffee club session, Frank Crouse insisted that action be taken immediately to raise the money; \$43,000 in stock was raised in that one day, and there is every expectation that the total will be raised by the time that this issue reaches its readers—quite an accomplishment for the small community in and around Dawson.

The temporary board was left in office to ensure that the plant began operation under the direction of the men who had been in contact with the work up to this time.

On October 29 filling of the storage tanks with soy beans began. By the middle of November, installation of machin-

ery and all interior work on the building (electricity, plumbing, etc.) was completed—except that the late delivery of a short section of spout from the storage tank to the plant delayed the plant start-up by several days.

“On Monday, November 26, the machinery went into operation and from now on the plant will be in operation 24 hours a day, seven days a week, with three shifts of workers operating the plant.”

Many said it could not be done in a small community of farmers in midwestern Minnesota, but within a year the idea had become a reality.

Photos show: (1) “Over a cup of coffee.” Left to right: J.C. Hanson, Bert Dahl, Glenn Blomquist, and Art Lee discussing soy bean processing over a morning cup of coffee. (2) Board of directors: Left to right, seated—Melvin Knutson, Carl M. Hanson, Morris Enevoldson. Standing—Carl Berkeus, Merrill Lund, Volney Peterson. Not in picture, John Lideen. (3) Staff of the soy bean plant. Left to right: Esther Asbjornson, Anton P. Johnson, Herman Anderson, Leonard Mogard, Walfred Anderson, Darrel Crane, A.F. Sear, Alvin Vane, Louis Sandbakken, Carl Barkeus, Thomas Newell.

181. *Dawson Sentinel (Minnesota)*. 1951. Open house at soy bean plant all day next Saturday. 68(14):1. Dec. 7. Section 1 of 3.

• **Summary:** “There will be open house all day Saturday at the new Tri-County Soy Bean Co-operative plant, with coffee and doughnuts served to all visitors. The plant will be in full operation...” The plant is now operating 24 hours a day.

“Tests of soy bean meal show a protein content of 48 per cent protein, two per cent over what was estimated, and the soy bean oil processed is of excellent quality.” A large photo, titled “Tri-County Soy Bean Co-operative plant,” shows the outside of the plant and several storage tanks.

To the left of the newspaper's title we read: “Section One—Soy Bean Plant Grand Opening.”

182. Deere and Weber. 1951. The completion of the new Tri-County Soy Bean Co-operative Plant... (Ad). *Dawson Sentinel (Minnesota)* 68(14):8. Dec. 7.

• **Summary:** “... is a source of pride to all who had anything to do with its construction, as well as the people of the community, and area, it serves.

“Congratulations”—to the business men, farmers, and “people of this community on the fine spirit of cooperation which brought this project to completion within a year.” Address: Lee Motor Co.—John Deere representative in Dawson.

183. *Dawson Sentinel (Minnesota)*. 1951. Five elevators in county co-operate in soy bean buying and storing. 68(14):1. Dec. 7. Section 2 of 3.

• **Summary:** “Pictured on this page are three of the five



elevators cooperating in the purchasing and storing of soy beans for the new soy bean processing plant in Dawson.” Those elevators are: Madison Mercantile and Elevator Co. (A.J. Larson). Farmers Elevator & Mercantile Co, Boyd (George Gilbertson). Farmers Co-op Elevator, Dawson (Bert Dahl). GTA Elevator, Madison (Hans Strand). GTA Elevator, Haydenville (C.H. Bjerke). A photo (in this section or the previous one) shows each elevator and its manager.

Directly below this article is a short “filler” titled “Industrial uses of soy beans,” which states: “Among many industrial uses are paints, varnish, enamel, linoleum, oilcloth, printing inks and papers, and for coated fabrics and lacquers. Soybean lecithin is widely used in many industries.”

An editorial in Section 1 is titled “Congratulations Tri-County Soy Bean Co-op.” “To Glenn Blomquist, Art Lee, Bert Dahl and John Hanson must go the major credit for this new industry.”

Note 1. This is the earliest document seen (March 2008) that mentions GTA (Farmers Union Grain Terminal Association), a cooperative.

**184. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** AGRI Industries.

**Manufacturer’s Address:** Mason City, Iowa.

**Date of Introduction:** 1951.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 1. Farmers Grain Dealers Association (Des Moines, Iowa, Soybean Division) (Mason City, Iowa, 1943). Footnote: “Located at Manly, Iowa, 1943-1951; Moved to Mason City in 1951; merged in 1967 with Farmers Grain Dealers Association.”

**185. Ohio Valley Soybean Cooperative.** 1952. “One of the better Tri-State soybean markets.” *Sunday Courier and Press (Evansville, Indiana)*. Aug. 24. p. 14.

• **Summary:** This large black-and-white ad states: “Toasted quality Cardinal soybean meal.” A photo shows the plant from ground level, with railroad tracks in the foreground. Address: Fifth St., Henderson, Kentucky. Phone: 3921.

**186. Middlemass, Larry.** 1952. Soybean cooperative plant handles over 850,000 bushels a year: Producing oil used for oleo. Meal turned out is mainly livestock feed. *Sunday Courier and Press (Evansville, Indiana)*. Aug. 24. p. 14.

• **Summary:** Note: Evansville, Indiana is just across the Ohio River (to the north) from Henderson, Kentucky. “More than 4,000 Tri-Staters are owners of one of Henderson’s fastest-growing young businesses. It’s the Henderson [Ohio Valley]

Soybean Cooperative, which each year converts 850,000 to 900,000 bushels of soybeans into oil and livestock feed.”

In 1941 the cooperative and plant were organized by about 25 soybean growers, at a time when the excellent food value of the soybean was just becoming known. Two screw presses squeezed the oil from 1,500 bushels of soybeans each day. By 1943, a third screw press was added, enabling the plant to process 2,250 bushels/day. In 1948 the cooperative decided to convert the plant to solvent extraction—a relatively new and more efficient technology. The screw presses were scrapped and the oil was now extracted by hexane solvent, a petroleum by-product. A description of how the new solvent extraction works is given.

Today the output is about double what it was in 1941. The plant has an annual payroll of about \$117,000, employs 35 men, and is still growing. By October of this year (harvest time) a \$65,000 improvement program (new unloading facilities, a new drier, and new conveying equipment) is scheduled to be completed. The co-operative gets its soybeans from farmers within about a 50-mile radius of Henderson. About 75% of all beans arrive at the plant during the harvest in October and November. But the plant has storage for 600,000 bushels, so it can process the soybeans in the months to come.

Most of the oil from the plant is presently shipped to Louisville, Kentucky, where it is used to make oleomargarine and shortening. Some of this oil is used to make paint and other industrial (nonfood) products. About half of the meal is sold back to members of the cooperative. The rest is shipped east and south to be used for livestock and poultry feeds.

An excellent aerial photo shows the Ohio Valley Soybean Cooperative complex. The caption states that it was constructed in about 1940 at Henderson, Kentucky, through efforts of the Henderson Farm Bureau. The initial cost of the plant was about \$350,000. About 3 years ago an additional, very modern plant was constructed.

**187. Eagle Grove Eagle (Iowa).** 1952. Start work on Boone Valley’s new plant (Photo caption). Sept. 25. p. A1.

• **Summary:** This photo shows 6 men standing together in front of a building. “Mayor pro tem J.W. Robinson is shown turning the first shovel of dirt on the site of the new storage elevators which Boone Valley is building.” Left to right are: “Chas. Loux, plant superintendent; Ed Olson, general manager of Boone Valley; Ralph Olson of Ellsworth, president of the firm; Robinson; Fred Reil, president of the Eagle Grove Chamber of Commerce; and Gordon Heath, manager of the Consumers Cooperative Association.

“Cost of converting the Boone Valley operation from expeller type to solvent type has been set at approximately \$600,000. Construction work is already underway and is expected to last until next summer.”



188. Photographs of the Ohio Valley Soy Bean Co-operative, in Henderson Co., Kentucky (1952-1955). 1952. Henderson Co., Kentucky.

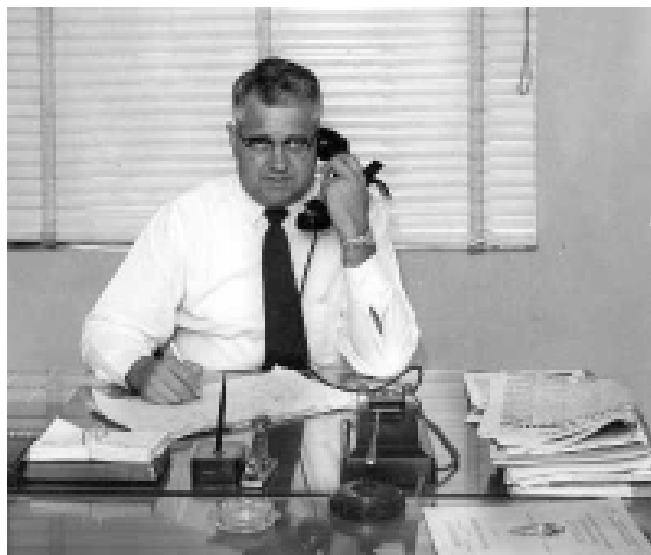
• **Summary:** Five digital photos (the first four black-and-white) were sent to Soyinfo Center in March 2007 by Al Reisz, Jr., son of the key man in organizing and running this cooperative. These photos show the first cooperative soybean processing plant in the USA:



(1) The hexane solvent extraction plant in about 1952 (perhaps 1951).



(2) Three men involved in the OVSC standing in a soybean test plot that was adjacent to the plant grounds. Al Reisz is standing in the center. The Vo-op worked with the University of Kentucky Ag. Extension Service to test soybean varieties and to show farmers how to plant, cultivate, and harvest soybeans.



(3) Al Reisz at his desk in the OVSC office in 1954.



(4) A typical meeting with farmers in 1954 to promote the planting of soybeans. Al Reisz is standing at the left of the graph.



(5) European visitors during a tour of the OVSC plant in 1955. Al Reisz is at the far left, back row.



(6) Soybean oil from OVSC being loaded into a railroad tank car.

189. *Soybean Digest*. 1953. To build Iowa plant [Boone Valley Cooperative]. Jan. p. 21.

• **Summary:** “A \$600,000 solvent extraction soybean processing plant will be built by the Boone Valley Cooperative Processing Association at Eagle Grove, Iowa.” Ralph Olsen, president, has announced that construction will begin at once. The current plant uses Expellers and has a capacity of 90 tons/day. The new plant, which is expected to be completed by next summer, will have a capacity of 300 tons/day and 100,000 bushels of soybean storage.

190. *Dawson Sentinel (Minnesota)*. 1953. This crew works in a safe plant. 69(35):1. May 8.

• **Summary:** The lower caption gives the names of the 14 people shown in the photo, including Joe Givens. Not pictured were Leo Kockelman, John Beattie, John and Jerome Strangeland, and Al Kaiser. An untitled story below the photo notes that a recent conversion process has made the plant a safer place to work. Fire underwriters were consulted in planning the conversion and their suggestions followed—so that the plant now carries a lower insurance rate than does the average business on Dawson’s main street. The solvent extraction room was isolated from the rest of the building by means of fire walls and plastering. A large ventilating fan and two smaller blowers keep the air in the room circulating constantly.

Note: The plant reopened on May 1. It was converted from one using a safe solvent (trichloroethylene) to one that was extremely flammable and potentially dangerous (hexane).

191. *Gleaner and Journal (Henderson, Kentucky)*. 1953. Foreign leaders visit here today. July 11.

• **Summary:** “Eleven leaders in their respective countries in the fields of agriculture, industry and labor—then from the Netherlands, one from France—are scheduled to visit Henderson today.” They are to be conducted on a tour of the

Ohio Valley soybean mill here. They are in Kentucky as part of the University of Kentucky’s foreign training programs and the international exchange program.

192. *Soybean Digest*. 1953. Iowa firm opens new plant (Photo caption). Aug. p. 20.

• **Summary:** This ground-level photo shows an office building in front with a large soybean extraction plant and about 61 concrete grain elevators behind it. The lower caption reads: “This is the new solvent extraction and storage plant of the North Iowa Cooperative Processing Association recently officially opened at Mason City. Plant, of 150 tons daily capacity, was furnished by French Oil Mill Machinery Co., Piqua, Ohio. Engineers were R.W. Booker & Associates, St. Louis [Missouri]. Storage capacity is 350,000 bushels. Total cost was 1½ million dollars. Glen [sic, Glenn] Pogeler is manager for the association. About 600 people attended the two-day open house.”

193. *Eagle Grove Eagle (Iowa)*. 1953. Aerial view of the new Boone Valley plant (Photo caption). Oct. 1. p. C1.

• **Summary:** “At the left can be seen the new solvent plant constructed of steel and glass. The new storage elevators are in the middle and just in front of them in the trees is the office building.”

194. *Eagle Grove Eagle (Iowa)*. 1953. An invitation—To the people of north central Iowa (Ad). Oct. 1. p. 3c.

• **Summary:** A full page ad. “To attend the big opening of the new \$600,000.00 Boone Valley Coop Processing Assn. soybean solvent processing plant. Thursday, October 8th. 9 a.m. to 5 p.m. Free—Coffee and doughnuts served to all! Good news for visitors.

“Good news for visitors: The Eagle Grove Chamber of Commerce is cooperating with the Boone Valley Cooperative Processing Assn. by offering 3 big days of special bargains.” A photo shows an aerial view of the new Boone Valley solvent plant and concrete storage bins.

195. *Eagle Grove Eagle (Iowa)*. 1953. Boone Valley will use 9 cars each day. Oct. 1. p. C1.

• **Summary:** The new plant will cause a boom in the railroad business here by using “9 railroad cars in and out each day (Sundays and holidays included). That makes 270 cars per month and 3,250 cars per year.” Railroad men can figure out how many jobs that will provide.

196. *Eagle Grove Eagle (Iowa)*. 1953. Feed mixing profit keeps firm going: Side line added in 1946 becomes profit motive that keeps business going. Oct. 1. p. C1.

• **Summary:** The company started making soy bean meal and oil in 1944, then in 1946 started a feed mixing operation on a very small scale. Sales the first month were \$40,000. But the feed business grew by at least 25% a year until in 1953 it

was using over half the soybean meal produced by the parent first and had developed into a \$175,000 a month operation. In 1952, the last year of its operation, Boone Valley lost \$100,000 on soy bean meal production. The profit from the feed mixing operation kept the company's overall operation in the black [profitable] and a going concern. Recalling tough times, general manager Ed Olson says, "If it hadn't been for the feed mixing business, we wouldn't be here."

197. *Eagle Grove Eagle (Iowa)*. 1953. Boone Valley will add 14 to its payroll. Oct. 1. p. C1.

• **Summary:** "When the plant shut down in July it was employing 34 persons regularly in the processing operation." When its starts up later this month, that number is expected to increase to 48; the annual payroll at that time will be over \$200,000.

198. *Eagle Grove Eagle (Iowa)*. 1953. Boone Valley has exciting 10 year history: Built in war time, completely burned out, and now completely rebuilt and expanded in value over six times is story. Oct. 1. p. C1.

• **Summary:** "The Boone Valley Cooperative Processing Association has had an exciting, hectic and turbulent 20 years of operation, or rather history is better, because it has not been operating nearly all of that time."

"A group of farmers and elevator operators near Stratford headed by Ed Olson began to make plans and study the possibility of starting a soy bean so that the farmers who produced the protein could get the protein back to feed their livestock.

"At the same time another group of farmers around Eagle Grove and Webster City were also working on the same proposition. Members of the Eagle Grove Chamber of Commerce heard of it and enlisted the aid of the Northwestern railroad people who at that time had the old shops building for sale.

"Under the influence of Ed Olson these groups all got together and formed an organization which later became the Boone Valley Cooperative Processing Association and [in March 1944] started to process the farmers soy beans into feed for the farmers." All this happened during the war when materials and labor were hard to get. Only the highest priority rating from the government made it possible for the firm to get started.

"Common and preferred stock was sold to 23 cooperative elevators and enough money was raised to start the firm which was valued at approximately \$100,000 at that time."

Three years later, on Aug. 23, "the company was hit by a disastrous fire which burned the building to the ground. All that was left standing were the four outside walls.

"Because the member elevators had come to depend upon the Boone Valley for their soy bean meal and mixed feeds the firm bought the Hubbard, Iowa plant to keep these members supplied until a new plant could be built again in

Eagle Grove.

"Finally in October 1948, more than a year later, the new plant was back in operation in Eagle Grove. Its valuation at that time was placed at approximately \$275,000. It had 50 members by now." The company continued to operate plants in Eagle Grove and Hubbard "until May 1950 when the Hubbard plant was sold and the machinery moved to Eagle Grove and combined with the machinery already here.

"By 1962 it had become evident to the directors and officers that if Boone Valley was to continue to operate, it would have to modernize" by changing to a solvent extraction process from the older expeller process.

The facts and figures "were explained to the members in a series of meetings and finally approval was given to the Board to embark on the \$650,000 expansion program. This change over [changeover] has been going on since July and the plant has been shut down since that time." A series of test runs are expected to start later this month, and by early November the plant should be running at full capacity.

199. *Eagle Grove Eagle (Iowa)*. 1953. Open house today at Boone Valley: Refreshments and conducted tours for you. New \$650,000 processing plant ready for public inspection. Not to start operating until last of month. Oct. 1. p. C1.

• **Summary:** "Thursday, October 8 (today) from 9 a.m. to 5 p.m. is official open house time at the Boone Valley Cooperative Association's new plant. Everyone is invited to come and go through the new plant on a conducted tour. Coffee and doughnuts will be served by the Chamber of Commerce members..."

"There are 50 member cooperatives who own the Boone Valley with an estimated membership of over 20,000 farmer owners..." The new hexane solvent extraction equipment will increase the capacity of the plant by at least four times. Operating 24 hours a day, the plant will process 10,000 bushels of soybeans daily. "From this it will get 5,000 bags of meal [each weighing 100 lb] or 250 tons of meal each day."

"Many special precautions are being taken to make the operation as safe as possible." Special tools, made of a soft substance called "non-spark meloid," will be used. "No matches, lighters, or metal objects which could cause a spark will be allowed in the plant. Visitors will not be allowed in the plant after it starts operation." Portrait photos show: (1) Ralph Olson. (2) Ed Olson.

200. French Oil Mill Machinery Co. 1953. There's progress at Boone Valley Cooperative Processing Association (Ad). *Eagle Grove Eagle (Iowa)*. Oct. 1. p. 2.

• **Summary:** A full page ad. "Progress—is an important word in America. Why has America's industrial progress outstripped the rest of the world? In no country have men and women been so free to think, to create, to develop, to produce. That's why American have more of the good things



in life, more income to buy them, more leisure to enjoy them. That's why the world's highest standard of living is enjoyed in the U.S.A." A large illustration shows a handsome man, straight out of the 1950s, gesturing with his thumb over his shoulder to a photo that shows an aerial view of the new Boone Valley solvent plant and concrete storage bins. Address: Piqua, Ohio.

201. *Eagle Grove Eagle (Iowa)*. 1953. Three cooperatives pay employee wages with silver dollars: To circulate 5300 "cart wheels" here. In observance of the 25th anniversary of founding of Consumers Cooperative Association. Nov. 19. p. A1.

• **Summary:** "5300 silver dollars will be floating around Eagle Grove and vicinity this week when the three wholesale cooperatives pay their employees weekly wages with the big 'cart wheels.'"

"The Boone Valley Cooperative Processing Association has the largest payroll and will distribute approximately \$3300 silver dollars to its employees."

The Consumers Cooperative Association, now age 25, with headquarters in Kansas City, Missouri, serves 9 states in nearly every farm operation or merchandise program. Howard Cowden, one of the nation's recognized business leaders, is president of the CCA, which "has made such tremendous growth and development in 25 years, makes the event well worth commemorating."

202. *Eagle Grove Eagle (Iowa)*. 1953. Boone Valley holds tenth annual dinner and meeting: 255 present as officers are elected. Company has assets totaling \$1,760,000 as it starts new type operation. Nov. 26. p. 1.

• **Summary:** The annual dinner and business meeting was held Saturday noon in the Memorial building. Mayor Don Mitchell gave a welcoming address. Various guests were introduced. All the former officers and executive directors were re-elected without exception or opposition. Their names and towns are given. The new type operation refers to the solvent extraction plant, which is estimated to cost \$619,049. The company's first year assets were \$299,599, so they have grown 5.8-fold during these first 10 years. "Sales for the year ending in August, 1953, amounted to \$3,429,038 in comparison with the first year's sales of \$465,963"—a 7.4-fold increase.

"Starting with 10 employees, the company now has 54 employees. Its 1954 pay roll is estimated at \$200,000."

"Few firms have experienced such a hectic operation in so few short years. That it has come through successfully and is now ready to embark on the new modern operation attests to the diligence and hard work of the officers, directors and manager." Portrait photos show Ralph Olson and Ed Olson.

203. *Eagle Grove Eagle (Iowa)*. 1953. Boone Valley officers and directors (Photo caption). Dec. 3. p. 1.

• **Summary:** A horizontal photo shows 7 of the offices and executive directors seated side by side at a table; the name and town of each is given. In the lower right inset are Ed Olson (general manager, lives in Eagle Grove), and Ralph Olson (president, lives in Ellsworth).

204. **Product Name:** Soybean Oil, and Soybean Oil Meal. **Manufacturer's Name:** North Iowa Cooperative Processing Association.

**Manufacturer's Address:** Mason City, Iowa.

**Date of Introduction:** 1953.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Soybean Digest*. 1953.

"Iowa firm opens new plant" (Photo caption). Aug. p. 20.

The lower caption reads: "This is the new solvent extraction and storage plant of the North Iowa Cooperative Processing Association recently officially opened at Mason City, Plant, of 150 tons daily capacity, was furnished by French Oil Mill Machinery Co., Piqua, Ohio... Storage capacity is 350,000 bushels. Total cost was 1½ million dollars. Glen [sic, Glenn] Pogeler is manager for the association. About 600 people attended the two-day open house."

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 1. Farmers Grain Dealers Association (Des Moines, Iowa, Soybean Division) (Mason City, Iowa, 1943). Footnote: "Located at Manly, Iowa, 1943-1951; Moved to Mason City in 1951; merged in 1967 with Farmers Grain Dealers Association."

205. Derr, Raymond William. 1953. Missouri Farmers in action: A public relations study of the Missouri Farmers Association. Columbia, Missouri: Missouri Farmer Press. viii + 230 p. Illust. No index. 24 cm.

• **Summary:** Contents: Foreword, by H.E. Klinefelter (Editor, MFA Publishing Dep.). Introduction, by Clarence Cannon, U.S. Representative from Missouri. 1. How this book came to be written. 2. Organization of the Missouri Farmers Association. 3. Historical sketch of the cooperative movement. 4. Hirth lays the foundation for the Missouri Farmers Association. 5. The first years of the Missouri Farmers Association. 6. The producers contract. 7. The era of President Hirth. 8. The Missouri Farmers Association becomes democratic. 9. Public relations through legislative activities. 10. The program at the grass roots. 11. How the M.F.A. tells its story. 12. Meeting the challenge of the future.

Ray Derr wrote this as his PhD thesis. It was published by the MFA's state board of directors. The book is not a history of the MFA, but rather a careful study of its public relations activities—which were extensive. For example, MFA strongly supported the McNary-Haugen Farm Relief Bill. Despite

attempts in 1924, 1926, and 1928 to pass the bill—it was vetoed by President Calvin Coolidge, and never approved. It was supported by Henry C. Wallace. In 1953, more than half of the farmers in Missouri owned and controlled MFA, which was the largest statewide farm organization of its kind in the United States. It does not mention the co-op's soybean processing plant at Mexico, Missouri. The main character is William Hirth (1875-1940), a farm leader, organizer, first president of the MFA, and editor of *The Missouri Farmer*. Address: Missouri.

206. Photograph of Glenn Pogeler seated behind his large desk at the North Iowa Co-Operative Processing Association, in Mason City, Iowa. 1953.

• **Summary:** At the upper right of the photo is an open window, with many panes, which shows a bulldozer in front of a soybean crushing plant under construction. A digital scan of this black-and-white photograph was sent to Soyfoods Center on 16 June 2005 by Gary Pogeler of Pennsylvania; he owns the original photo.

207. *Kentucky Farm Bureau News*. 1954. Co-op Council holds 1st annual meet. Jan.

• **Summary:** The first annual meeting of the Kentucky Cooperative Council was held in Louisville in November; 68 Kentucky cooperatives are now members of the group. The Council's president is Al Reisz, manager, Ohio Valley Soybean Cooperative (Henderson). Names of all officers are given. A photo shows Reisz and others seated at a table.

208. Northern Utilization Research Branch, Agricultural Research Service. 1954. Seventh Annual Cooperative Soybean Oil Mills Conference on problems of cooperative soybean oil mills [Proceedings]. Peoria, Illinois. 19 p. Held 3-4 May 1954 at the Hanford Hotel, Mason City, Iowa. Publ. June 21.

• **Summary:** This conference was sponsored by: (1) Agricultural Research Service, Northern Utilization Research Branch, Peoria, Illinois; (2) Farmer Cooperative Service, Cotton and Oilseeds Branch [USDA], Washington, DC. (3) North Iowa Cooperative Processing Association, Mason City, Iowa (manager Glenn Pogeler, who gave the first welcoming remarks).

A detailed program is given. Presentations included: "Recent findings on the toxicity of TESOM (trichloroethylene extracted soybean oil meal), by L.L. McKinney of Peoria. Panel discussion: "Procurement problems of cooperative soybean oil mills. Chair: Dr. W.W. Fetrow, Chief, Farmer Cooperative Service. Panelists: Maurice Maze, manager, M.F.A. Cooperative Grain and Feed Company, Mexico, Missouri. S.O. Frey, manager, Producers Cooperative Association, Girard, Kansas. C.W. Hanson, manager, Big 4 Cooperative Processing Association, Sheldon, Iowa. "Government programs as they affect producers and proces-

sors of cottonseed and soybeans," by Glenn Pogeler. "Has operation to date justified conversion to solvent extraction?," by Ed Olson (manager, Boone Valley) and Glenn Pogeler. After lunch there was a guided tour of the facilities of the North Iowa Cooperative Processing Association.

On pages 18-19 is a "List of attendance" from Farm Cooperative Associations, listed here alphabetically: Big 4 Cooperative Processing Ass'n, Lake Park & Sheldon, Iowa. Boone Valley Cooperative Processing Ass'n., Eagle Grove & Woolstock, Iowa. Co-Op Vegetable Oils, Ltd., Alton, Manitoba, Canada. Farmers Cooperative Ass'n., Ralston, Iowa. Farmers Cooperative Company, Dike, Iowa. Farmers Grain Dealers Ass'n., Des Moines, Iowa. Farmers Union Grain Terminal Ass'n. [GTA], St. Paul, Minnesota. Imperial Hay Growers Ass'n., Brawley, California. M.F.A. Co-op Grain and Feed Company [MFA], Mexico, Missouri. North Iowa Cooperative Processing Ass'n., Mason City & Nora Springs, Iowa. Northwest Co-op Mills, St. Paul, Minnesota. Producers Cooperative Ass'n., Girard, Kansas. Southwest Flaxseed Ass'n., Imperial, California. Tri-County Co-op Soybean Ass'n. [later renamed Dawson Mills], Dawson, Minnesota. West Bend Elevator Company, West Bend, Iowa.

Note 1. This is the earliest English-language document seen (June 2006) that uses the acronym "TESOM."

Note 2. North Iowa Cooperative Processing Association apparently now has two plants. Nora Springs is about 9 miles due east of Mason City. Address: Peoria, Illinois.

209. New Orleans Agricultural Research Service, Southern Utilization Research Branch. 1955. Journal of Proceedings, Annual Conference on Problems of Cooperative Cottonseed and Soybean Oil Mills [First]. 41 p. Held March 7-9, 1955 at Caprock Hotel, Lubbock, Texas.

• **Summary:** This conference was sponsored by: (1) Agricultural Research Service, Southern Utilization Research Branch, New Orleans, Louisiana. (2) Northern Utilization Research Branch, Peoria, Illinois. (3) Farmer Cooperative Service, Cotton and Oilseeds Branch [USDA], Washington, DC (Ward W. Fetrow, chief). (4) Plains Cooperative Oil Mill, Lubbock, Texas (Roy B. Davis, General Manager). Papers included: "Soybean viewpoint," by Glenn Pogeler. Address: Lubbock, Texas.

210. *Ohio Valley Soybean Cooperative News*. 1955-1961. Serial/periodical. Henderson, Kentucky: OVSC. Vol. 1, No. 1. July 1955, to at least June 1961. Frequency: Monthly.

• **Summary:** In July 1955, the president of the cooperative was Charles B. Smith; the manager was A.I. Reisz, who continues as manager until at least 1961. Address: Henderson, Kentucky.

211. Reisz, A.I. 1955. Cooperative organization is mutual obligation of several groups. *Ohio Valley Soybean Cooperative News* (Henderson, Kentucky) 1(1):1-2. July.

• **Summary:** “Our cooperative was organized nearly fifteen years ago [1940] as a result of the vision and perseverance of the farm leaders of that day. Its purpose was to better market the soybeans you as farmers were producing. I believe that the history of our organization, if it were carefully studied, would prove beyond all doubt that it has succeeded in accomplishing this purpose.”

“A cooperative is a joint undertaking by a group of people organized to do a specific job which they as individuals are unable to do for themselves. A cooperative is composed of three distinct groups of people: (1) patrons and stockholders, (2) board of directors, and (3) personnel. If the cooperative is to serve the purpose for which it was set up, each of these groups must do their part.”

Small portrait photos on page 1 show: A.I. Reisz, wearing a bow tie and glasses, Oscar D. Keck (vice president), and Charles B. Smith (president). Address: Manager, Ohio Valley Soybean Cooperative, Henderson, Kentucky.

212. *Gleaner and Journal (Henderson, Kentucky)*. 1955. Charles B. Smith quits as head of the soybean coop. Sept. 8. p. 1, 9.

• **Summary:** “Charles B. Smith stepped down yesterday after 15 years as president of the Ohio Valley Soybean Cooperative, and O.D. Keck of Mt. Vernon, Indiana, was named to succeed him.” The board of directors held its meeting here “prior to last night’s annual stockholders’ dinner...” Smith has asked to be relieved of his duties “because of injuries received in an automobile crash several months ago. Smith becomes chairman of the board of directors. James R. Rash, Jr... was named vice president.”

Keck told the stockholders that the coop had shown a loss in income last year; the customary dividend was suspended. There has been a drop in demand for the coop’s main product, soybean meal; to offset this, the board voted to start mixing stock feed here.

J. Ward Calland of Decatur, Indiana, president of the National Soybean Crop Improvement Council, was the main after-dinner speaker last night. The banquet was attended by upward of 400 people.

213. National Soybean Processors Association. 1955. Year book, 1955-1956 (Association year). Chicago, Illinois. 48 p.

• **Summary:** On the cover (but not the title page) is written: “Year Book and Trading Rules, 1955-1956.” Contents: Constitution and by-laws and code of ethics. Officers, directors and committees for 1955-56. Membership of the National Soybean Processors Association. Trading rules on soybean oil meal. Appendix to trading rules on soybean oil meal: Official methods of analysis (moisture, protein, oil, crude fiber {only method numbers listed}, sampling of soybean oil meal). Trading rules on soybean oil: Tentative refined oil specifications. Appendix to trading rules on soybean oil: Uniform sales contract, standard specifications

for crude soybean oil for technical uses, grading soybean oil for color (N.S.P.A. tentative method), methods of analysis (A.O.C.S. official methods): Soybean oil, crude; soybean oil, refined; soybean oil, refined and bleached; soybean oil for technical uses; soap stock, acidulated soap stock and tank bottoms (only method numbers listed).

The section titled “Officers, directors, and committees” (p. 12-15) states: President: R.G. Houghtlin. V.P., Chairman Executive Committee: Dwight L. Dannen. Secretary: E.A. Cayce. Treasurer: H.A. Abbott. Executive Committee: Dwight L. Dannen, Chairman, D.O. Andreas, H.A. Abbott, R.G. Golseth (term ending Sept. 1956). E.A. Cayce, A.C. Hoehne, R.G. Houghtlin, W.E. Hulse (term ending Sept. 1957).

Board of Directors (Term expiring Sept. 1956): E.A. Cayce, Jasper Giovanna, Willard C. Lighter, M.D. McVay, Ralph S. Moore, Clark Yager. Term expiring Sept. 1957: D.O. Andreas, Earl J. Brubaker, Dwight L. Dannen, R.B. Jude, W.H. Knap, Glenn Pogeler. Term expiring Sept. 1958: S.D. Andrews, Jr., S.E. Cramer, A.C. Hoehne, W.E. Hulse, Donald C. Ogg, J.J. Quinlan.

Standing committees: For each committee, the names of all members (with the chairman designated), with the company and company address of each are given—Traffic and transportation. Technical. Soybean grades and contracts. Oil trading rules. Meal trading rules. Crop improvement council. Soybean research council. Uniform rules and standards for soybean oil meal. Safety and insurance. Lecithin. Regional: Ohio and East; Illinois, Indiana, Kentucky, Wisconsin and Northwestern Missouri; Iowa, Minnesota, Nebraska, South Dakota; Kansas, and Western Missouri; Southeastern Missouri and the Mississippi River Delta Sections.

The following organizations, and individuals are members of NSPA: Albers Milling Co., Los Angeles, California (W.P. Kyle). Allied Mills, Inc., Board of Trade Bldg., Chicago, Illinois; Peoria, Illinois; Taylorville, Illinois; Omaha, Nebraska. Archer-Daniels-Midland Co., Box 839, Minneapolis 2, Minnesota; Mankato, Minnesota; Decatur, Illinois; Baldwin Oil Mill, Inc., Foley, Alabama (W.H. Sessions). Belzoni Oil Works, Belzoni, Mississippi (Irby Turner). Big 4 Co-op. Processing Assn., Sheldon, Iowa (Chas. W. Hanson). Boone Valley Co-op. Processing Assn., Eagle Grove, Iowa (Edward Olson). Borden’s Soy Processing Co., New York 17, New York (E.J. Brubaker); Waterloo, Iowa; Chicago 4, Illinois (James R. Pentis); Kankakee, Illinois. Buckeye Cotton Oil Co. (The), Cincinnati 1, Ohio (W.H. Knapp, R.B. Williams); Little Rock, Arkansas; Wilson, Arkansas; Louisville, Kentucky; Greenwood, Mississippi; New Madrid, Missouri; Raleigh, North Carolina; Memphis, Tennessee. Cargill, Inc., Minneapolis 15, Minnesota (M.D. McVay, Jay Haymaker); Chicago 3, Illinois (W.B. Saunders); Cedar Rapids, Iowa (C.W. Bohlander); Fort Dodge, Iowa (W.J. Wheeler); Washington, Iowa (Hugo Lensch); Philadel-



phia, Pennsylvania (R.F. Hubbard). Central Iowa Bean Mill, Gladbrook, Iowa (Paul H. Klinefelter). Central Soya Co., Inc., Fort Wayne 2, Indiana (W.E. Huger); Gibson City, Illinois (Newell Wright); Decatur, Indiana (T.H. Alwein); Marion, Ohio (W.E. Mann); Chattanooga, Tennessee (R.W. Fay). Checkerboard Soybean Co., Decatur 30, Illinois (R.E. Baer). Colchester Processing Co., E. St. Louis, Illinois (E.L. McKee). Consumer's Soybean Mills, Inc., Minneapolis 15, Minnesota (Riley W. Lewis). Dannen Grain and Milling Co., St. Joseph 1, Missouri (Dwight L. Dannen). Delphos Grain and Soya Products Co., Delphos, Ohio (Floyd E. Hiegel). Delta Cotton Oil and Fertilizer Co., Jackson, Mississippi (Alfred Jenkins). Drackett Co. (The), Cincinnati 32, Ohio (Roger Drackett). Farmers Cooperative Assn., Ralston, Iowa (Karl Nolin). Farmers Cooperative Co., Dike, Iowa (C.M. Gregory). Fremont Cake and Meal Co., Fremont, Nebraska (Harry E. Wiyse). Funk Bros. Seed Co., Bloomington, Illinois (H.A. Abbott). Galesburg Soy Products Co., Galesburg, Illinois (Max Albert). General Mills, Inc., Chem. Div., Minneapolis 1, Minnesota (Sewal D. Andrews, Jr.); Belmond, Iowa (Walter B. Hotvet); Rossford, Ohio (Glenn W. Martin). Glidden Co. (The), Chicago 39, Illinois (Willard C. Lighter). Gooch Milling & Elevator Co., Lincoln 1, Nebraska (M.R. Eighmy). Haynes Milling Co., Inc., Portland, Indiana (Clarence E. Peters). Holland Pioneer Mills, Ohio City, Ohio (G.A. Holland). Honeymead Products Co., Mankato, Minnesota (D.O. Andreas, L.W. Andreas); Huegely Elevator Co., Nashville, Illinois (J.W. Huegely). Illinois Soy Products, Springfield, Illinois (Jasper Giovanna, Eric Nadel). Iowa Milling Co., Cedar Rapids, Iowa (Joe Sinaiko, Bob Scroggs). Iowa Soy Co., Redfield, Iowa (Donald C. Ogg). Ipava Farmers Processing Co., Ipava, Illinois (Phil. Snedeker). Kansas Soya Products Co. (The), Emporia, Kansas (Elmer L. Buster). Lauhoff Soya Co., Danville, Illinois (R.G. Golseth). Marshall Mills Inc., Marshalltown, Iowa (J.I. Johnson). McKee Feed & Grain Co., Muscatine, Iowa (L.R. McKee). Mid-States Fats and Oils Corp., Peru, Indiana (Oren P. Cochran); Indianapolis, Indiana (Paul J. Sicanoff). Minnesota Linseed Oil Co., Minneapolis 21, Minnesota (R.J. Lindquist, Jr.). Mississippi Cottonseed Prod. Co., Jackson, Mississippi (H.E. Covington). Muscatine Processing Corp., Muscatine, Iowa (G.A. Kent). North Iowa Cooperative Processing Association, Mason City, Iowa (Glenn Pogeler). Ohio Valley Soybean Co-op, Henderson, Kentucky (A.I. Reisz). Owensboro Grain Co., Owensboro, Kentucky (William M. O'Bryan). Pacific Vegetable Oil Corp., San Francisco 7, California (B.T. Rocca, Jr.). Pillsbury Mills, Inc., Clinton, Iowa (Clark Yager, D.B. Long, E.A. Blasing). Planters Manufacturing Co., Clarksdale, Mississippi (A.K. Shaifer). Quaker Oats Co. (The), Chicago 54, Illinois (K.N. Tilden). Quincy Soybean Products Co., Quincy, Illinois (Irving Rosen, Norman Rosen). Ralston Purina Co., St. Louis 2, Missouri (Donald B. Walker); Kansas City, Missouri (F.G.

Franze); Bloomington, Illinois (D.D. Rowland); Lafayette, Indiana (Ralph Guenther); Iowa Falls, Iowa (H.N. Johnson). Riverside Oil Mill, Marks, Mississippi (William King Self). Sisketon Cotton Oil Mill, Inc., Sisketon, Missouri (P.B. Bartmess). Sioux Soya Mills, Div. of Sioux Industries, Inc., Sioux City 2, Iowa (John W. Zipoy). Southern Cotton Oil Co. (The), Goldsboro, North Carolina (W.V. Westmoreland); Tarboro, North Carolina (W.A. Moore). Southland Cotton Oil Co., Div. of Anderson Clayton Co., Paris, Texas (James R. Gill). Soy-Rich Products, Inc., Wichita, Kansas (Ralph S. Moore). Spencer Kellogg and Sons, Inc., Buffalo 5, New York (Robert B. Jude); Chicago, Illinois; Decatur, Illinois; Des Moines 6, Iowa; Bellevue, Ohio; El Centro, California. Swift & Co., Union Stock Yards, Chicago 9, Illinois (S.E. Cramer). Tri-County Co-op Soybean Assn., Dawson, Minnesota (J.C. Givens). Wells (Ralph) & Co., Monmouth, Illinois (Ralph Wells). West Bend Elevator Co., West Bend, Iowa (R.W. Jurgens). West Tennessee Soya Mill, Inc., Tiptonville, Tennessee (Peter Frederickson).

Associate Members: American Feed Stores Home Organization (The), Minneapolis, Minnesota. Armour & Co., Chicago 9, Illinois (John H. Noble). Best Foods, Inc. (The), New York 17, NY. Capital City Products Co., Columbus 16, Ohio. Clinton Foods Inc., Clinton, Iowa. Cooperative Mills Inc., Baltimore 30, Maryland. Cox (Chas. M.) Co., Boston, Massachusetts. Humco Co. (The), Memphis 1, Tennessee. Kraft Foods Co., Chicago, Illinois. Lever Bros Co., New York 22, New York. Procter & Gamble Co., Cincinnati 1, Ohio. Spartan Grain & Mill Co., Inc., Spartanburgh, South Carolina. Tuckers (Mrs.) Products, Div. of Anderson Clayton Co., Sherman, Texas. Wilson & Co., Inc., Chicago, Illinois. Address: 3818 Board of Trade Building, Chicago 4, Illinois.

214. Vennes, L.A. 1955. The Ohio Valley Soybean Cooperative. *Rural Kentuckian* 8(11):16-17, 20. Nov.

• **Summary:** Describes how and why farmers in the Henderson area established America's first soybean processing and marketing cooperative. The cooperative crushing plant has been a success. Henderson is located in the fertile Ohio Valley, 150 miles southwest of Louisville, Kentucky, where the production of corn and livestock have been major farm enterprises for more than a century. Soybeans, a relative newcomer by those standards, have done much to improve the economy of the area. Local farmers now market more than \$2 million worth of soybeans a year.

Much of the bottomland around Henderson is covered by overflow waters from the Ohio River each winter and early spring. This the soil is rich and well adapted to growing cash crops. Prior to 1938 most of the soybeans grown in the area were sold as seed to farmers growing soybean hay. But starting in 1938 soybeans began to be produced in large enough quantities to be considered a cash grain crop.

"Farmers then raised this question: 'Would it be profitable and possible to establish a soybean crushing plant within this

general area?" To answer this question the Extension Service of the University of Kentucky was consulted and a detailed survey of the situation was made." It was concluded that such a mill would be possible and profitable. And it could supply high-protein feeds very economically to livestock farmers in the area. A program of acquainting local farmers with the facts of the situation was started. "Money was raised by stock subscription from farmers on the basis of \$1.00 share of stock for each acre of soybeans grown over a two year period. In addition to the common stock which was sold only to soybean growers, \$15,000 of the preferred stock was offered to the public.

"And so the first cooperative soybean processing plant in America was organized late in 1940.

"By the time the necessary remodeling of the storage elevator had been accomplished, the processing plant built, and new machinery installed, months had passed and it was in the summer of 1941 before the plant was ready for operation. By this time most of the 1940 crop of soybeans had been marketed, and only enough beans from that crop were processed to test out the machinery and iron out the many operating problems that a new organization may expect to encounter.

"The first year only 19,179 bushels of beans were processed."

A table (p. 20) shows the amount of soybean handled and the value of the products in fiscal year 1941, 1945, and 1954 (each year ending July 31). The number of bushels of soybeans handled increased from 19,179 in 1941 to 631,248 in 1945, to 700,225 in 1954. The total value of the products grew from \$28,895 in 1941 to \$1,399,911 in 1945, to \$2,055,085 in 1954.

Photos show: (1) An aerial view of the Ohio Valley Soybean Cooperative facilities at Henderson. (2) Receiving soybeans at the soybean co-op, as a truck dumps its load into an underground hopper. Address: Marketing Specialist, Univ. of Kentucky.

215. Polk's Mason City (Cerro Gordo County, Iowa) directory. 1955. Omaha, Nebraska: R.L. Polk & Co. 729 p. See p. 271, 296.

• **Summary:** This is the earliest listing found for Glenn H. Pogeler or his company in Mason City, Iowa, city directories. Page 271. North Iowa Cooperative Processing Association, 1605 19 St. S.W., Mason City. Phone: 1600. General Mgr.: Glenn H. Pogeler. Asst. Mgr.: H.D. Rissler. Traffic Mgr.: Harold Peterson. Plant Superintendent: Harold H. Tietjens. Description: Soybean processors.

Page 296: Pogeler, Glenn H. (residence; Ardis is his wife), 118 Willowbrook Dr.

No listings for Pogeler or his business were found in 1950 or 1953 Mason City city directories.

216. *Gleaner and Journal* (Henderson, Kentucky). 1956.

Sewer explosions send covers rocketing into air. Dec. 26. p. 1.

• **Summary:** The explosions on Christmas eve "occurred in a series starting about 6:30 p.m., and continuing until 8:30 p.m. The five manhole covers involved are from the railroad crossing on outer Fifth street to the Ohio Valley Soybean cooperative." One cover was thrown 30 feet in the air from its hole.

"The backlash of the subterranean blasts gushed water from bathroom fixtures in the area, and disrupted things in general. A boy was slightly injured when 'blown' across a kitchen as the backlash exploded in his face from a kitchen sink."

At one point, "fire gushed from one of the 24-inch manholes three to four feet into the air. This blazed for about 25 minutes, observers said."

Herman Hussel, water and sewer superintendent, "said last night that 150 to 175 feet of the sewer line had been blown out of position by five or six inches and must be re-laid. The five manholes affected probably will have to be reworked, he added."

Note 1. In 1948 the Ohio Valley Soybean cooperative started processing its soybeans using hexane solvent. Gas escaping from this solvent and leaking into the sewer mains along Fifth Street probably caused the explosions (Boyett 2004). On 25 Jan. 1957 the city ended up paying \$1,250 for 500 feet of new sewer pipe; the cause of the explosions was not yet identified. "The general public didn't find out what caused the manholes to flip their lids until 10 Sept. 1957, the day after the Henderson City Commission approved a \$1,857 settlement with Aetna Insurance, the carrier for the Ohio Valley Soybean Cooperative" (Boyett, Frank. 2006. "Silent night?: Explosions in sewer main caused quite a ruckus on Christmas 50 years ago." *Henderson Gleaner*. Dec. 24. p. 5A).

Note 2. The Ohio Valley Soybean Cooperative is now (Feb. 2007) the Bakery Feeds complex.

217. Journal of Proceedings, Annual Conference on Problems of Cooperative Cottonseed and Soybean Oil Mills [Second]. 1956. 25 p. \*

218. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Halstad Elevator Company.

**Manufacturer's Address:** Halstad, Minnesota.

**Date of Introduction:** 1956.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product-Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 10. Table 5 lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." 13. Halstad Elevator Com-

pany (Halstad, Minnesota, 1956).

219. Parker, Florence E. 1956. The first 125 years: A history of distributive and service cooperation in the United States, 1829-1954. Chicago, Illinois: Cooperative League of the USA. 462 p. Illust. 22 cm. \*

• **Summary:** An excellent book on early cooperative developments.

220. International Cooperation Administration. 1956. Soybean processing. Washington. 35 p. \*

221. *Gleaner and Journal (Henderson, Kentucky)*. 1957. Soybean fraud plot revealed; Man seized as police break case. Jan. 5. p. 1.

• **Summary:** "A scheme which defrauded the Ohio Valley Soybean Cooperative of 'many thousands of dollars' over the past several years was revealed here yesterday with the arrest of an employee of the cooperative." A photo shows Joseph Nicholas Egger, age 44, of 431 Tenth St.; he "was charged with being the key man in the plan in three warrants filed yesterday in city court and signed by A.I. Reisz, manager of the soybean cooperative." Egger is now in "county jail under a total bond of \$10,000. He refused to make a statement when booked yesterday."

222. Sandefur, Hugh E. 1957. Co-op sues in circuit court to recover all. *Gleaner and Journal (Henderson, Kentucky)*. Jan. 11. p. 1, 10.

• **Summary:** "The Ohio Valley Soybean Cooperative. in a civil action filed in Circuit court yesterday, set at \$46,560.27 a loss it has charged was incurred by fraud. The suit named 12 co-defendants"—whose names are given. The first man arrested was Joseph Nicholas Egger.

223. *Gleaner and Journal (Henderson, Kentucky)*. 1957. Two accused in soybean fraud; a record jury. Jan. 12. p. 1, 6.

• **Summary:** "A January grand jury set a number of records for endurance and accomplishment in its four and a half day decision which concluded at 12:25 p.m., yesterday with the return of 75 indictments involving 23 individuals.

"Fifty-five of the indictments were returned against two men—Joseph Nicholas Egger of Henderson and Thomas V. Greenwell of Morganfield."

"The 55 indictments involve a total of 15,581 bushels of soybeans the company claims were paid for but not delivered, with a total value of \$39,267.35." Both Egger and Greenwell are under \$27,500 bond. Egger is a weighman for the cooperative and Greenwell is a farmer in Union County.

224. *Gleaner and Journal (Henderson, Kentucky)*. 1957. Greenwell taken at Morganfield, put in Jail here. Jan. 13. p. 1.

• **Summary:** Thomas V. Greenwell is age 33. "Egger has a record of 10 years AWOL from the army. Greenwell was charged with complicity in the armed robbery of the Southside Liquor store in January 1954." Greenwell was charged with seduction in 1945 and with drunken driving in 1947.

225. Sandefur, Hugh Edward. 1957. Soybean fraud sift one of most intensive here. *Gleaner and Journal (Henderson, Kentucky)*. Jan. 13. p. 1.

• **Summary:** "The major part of the work was done by Capt. Clifford Hooper of the detective division of the [Henderson police] department, and Mrs. Charles H. Wolf, whose regular duties are in the police record room." These two investigators worked for five intensive weeks to amass "information that piled a foot high." The records included sworn affidavits and statements from hundreds of individual interviews. The two worked for 13-14 hours a day, putting in more than 100 hours of overtime on the case, and traveling hundreds of miles. "They were racing for a Jan. 7 deadline—when the grand jury would meet."

On Oct. 14 A.I. Reisz, manager of the soybean cooperative first noticed a shortage in his firms accounts, and believed he spotted some forgeries. The case was given to Hooper and Wolf on Nov. 30 at the request of the mayor.

226. *Gleaner and Journal (Henderson, Kentucky)*. 1957. Restraining rule against Millses lifted by court. Jan. 17. p. 1.

• **Summary:** "Mrs. Mills is the daughter of Mr. and Mrs. Joseph N. Egger. Egger is in county jail awaiting trial for the part he played in issuing fake weight receipts which were paid off by the cooperative."

227. *Gleaner and Journal (Henderson, Kentucky)*. 1957. New indictments block Egger liberty on bail. Jan. 22. p. 1.

• **Summary:** Sheriff Lee Williams served "eight more warrants charging Egger with forgery." His bond is now \$12,800. His wife, Mariana Egger, has also been indicted for "false swearing."

228. *Gleaner and Journal (Henderson, Kentucky)*. 1957. Seating of jury fails in first day of bean trial. Feb. 19. p. 1.

• **Summary:** Those excused from jury duty admitted they had formed an opinion in the case or were stockholders in the cooperative. Greenwell and Egger have been charged with participating in a scheme under which fake weight slips were issued for soybeans not delivered to the cooperative"—which honored the slips with check payments.

Greenwell will be tried first, separately. "Egger probably will not be tried until May. Each man is under \$12,600 bond."

229. Kerler, George H. 1957. State points at two men as trial opens. *Gleaner and Journal (Henderson, Kentucky)*. Feb.



20. p. 1, 10.

• **Summary:** Detailed allegations against Thomas V. Greenwell were made by the Commonwealth's Attorney John S. Palmore to a Circuit court jury yesterday. Greenwell is "charged with forgery in an alleged conspiracy to defraud the cooperative of about \$40,000 in a scheme dating back to 1952."

230. Kerler, George H. 1957. Fireman says he joined plot to help farmer. *Gleaner and Journal (Henderson, Kentucky)*. Feb. 21. p. 1, 6.

• **Summary:** Gordon Morgan, a fireman, was on duty in Morganfield when he should have been hauling a load of soy beans to the "Ohio Vaely Soybean cooperative" on Oct. 9 [1956]. Morgan, who also helps Greenwell with a large farming operation, "admitted endorsing the checks and handing the cash over to Greenwell." Greenwell paid various farm laborers to participate in his scheme. When one, William Hancock, refused to participate, "Greenwell put him off the farm where he was living." "Greenwell is being tried on one indictment only, the transaction of Oct. 9-10 involving Gordon Morgan."

231. Kerler, George H. 1957. Reisz explains object on bar can fix weight. *Gleaner and Journal (Henderson, Kentucky)*. Feb. 22. p. 1, 12.

• **Summary:** "Greenwell is charged with participating in a forgery racket which may have cost the soybean mill more than \$40,000 since 1952."

"Reisz said that last Oct. 14, when the co-op became suspicious of an unusually large number of soybean shipments from Greenwell interests, it was discovered that by placing a 10-pound object on the balance bars... of the scale a weight of 27,500 pounds could be registered. By moving the object, the registered weight could be lowered to the desired poundage."

232. Kerler, George H. 1957. Says he signed two names but changed style. *Gleaner and Journal (Henderson, Kentucky)*. Feb. 23. p. 1, 6.

• **Summary:** Maxwell Allen of Louisville, an "examiner of questioned documents told the Circuit court jury yesterday that 27 weight tickets issued to the Ohio Valley Soybean cooperative and challenged as forgeries by the state were written by the same individual—Joseph Nicholas Eggler"—"although he tried to sign the names of the driver and seller in different styles."

233. Kerler, George H. 1957. Bean producer testifies after state finishes. *Gleaner and Journal (Henderson, Kentucky)*. Feb. 26. p. 1, 8.

• **Summary:** "Thomas V. Greenwell told a [Henderson] Circuit court jury that a soybean weight ticket was issued to one of his friends so that operating expenses could be met

and creditors temporarily avoided."

234. Kerler, George H. 1957. Banker joins witnesses in Greenwell aid. *Gleaner and Journal (Henderson, Kentucky)*. Feb. 27. p. 1, 10.

• **Summary:** Several witnesses testified in an attempt to establish Greenwell's good reputation.

235. Kerler, George H. 1957. Jury is out 31 minutes. *Gleaner and Journal (Henderson, Kentucky)*. Feb. 28. p. 1, 8.

• **Summary:** "Thomas Vincent Greenwell was sentenced to five years in the penitentiary yesterday by a Henderson Circuit court jury which took 31 minutes to reach the verdict. The trial lasted six and a half days."

"Greenwell, 31 year old farmer from Uniontown and father of six children, received the maximum penalty."

William L. Sullivan, chief defense counsel, "said the co-op is really after Eggler—not this daddy of six children." A photo shows Greenwell.

236. Day, Bill. 1957. State pledges to tie him to soybean fraud. *Gleaner and Journal (Henderson, Kentucky)*. June 12. p. 1, 10.

• **Summary:** "A jury of 11 men and one woman heard the first witnesses yesterday in the trial of Joseph N. Eggler in the alleged fraud of the Ohio Valley Soybean cooperative."

"They also heard Commonwealth's [of Kentucky] Attorney John Palmore declare he would prove that Eggler falsified weights while working as night weighmaster at the co-op, and that Eggler and his wife spent in the years of 1952-1956 far more money than his normal income could have allowed."

237. Day, Bill. 1957. Cheat bean scales: Weights or a pencil can do it, says Reisz. *Gleaner and Journal (Henderson, Kentucky)*. June 13. p. 1, 11.

• **Summary:** "A Circuit court jury was told yesterday how the scales of a soybean plant could be manipulated to record a receipt of beans when no truck was standing on the scale."

"A.I. Reisz, manager and secretary-treasurer of the Ohio Valley Soybean cooperative explained two methods as he testified in the fraud trial of Joseph N. Eggler."

"Eggler is under 63 indictments for fraud at the mill, which has been estimated to run between \$40,000 and \$50,000 dollars." The two methods, Reisz explained, can involve use of either a 10 pound weight or a pencil.

238. Day, Bill. 1957. Experts point to signatures at fraud trial. *Gleaner and Journal (Henderson, Kentucky)*. June 14. p. 1, 12.

• **Summary:** "The commonwealth introduced two handwriting experts and a lie detector operator in Circuit court yesterday." Maxwell Allen said he had made enlarged

photographs of signatures written by Egglar and that these signatures were disguised.

239. Day, Bill. 1957. Egglar takes stand, denies fraud charges. *Gleaner and Journal (Henderson, Kentucky)*. June 15. p. 1, 6.

• **Summary:** “Joseph N. Egglar took the witness stand in his own defense yesterday and denied any part of charges that he conspired to defraud the Ohio Valley Soybean cooperative of what the firm says amounted to \$50,000.”

“Egglar took the stand as the first defense witness after the state rested its case...” “He testified that during the bean season his salary with Ohio Valley was 63½ cents per hour for an 84-hour week, seven days a week, and that his weekly check was usually \$60 to \$70 a week when he started.”

240. *Gleaner and Journal (Henderson, Kentucky)*. 1957. Egglers tell jury of cash that she had. June 18. p. 1, 6.

• **Summary:** Egglar and his wife both took the witness stand. “Their general testimony was intended to show that they had money to spend beyond what he had earned as an employee at the cooperative.”

241. Day, Bill. 1957. Jury condemns him for fraud at soybean mill. *Gleaner and Journal (Henderson, Kentucky)*. June 19. p. 1, 10.

• **Summary:** “Joseph Norman Egglar was convicted yesterday of conspiracy in a plot against the Ohio Valley Soybean co-operative and sentenced to one year in jail.” The jury of 11 men and one woman deliberated for a little over one hour before returning the verdict. The trial lasted 8 days. The judge was Norris Vincent.

242. Robinson, Charles E. 1958. Hedging principles and practices in soybeans and other commodities. Paper presented at the Fourth Annual Joint Conference of Cooperative Cottonseed Oil Mills and Cooperative Soybean Oil Mills. 10 p. Held 5 March 1958 at Mason City, Iowa.

• **Summary:** Begins with a brief summary of the functions of the Commodity Exchange Authority (CEA), which “are designed to prevent price manipulation and corners [as in ‘cornering the market’] affecting agricultural commodities,... and to prevent dissemination of false and misleading crop and market information affecting prices; protect hedgers and other users of the commodity futures markets against cheating, fraud and manipulative practices; insure the benefit of membership privileges on contract markets to cooperative associations of producers;... and provide information to the public regarding trading operations on contract markets.

“The CEA supervises trading on all of the commodity exchanges on which soybeans and oilseed product futures are traded.” Hedging, which is defined in the Commodity Exchange Act, can reduce price risks.

Note: In 1974 Congress amended the Commodity Ex-

change Act (CEA) and on 15 April 1975 created the Commodity Futures Trading Committee (CFTC) to replace the Commodity Exchange Authority. The stated ‘mission’ of the CFTC is to protect market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity and financial futures and options, and to foster open, competitive, and financially sound futures and option markets. Address: Supervisor in Charge, Chicago office, USDA Commodity Exchange Authority, Washington, DC.

243. *SoyaScan Notes*. 1958. Letters (5) received by Glenn Pogeler from U.S. government officials in reply to his letters (Overview). Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** During 1958 Glenn Pogeler was Manager, North Iowa Co-Operative (spelled “Cooperative” after June 1958) Processing Association, 1605 19th Street, S.W., Mason City, Iowa. These letters are each typed on a letter-head with a signature.

1958 April 25–Re: Request that \$100,000 be included in USDA’s budget for soybean research, including rust prevention. From B.B. Hickenlooper, Iowa, U.S. Senate Committee on Agriculture and Forestry.

1958 June 17–Re: Possibility of exporting sizeable quantity of soybean oil to the Soviet Union through commercial channels. “I have often said we should engage in trade with the Soviet Union when it is to our advantage to do so. Mr. [Don] Paarlberg [Assistant Secretary of Agriculture for Marketing and Foreign Agriculture, USDA] has informed me of your visit. I understand that he has contacted the State Department...” From Ezra Taft Benson, Secretary of Agriculture.

1958 July 26–Re: “A appreciate your wire in support of my efforts to protect the soybean oil industry through a vegetable oil amendment to the farm bill. I am pleased that I was able to be successful in getting it enacted.” From Hubert H. Humphrey, U.S. Senate Committee on Agriculture and Forestry.

1958 July 28–Re: Telegram of July 25 in regard to S. 2990. From Thomas E. Martin, Senator, Iowa.

1958 Sept. 26–Re: Thank you for letter expressing “hope that I would be able to arrange my schedule to attend the meeting of the International Association of Oilseed Crushers at Cannes, France the first week of June.” From Ezra Taft Benson, Secretary of Agriculture.

244. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Arkansas Grain Corporation.

Renamed Riceland Foods in 1970.

**Manufacturer’s Address:** Stuttgart, Arkansas.

**Date of Introduction:** 1958. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Carle, W.F. 1962. *Ameri-*

*can Cooperation*. p. 326-30. "Cooperative pooling of soybeans under the new support price regulations." See p. 326. "In 1960 the Arkansas Grain Corporation constructed a 1,000 ton (33,000 bushel) per day soybean solvent extraction plant at Stuttgart, Arkansas. Except when shut down for maintenance and repairs, that plant has operated continuously since the last part of October 1960."

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 9. Arkansas Grain Corporation (Stuttgart, Arkansas, 1958).

245. Portrait photograph of Glenn Pogeler dressed in a coat and tie. 1958.



• **Summary:** A stamp on the rear of the photo shows that it was taken by S.W. Lock, a photographer in Mason City. Allen Pogeler guesses that the pin in Glenn's lapel could have been related to the Lutheran Church or the Chamber of Commerce. A digital scan of this black-and-white photograph was sent to Soyfoods Center on 16 June 2005 by Allen Pogeler of Encinitas, California.

246. *SoyaScan Notes*. 1959. Letters (9) received by Glenn Pogeler from U.S. government officials in reply to his letters (Overview). Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** During 1959 Glenn Pogeler was Manager, North Iowa Cooperative Processing Association, 1605 19th Street, S.W., Mason City, Iowa. These letters are each typed on a letterhead with a signature.

1959 March 7–Re: "It was nice to have the opportunity of visiting with you when you were in my office recently."

Thanks "for the enclosed resolutions adopted at the Farmers Grain Dealers Association of Iowa convention in Des Moines, Iowa." From: Merwin Coad, Representative, 6th District Iowa, House of Representatives, Washington, DC.

1959 July 10–Re: Thanks for "enclosing copies of letters which you have written to Senator Humphrey and Senator Fulbright regarding the so-called 'Food for Peace' bill." From B.B. Hickenlooper, Iowa, U.S. Senate Committee on Agriculture and Forestry.

1959 July 15–Re: "I am deeply grateful for your interest in my Food for Peace proposal... the bill will be considered in the near future by the Senate Committee on Foreign Relations. Enclosed is the speech I made in the Senate upon introduction of the bill, along with a copy of the bill itself, as well as my testimony at the recent hearings." From Hubert H. Humphrey, U.S. Senate Committee on Foreign Relations.

1959 July 15–Re: "Senator Humphrey's bill S. 1711, the Food for Peace bill. From J.W. Fulbright, Chairman, U.S. Senate Committee on Foreign Relations.

1959 July 15–Re: Legislation to extend Public Law 480. From: Merwin Coad, Representative, 6th District Iowa, U.S. House of Representatives.–1959 Aug. 17–Re: Humphrey Food for Peace bill. "I... agree that the farm surplus situation demands close attention." From H.R. Gross, Iowa, U.S. House of Representatives.

1959 Aug. 20–Re: Thanks for the copy of your telegram addressed to Senator Lyndon Johnson concerning the "Food for Peace" bill. From Thomas E. Martin, Iowa, U.S. House of Representatives.

1959 Sept. 24–Re: "I want to thank you very much for the support you generously gave to the Food for Peace amendments to Public Law 480." Without "wholehearted support such as yours, it would not have been possible to get the two-year extension of the law, the expanded use of foreign currencies, and the edible oil donation section enacted." From Hubert H. Humphrey, U.S. Senate Committee on Agriculture and Forestry.

1959 Sept. 29–Re: Thanks for "your favorable attitude on S. 2690, a bill which I introduced recently in the Senate." From: Senator Karl E. Mundt, U.S. Senate.

247. *Eagle Grove Eagle (Iowa)*. 1959. Heart attack is fatal to Ed Olson. June 4. p. A1, A4.

• **Summary:** Edward William Olson died on 30 May 1959 in Eagle Grove, Iowa. He suffered a heart attack at about 6:45 a.m. Saturday and died before medical attention could reach him. Services were held in the Samuel Evangelical and Eagle Grove Evangelical Lutheran churches. He was buried in Rose Hill Cemetery. The Rev. B.F. Molstre officiated at both services and at the grave side also.

"Attended by hundreds from nine states (perhaps more) it was one of the largest services ever held in Eagle Grove. Olson's friends and business contacts covered the entire country as he was developing the multi-million dollar



soybean processing plant.”

Two long obituaries are given. He married Florence Paul of Albert City on April 20, 1930; they established their first home in that city. In 1931 he and his wife moved to Highview, where he accepted a job as manager of the Highview Farmers Coop Elevator of Webster City, earning \$90 a month. “In 1935 the Woolstock Cooperative hired Olson and he moved there where he remained until he and other associates decided to organize a soybean processing cooperative.

“In 1944 [sic, 1943] it was decided to locate the processing plant in Eagle Grove, and Olson and his family moved to the city” in Sept. 1943.

“During has 15 years in Eagle Grove he was instrumental in developing the city’s largest industry, which is also probably at present its largest employer.” A portrait photo shows Ed Olson.

248. *Evansville Courier (Indiana)*. 1959. \$60,000 addition under way at Henderson soybean co-op. July 30. p. 1.

• **Summary:** Note: Evansville, Indiana is just across the Ohio River (to the north) from Henderson, Kentucky.

249. Hudgions, Jack. 1959. Inquisitive foreigners invade soybean plant: All Americans are rich. *Evansville Courier (Indiana)*. Aug. 1.

• **Summary:** Henderson, Kentucky—Representatives of nine foreign countries, all deeply interested in the advancement of agriculture, toured Henderson’s Ohio Valley Soybean Cooperative at Fifth Street on Friday, then bombarded the local management with questions. How does one start a cooperative? How do people share in its growth and prosperity? To what extent does the federal government participate? Is this one of the ways Americans become rich?

The soybean cooperative is one of several hundred agricultural businesses being studied by the group during its 5-month tour of the USA. The group was addressed by Al Reisz, general manager and secretary and manager of the plant. He explained that members of the board of directors are elected by more than 4,900 stockholders.

Two photos show various members of the group with Al Reisz and David Frymire (asst. general manager). Countries represented included Ethiopia, Bolivia, Taiwan, Vietnam, British Honduras, and Pakistan. Address: Courier Tri-State Editor.

250. *Southwest American (Fort Smith, Arkansas)*. 1959. Governor to welcome new plant. Oct. 25. p. 1A, 8A.

• **Summary:** Governor Orval Faubus will welcome the new soybean processing plant at Van Buren, Arkansas, into the state’s industrial family at a dedication celebration Tuesday at the Fort Smith fairgrounds. The plant began operating last Friday, Oct. 23. The address dedicating the plant will be made by Howard Cowden, president of the Cooperative

Processing association (which operates the new mill) and head of the Consumers Cooperative association, of Kansas City, Missouri (a stockholder in the new plant).

The day’s festivities will begin at 8 a.m., when the mill will be open to public inspection. The open house will continue until 11:30 a.m., when an automobile parade will start at the mill and end at the fairgrounds—where a barbecue chicken dinner will be served to an expected 5,000 persons. “Roy Robus, manager of the plant, said meal tickets will be given only to those attending the open house at the mill.” One must have a ticket to get a free meal. Van Buren retail merchants will run special sales to mark the event.

The plant expects to buy about \$4 million worth of soybeans a year. It has a processing capacity of 2 million bushels per year and storage capacity of 600,000 bushels.

Civic leaders in Van Buren plan to recognize the importance of soybeans to the area’s economy by staging an annual soybean day celebration.

Note: Van Buren, the capital of Crawford County in northwest Arkansas, is on the Arkansas River 6 miles northeast of Fort Smith.

251. *Southwest American (Fort Smith, Arkansas)*. 1959. \$4 million soybean crop is expected. Oct. 25. p. 1A, 8A.

• **Summary:** Soybean farmers within a 50-mile radius of Van Buren, Arkansas, who bring their crop to the new processing mill will probably earn about \$4 million in during the next 12 months. That’s the amount of cash the new mill expects to pay for the 2 million bushels of soybeans it will process, operating 24 hours a day, 300 days a year. Today soybeans sell for \$1.90 a bushel.

Rob Robus is manager of the Cooperative Processing association’s new soybean processing mill on Kibler mill, and the former site of the old smelter. Benny Franks of Van Buren is plant superintendent. The plant’s stockholders are 5 local cooperatives at Van Buren, Gravette, Rogers, Cave Springs, and Bentonville—plus a Consumers Cooperative association, a regional cooperative at Kansas City, Missouri.

The mill, which began operating on Oct. 23, employs 25 persons and has a payroll of more than \$150,000 a year. Construction of the fully automatic plant cost \$1 million; it was started last January and completed Oct. 15. Each truck full of soybeans is unloaded in 5 minutes using a truck-lifting device, which raises the front end of the vehicle, so that the loads slides off into a storage bin.

Robus, who came to Van Buren from Pella, Iowa, said farmers in the area now have the potential to produce more than 4 million bushels of soybeans a year; the mill is ready to buy all these soybeans either for processing, storage, or sale to other mills. Arkansas is now America’s 4th largest soybean producing state. Every day, the mill will convert 6,700 bushels of soybeans into 160 tons of meal and 40 tons of oil. The meal is shipped to the plant’s member cooperatives, and most of the oil is shipped to Texas, where it is

refined into food products, plastics, etc.

A photo shows "Crawford County's new soybean plant."

252. *Southwest American (Fort Smith, Arkansas)*. 1959.

Dedication today at soybean plant. Oct. 27. p. 1A.

• **Summary:** Between 400 and 500 persons, many more than expected, visited the Van Buren soybean processing plant Monday night, even before the formal opening on Tuesday when thousands are expected. The Monday night tours were planned for local businessmen who couldn't leave their stores on Tuesday.

A photo shows employee Bob Franks taking a group of visitors through the new plant Monday night.

253. Bedell, Conaly. 1959. Ancient Chinese crop new source of income for Crawford farmers. *Southwest American (Fort Smith, Arkansas)*. Oct. 28.

• **Summary:** The soybean has replaced cotton as a major cash crop in Crawford County, Arkansas. The new plant at Van Buren is a soybean solvent extraction plant.

254. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Cooperative Processing Association, Subsidiary of Consumers Cooperative Assn.

**Manufacturer's Address:** Van Buren, Arkansas.

**Date of Introduction:** 1959. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Southwest American (Fort Smith, Arkansas)*. 1959. "Governor to welcome new plant." Oct. 25. p. 1A, 8A. Governor Orval Faubus will welcome the new soybean processing plant at Van Buren, Arkansas. The plant began operating last Friday, Oct. 23. The Cooperative Processing association operates the new mill.

*Southwest American (Fort Smith, Arkansas)*. 1959. "\$4 million soybean crop is expected." Oct. 25. p. 1A, 8A. Note: This is a soybean solvent extraction plant.

Soybean Blue Book. 1961. p. 71.

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 10. Farmland Industries (Kansas City, Missouri, Soybean Processing Division). (Van Buren, Arkansas, 1960). Footnote: "Co-op Processing Association was acquired by Farmland Industries in 1968."

Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 69-75. On 1 Jan. 1959 construction began on the new plant in the Arkansas River Valley in western Arkansas. Arkansas farmers from five local cooperatives worked with a Kansas-city based regional cooperative, the Consumer Cooperative Association (CCA, which bought

53% of the stock), to create the new plant, which they named the Consumers Processing Association. The plant, which opened on 27 Oct. 1959, cost \$1 million and could transform 8,300 bushels/day of soybeans into oil and meal, employ 25 people, and operate 24 hours a day for 200 days/year. The town proclaimed it "Soybean Day." The celebration drew over 3,000 people. On 1 Sept. 1966 Consumer Cooperative Association was renamed Farmland Industries, Inc.

255. *Gleaner and Journal (Henderson, Kentucky)*. 1959.

President speaks here: Attendance is believed to be record. Nov. 6. p. 1.

• **Summary:** "A record 89 people attended the annual meeting of the second district of the Kentucky Cooperative Council Wednesday night..." A.I. Reisz, manager of the Ohio Valley Soybean Cooperative, is a district representative on the state board. A large photo shows Al Reisz and David Frymire with Carl Sheriff, state president.

256. Strayer, George M. 1959. A special message to members of Ohio Valley Soybean Cooperative. *Ohio Valley Soybean Cooperative News (Henderson, Kentucky)* 5(5):1. Nov.

• **Summary:** "Out of every 20 acres of soybean you grew last year eight acres, in terms of oil, went into export markets. Roughly half the production of those acres were exported as beans, the remainder in the form of oil. That eight acres determined the price you received for your entire crop..."

"For only \$3.00 you [an individual] can become a member of the American Soybean Assn. You should be a member! Help to help you, join A.S.A." Address: Exec. Vice-President and Secretary-Treasurer, American Soybean Assoc., Hudson, Iowa.

257. *SoyaScan Notes*. 1960. Letters (2) received by Glenn Pogeler from U.S. government officials in reply to his letters (Overview). Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** During 1960 Glenn Pogeler was Manager, North Iowa Cooperative Processing Association, 1605 19th Street, S.W., Mason City, Iowa. These letters are each typed on a letterhead with a signature.

1960 April 15–Re: Pogeler's opposition to minimum wage legislation. From H.R. Gross, 3d District, Iowa, U.S. House of Representatives.

1960 April 18–Re: Opposition to Federal Minimum Wage bill. From B.B. Hickenlooper, Iowa, U.S. Senate Committee on Foreign Relations.

258. *Mankato Free Press (Minnesota)*. 1960. 'Just day to day business.' Aug. 3. p. 1-2.

• **Summary:** Lowell Andreas, president of Honeyamead, commented that the \$6 million sale of Honeyamead Products Co. is "just day to day business"—as he sipped a cup of

morning coffee. After Sept. 2, the effective date of the sale, Andreas will switch from being president of the sprawling soybean plant to being its manager. Lowell and his brother, Dwayne, negotiated the sale with GTA. They went to St. Paul Tuesday morning, without the slightest idea that they would be selling Honeymead. They arrived at 11:00, talked with GTA through lunch, and finalized the deal at 1:30 that afternoon. Now he is looking for a place to invest the \$6 million.

Andreas believes that soybeans have a bright future in this area. In 1947, when Honeymead bought the plant in Mankato, the storage capacity was 140,000 bushels. Today it is 3.75 million bushels—a 26-fold increase in 13 years. The business began to expand rapidly when livestock feeders began to demand soybean meal in their feed concentrates. Portrait photos show Lowell and Dwayne Andreas.

259. *Mankato Free Press (Minnesota)*. 1960. Honeymead sells plant for \$6,000,000. Aug. 3. p. 1-2.

• **Summary:** Honeymead's fixed assets and name (not the corporation) were sold to the Farmers Union Grain Terminal Association (GTA), according to Lowell Andreas, Honeymead president. It was a straight cash deal. The sale, which will have no effect on the 100 employees, was completed at 1:30 p.m. on Tuesday, and will take effect Sept. 2. As part of the sale, Lowell Andreas has agreed to manage the operation for not less than 10 years. He will be subject only to the GTA board of directors consisting of 12 farmers. GTA, based in St. Paul, Minnesota, is a cooperative which markets grain for more than 600 county [sic, country] elevators in 4 states. Honeymead processes both soybeans and flax.

Note: This is the earliest document seen (March 2008) stating that Honeymead Products, a soybean processor in Mankato, Minnesota, has changed from a privately owned company (by the Andreas family) to one that is cooperatively owned (by Farmers Union GTA).

260. *Farmers Union Herald (St. Paul, Minnesota)*. 1960. GTA enters processing field with soybean plant purchase [Honeymead Products Co.]: Another co-op milestone. 34(15):1, 3. Aug. 8.

• **Summary:** "Another milestone in the growth of the farmers' own businesses in the Upper Midwest has been reached with the announced purchase by GTA of the Honeymead Products Co. of Mankato, Minnesota.

"Announcement of the acquisition by Farmers Union Grain Terminal Association was made to the press in response to numerous inquiries on Tuesday, Aug. 2, by General Manager M.W. Thatcher. The board of directors of the cooperative had, that day, put its final stamp of approval on the \$6 million transaction and the details had been laid before the country field staff... The Honeymead plant, located on the Minnesota River, in Mankato, is in the heart

of soybean producing areas of southern Minnesota. It handles around 56,000 bushels of soybeans a day, turns the wonder bean into oils, protein products, flours and flakes which it sells worldwide.

"Dwayne Andreas, chairman of the Honeymead board, and Lowell Andreas, his brother, bought the company from a Pacific Northwest egg cooperative soon after they came out of the military services after World War II. They are natives of Iowa, born and raised on the farm but have found their greater talents in farm business management roles."

Honeymead's Mankato plant is now "the largest single plant in the soybean crushing field. It also crushes flaxseed..." The plant consumes about a third of Minnesota's entire soybean crop. Total sales are around \$50 million a year.

Portrait photos show Dwayne O. Andreas (chairman of the board) and Lowell Andreas (president). Smaller photos show J.L. Maslon, C.T. Mullan, and W.B. Cox, vice presidents of Honeymead. An aerial photo shows the Honeymead plant in Mankato.

Note: This is the earliest document seen (Nov. 2007) that mentions "GTA" (written as such) in connection with soybeans. Address: Minnesota.

261. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Farmers Union Grain Terminal Association (St. Paul, Minnesota).

**Manufacturer's Address:** Mankato, Minnesota.

**Date of Introduction:** 1960. August.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Mankato Free Press (Minnesota)*. 1960. "Honeymead sells plant for \$6,000,000." Aug. 3. p. 1-2. Honeymead's fixed assets and name (not the corporation) were sold to the Farmers Union Grain Terminal Association (GTA), according to Lowell Andreas, Honeymead president. It was a straight cash deal. The sale, which will have no effect on the 100 employees, was completed at 1:30 p.m. on Tuesday, and will take effect Sept. 2. As part of the sale, Lowell Andreas has agreed to manage the operation for not less than 10 years. Note: Honeymead Products has just changed from a privately owned company (by the Andreas family) to one that is cooperatively owned (by Farmers Union GTA).

*Mankato Free Press (Minnesota)*. 1960. 'Just day to day business.' Aug. 3. p. 1-2. After Sept. 2, the effective date of the sale, Andreas will switch from being president of the sprawling soybean plant to being its manager. Lowell and his brother, Dwayne, negotiated the sale with GTA. They went to St. Paul Tuesday morning, without the slightest idea that they would be selling Honeymead.

*Farmers Union Herald (St. Paul, Minnesota)*. 1960. "GTA enters processing field with soybean plant purchase [Honeymead Products Co.]: Another co-op milestone." 34(15):1, 3. Aug. 8. "Another milestone in the growth of the



farmers' own businesses in the Upper Midwest has been reached with the announced purchase by GTA of the Honeymead Products Co. of Mankato, Minnesota. Announcement of the acquisition by Farmers Union Grain Terminal Association was made to the press in response to numerous inquiries on Tuesday, Aug. 2, by General Manager M.W. Thatcher. The board of directors of the cooperative had, that day, put its final stamp of approval on the \$6 million transaction and the details had been laid before the country field staff..."

*Soybean Digest*. 1960 "Honeymead products sold to Farmers Union Grain Terminal Assoc." Sept. p. 74. "Farmers Union Grain Terminal Association, big St. Paul, Minnesota, grain marketing cooperative, moved into the soybean processing business Aug. 2 with the purchase of Honeymead Products Co.'s soybean plant at Mankato, Minnesota. Purchase price was about \$6 million, according to M.W. Thatcher, general manager of GTA."

Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 11. Farmers Union Grain Terminal Association (St. Paul, Minnesota, Honeymead Products Division) (Mankato, Minnesota, 1960).

262. *Soybean Digest*. 1960. Honeymead products sold to Farmers Union Grain Terminal Assoc. Sept. p. 74.

• **Summary:** "Farmers Union Grain Terminal Association, big St. Paul, Minnesota, grain marketing cooperative, moved into the soybean processing business Aug. 2 with the purchase of Honeymead Products Co.'s soybean plant at Mankato, Minnesota. Purchase price was about \$6 million, according to M.W. Thatcher, general manager of GTA."

The Honeymead plant is one of the largest in the country, with a daily capacity of 60,000 bushels of soybeans. Annual sales volume has sometimes exceeded \$40 million. Thatcher said that "Dwayne O. Andreas, Lake Minnetonka, chairman of Honeymead, and Lowell W. Andreas, Mankato, president, will continue as the management of the enterprise which they founded and built into a business with worldwide outlets."

Note: This is the earliest document seen (June 2003) that mentions the Farmers Union Grain Terminal Association in connection with soybeans.

263. North Iowa Cooperative Processing Association. 1960. Manufacturers of quality (Ad). *Soybean Digest*. Sept. p. 84.

• **Summary:** An illustration (line drawing) shows a 100 lb sack of North Iowa 44% Solvent Extracted Soybean Oil Meal. The nutritional composition is also shown.

Talk with Joe Givens of Minnesota. 2005. May 19. This was basically a one-man show, owned and run by Glenn

Pogeler. Address: Mason City, Iowa. Phone: Garden 3-4733.

264. *SoyaScan Notes*. 1961. Letters (4) received by Glenn Pogeler from U.S. government officials in reply to his letters (Overview). Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** During 1961 Glenn Pogeler was Manager, North Iowa Cooperative Processing Association, 1605 19th Street, S.W., Mason City, Iowa. These letters are each typed on a letterhead with a signature.

1961 Feb. 27–Re: Thanks for letter protesting the proposed increase in price supports for soybeans to \$2.30 per bushel. From George D. Aiken, Vermont, U.S. Senate Committee on Agriculture and Forestry.

1961 Feb. 28–Re: Thanks for letter commenting on [Kennedy] Administration's feed grain bill and attached American Soybean Assoc. news release. Eugene J. McCarthy, Minnesota, U.S. Senate Committee on Finance.

1961 March 27–Re: Thanks for your letter with copy of resolution passed by the recent conference of Cooperative Soybean and Cottonseed Processors. From Orville Freeman, Secretary of Agriculture, USDA, Washington, DC.

1961 Aug. 3–Re: Invitation to Freeman to take part in North Iowa Agricultural Institute. From Orville Freeman, Secretary of Agriculture, USDA, Washington, DC.

265. Tri-County Co-op Soybean Assn. 1961. For quality soybean meal (Ad). *Soybean Digest*. Sept. p. 78.

• **Summary:** This horizontal ¼-page ad states: "Call 379-4386." The company's logo is shown. This ad also appeared in the Sept. 1968 issue (p. 22) of this magazine. Address: Dawson, Minnesota.

266. **Product Name:** Lecithin [Fluid, or Plastic Grades].

**Manufacturer's Name:** Honeymead Products Co.

**Manufacturer's Address:** Mankato, Minnesota.

**Date of Introduction:** 1961.

**New Product–Documentation:** Soybean Blue Book. 1961. p. 102. Still listed in 1976.

267. *Mankato Free Press (Minnesota)*. 1962. 60,000 bushels of soybeans processed: Daily at Honeymead. Feb. 23.

• **Summary:** Honeymead Products Co. of Mankato is the "world's largest processor of soybean products." Fully 60% of the soybeans grown in Minnesota are processed at this one plant. Honeymead's soybean products include 44% soybean oil meal, 50% soybean oil meal, Lamisoy soy flour, lecithin, fully refined & deodorized soybean oil, crude soybean oil, toasted soy flour, brew flakes, degummed oil, once-refined oil, shell drain oil, clabber oil, and acidulated soap stock. In addition, Honeymead processes flax only at a recently purchased company in Minneapolis.

Honeymead's clearing office in Chicago (Illinois) buys, sells, and hedges on the Chicago Board of Trade, where

Honeymead has at least 5 men in the pits. A large photo shows the Honeymead office at 320½ Warren Street, where incoming grain prices from Chicago are posted.

Note: Talk with Lowell Andreas. 2003. July 23. In 1962 the Honeymead plant in Mankato was the world's largest single soybean processing plant. However it was Honeymead's only plant, so there were other companies (such as Cargill, ADM, and Central Soya) that processed more soybeans in total at the multiple plants owned by each. The flax processing company that Honeymead had just purchased in Minneapolis was Minnesota Linseed Oil Co. at Fridley, a suburb of Minneapolis; Ray Lindquist was manager before and after Honeymead bought the plant. Most of the soybeans grown in Minnesota and not processed at the Honeymead plant were shipped out of state. Although ADM also had a plant in Mankato, the Honeymead plant got much more and better coverage in local newspapers mainly because Honeymead was a locally owned company that contributed hugely to the Mankato economy, and was about twice as large as ADM. In addition, the publisher of the *Mankato Free Press* and Lowell were close friends.

268. Carle, W.F. 1962. Cooperative pooling of soybeans under the new support price regulations. *American Cooperation* 1962. p. 326-30.

• **Summary:** A brief history of the Arkansas Grain Corporation makes it easier to understand how and why it utilizes the soybean price support program. "The Arkansas Grain Corporation is a sister organization to the Arkansas Rice Growers Cooperative Association which has been processing and marketing rice for its members on a cooperative basis since 1921." The Arkansas Rice Growers Cooperative Association expanded rapidly during the period from 1945 to 1955 when farmers began harvesting their rice using combines, and the need for grain driers developed. During that time 13 "Affiliated Rice Drying Cooperatives" were constructed in the rice-growing sections of Arkansas.

"The number of acres planted to rice were reduced substantially when rice acreage allotments were put into effect. Many of these acres as well as acres from newly-cleared land were then planted to soybeans. In addition, acres from cotton and small grains were diverted to soybean production. The rapid increase in soybean production made it necessary to consider additional facilities to receive, dry, clean, and store the crop. Members of The Arkansas Rice Growers Cooperative Association met to discuss the problems, and in 1958 the Hazen and Weiner affiliates constructed soybean storage. Since that time, soybean storage and handling facilities have been constructed at 14 other locations."

"In 1960 the Arkansas Grain Corporation constructed a 1,000 ton (33,000 bushel) per day soybean solvent extraction plant at Stuttgart, Arkansas. Except when shut down for maintenance and repairs, that plant has operated continu-

ously since the last part of October 1960."

"Prior to 1961 only the rice, cotton, dry beans, peanuts, and tobacco cooperatives were permitted to put commodities under price support loans or purchase agreements for their members. During 1961, the U.S.D.A. agreed to extend price support privileges to associations of soybean producers who qualified under regulations issued by the Department. Arkansas Grain Corporation made a formal application on September 25, 1961, and were approved as a Cooperative Marketing Association eligible for price supports under the 1961-Crop Soybean Price Support Program Regulations." Financial details of crop payments are then given.

Note: This is the earliest document seen (March 2008) that mentions the "Arkansas Grain Corporation," which was later renamed Riceland Foods. Address: Manager, Soybean Div., Arkansas Grain Corp., Stuttgart, AR.

269. **Product Name:** Lecithin.

**Manufacturer's Name:** Arkansas Grain Corporation.

Renamed Riceland Foods in 1970.

**Manufacturer's Address:** N. Grand., Stuttgart, Arkansas.

**Date of Introduction:** 1962.

**New Product-Documentation:** Soybean Blue Book. 1962. p. 111; 1966. p. 106. Home office is now at 120 N. Grand in Stuttgart but plant is apparently at Helena, Arkansas 72342. Note that in 1971 Riceland Foods has a plant in Stuttgart but National Lecithin Inc. is listed in Hot Springs, Arkansas.

270. *Mankato Free Press (Minnesota)*. 1963. Street crews fight to clear sticky soybean oil ooze. Jan. 23. p. 1-2.

• **Summary:** A photo shows one car on Given street up to its hubcaps in soybean oil.

271. *Mankato Free Press (Minnesota)*. 1963. 3 million gallons soybean oil spill when tank splits: Oil could clog pipes, pumps. Jan. 23. p. 1.

• **Summary:** A large photo shows that the soybean oil, which burst out of a tank at the Honeymead Products Co., had such force that it pitched one railroad car off its tracks onto the ice of the nearby Blue Earth river, and knocked another railroad car onto the river bank. The tidal wave of oil covered the ice on the river. The tank that burst is visible at right.

272. *Mankato Free Press (Minnesota)*. 1963. Hexane blast big concern, not the oil. Jan. 23. p. 1-2.

• **Summary:** The Mankato fire department rushed to guard against the possibility that oil from Honeymead's ruptured tank might cause a fire or explosion at the company's hexane processing plant.

273. Swanson, Bob; Gravenstein, Ed. 1963. Loss could reach \$2 million. *Mankato Free Press (Minnesota)*. Jan. 23. p. 1-2.

• **Summary:** Honeymead's huge steel tank ruptured at 9:10

a.m. in 20-below zero cold, injuring one man and flooding several blocks surrounding the company in southwest Mankato. The lost oil is valued at \$2.1 million, according to Lowell Andreas, executive vice president of Honeymead. He said the firm is adequately protected against the loss by insurance. All 65 of Honeymead's employees are being used in the salvage and cleanup. Address: Staff writers.

274. *Mankato Free Press (Minnesota)*.1963. Sea of oil isolates 4 in family. Jan. 23. p. 2.

• **Summary:** Four members of Mel Herman's family were stranded in their dwelling at 416 Given st. when 3 million gallons of soybean oil burst Honeymead's ruptured tank. Mr. Herman, who is employed as a trucker by Honeymead, was in Minneapolis on business at the time of the accident.

275. *Mankato Free Press (Minnesota)*.1963. Honeymead mop-up to take a week. Jan. 24. p. 1-2, 8.

• **Summary:** A large photo shows an aerial view of the Honeymead plant in Mankato. 'X' marks the spot where the huge steel tank, filled with 3 million gallons of soybean oil, stood before it burst. Snow is on the ground around the plant. More photos appear on page 8.

276. *Minneapolis Tribune (Minnesota)*.1963. Family trapped by soybean oil: For six hours. Jan.

• **Summary:** A large photo shows Mel Herman trying to dig out his car from its garage surrounded by congealed soybean oil a foot deep from the nearby Honeymead plant in Mankato.

277. *SoyaScan Notes*.1963. Letters (4) received by Glenn Pogeler from U.S. government officials in reply to his letters (Overview). Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** During 1963 Glenn Pogeler was Manager, North Iowa Cooperative Processing Association, 1605 19th Street, S.W., Box 1338, Mason City, Iowa. These letters are each typed on a letterhead with a signature.

1963 Feb. 21-Re: Pogeler's concern with proposal in [European] Common Market countries to levy an internal duty on vegetable oils. From H.R. Gross, 3d District, Iowa, U.S. House of Representatives.

1963 May 22-Re: "I am glad to hear that House File 208 will be of some value to your cooperative." From Harold E. Hughes, Governor, State of Iowa, Des Moines.

1963 July 27-Re: "Too many labor disputes and problems are being settled on the basis of partisan politics." Threat of rail strike. From H.R. Gross, 3d District, Iowa, U.S. House of Representatives.

1963 July 29-Re: Thanks for article from *Wall Street Journal* entitled "Compulsion to Cure Compulsion." Railroad problem has dragged on too long. From: B.B. Hickenlooper, Iowa, U.S. Senate Committee on Foreign

Relations.

278. *Mankato Free Press (Minnesota)*.1963. Interior department studies effects of river oil pollution. April 21.

• **Summary:** Secretary of the Interior Stewart L. Udall said that his department, together with the Fish and Wildlife Service are making intensive efforts to pinpoint the immediate and long-term effects on wildlife from the [Honeymead soybean oil] spill that has now polluted the Mississippi and Minnesota Rivers. That spill "has already killed 2,000 waterfowl, plus an undetermined number of fish, beavers, muskrats and other wildlife." Udall said his department has an obligation "to protect fully the national interest in such cases of large-scale pollution."

279. *Mankato Free Press (Minnesota)*.1963. Oil film still on river here, say officials. April 21.

• **Summary:** A light film of soybean oil (from the rupture of a Honeymead tank in January) is still floating on the "Minnesota river," according to federal and state fish and game officials.

280. *Mankato Free Press (Minnesota)*.1963. Guardsmen pulled one section of oil dam out into the river to connect it with another (Photo caption). April.

• **Summary:** This photo shows burlap bags, stretched between two steel cables. The cables, one 4 inches above the water and the other 18 inches below, are supported by empty oil drums. A motor boat is pulling the floating dam onto the Mississippi River two miles above Red Wing, Minnesota. Oil stopped by the bags will be scooped into boats, taken ashore, and burned. The oil [some of it from Honeymead Products Co.] has killed an estimated 10,000 waterfowl.

281. *Mankato Free Press (Minnesota)*.1963. Kato 'highball' starts upstream. April.

• **Summary:** "Soybean Oil on the Rocks," Mankato's most famous highball, heralded the arrival of spring today, reaching a point between St. Peter and Le Sueur. Huge golden flows of soybean oil started to move downstream in the "Minnesota river" as the ice began breaking up. The golden-to-orange oil was part of 3 million gallons that burst from a tank at Honeymead Products Co. in Mankato on Jan. 23. From the "Blue Earth river" beside the plant, it flowed into the Minnesota river, and will proceed toward the Mississippi river unless stopped.

282. *Minneapolis Star (Minnesota)*.1963. Oil dam goes up on the Mississippi (Photo caption). April 7.

• **Summary:** Two large photos show: (1) One man from Northfield, dressed in a military uniform, wiring burlap bags together. Two cables were passed through the bags and fastened to barrels. (2) Another man, same place and dress, pushes one of many barrels into position. Later it was pulled



across the water. Note: The floating dam is intended to contain soybean oil spilled at the Honeymead plant in Mankato in January.

283. *Mankato Free Press (Minnesota)*. 1963. Army engineers seek to solve oil problem: In Minnesota River. April.

• **Summary:** Army engineers and the Minnesota department of health are studying the pools of crude soybean oil moving downstream towards Minneapolis in the “Minnesota river” after a storage tank broke at Honeymead Products Co. last January. A major concern is to prevent the oil from entering the Mississippi river south of Minneapolis. Honeymead will have to bear all expenses involved.

284. *St. Joseph News-Press (Missouri)*. 1963. K.C. co-op buys out Dannens: Personnel to be retained in multi-million-dollar deal. Sept. 1. p. 1.

• **Summary:** The sale of Dannen Mills facilities in St. Joseph, Missouri, and the Great Plains states to the Farmers Union Cooperative Marketing Association (better known as CMA), Kansas City [Missouri], was announced Saturday by Dwight L. Dannen, chairman of the Dannen board of directors, and P.J. Nash, secretary-manager of the cooperative.

Dannen has 450 employees, of which 250 are located in St. Joseph. “CMA is a regional grain marketing cooperative whose membership is composed of some 220 local cooperative elevators in Kansas, Missouri and Nebraska. It has terminal grain elevators in Topeka [Kansas] and Kansas City [Missouri], with a capacity of 25,000,000 bushels. It recent years CMA has been expanding its marketing service into the exporting of grains and it owns a fleet of barges.” In March 1963 the CMA board recommended that CMA should build or acquire a soybean processing plant in the Missouri-Kansas-Nebraska area.

The acquisition includes the Dannen soybean processing plant at St. Joseph, which has a production capacity of 750 tons per day. Dannen’s was founded in 1925 as a grain marketing business. It entered the feed manufacturing field in 1935 and placed its soybean mill in operation in 1938 [sic, 1939]. It has grain storage facilities for 24 million bushels.

Note: This is the earliest document seen (March 2008) concerning the Farmers Union Cooperative Marketing Association (better known as CMA), of Kansas City, Missouri. On 1 June 1968 it joined with 3 other regional grain cooperatives to become Far-Mar-Co.

285. *Wall Street Journal*. 1963. Farmers co-op buys Dannen Mills properties for over \$20 million. Sept. 4. p. 8.

• **Summary:** Dannen Mills was founded by H.L. Dannen in 1923 in St. Joseph, Missouri, as a grain merchandising organization. In 1935 it started manufacturing feed, and in 1938 it entered the soybean processing business.

286. *St. Joseph Gazette (Missouri)*. 1963. Tax policy on mill unchanged. Sept. 11. p. 1.

• **Summary:** “There will be no change in the city and county tax status on Dannen Mills, Inc. property recently purchased by the Farmers Union Co-operative Marketing Association [CMA]...

The “chief deputy county tax assessor said ‘co-operatives pay property taxes just like all other businesses do.’” Thus the Dannen property will continue to be subject to city and county property taxes. Co-operatives do, however, receive certain other tax advantages.

287. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmers Union Cooperative Marketing Association (CMA) (Kansas City, Missouri).

**Manufacturer’s Address:** St. Joseph, Missouri.

**Date of Introduction:** 1963. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *St. Joseph Gazette (Missouri)*. 1963. “K.C. co-op buys out Dannens: Personnel to be retained in multi-million-dollar deal.” Sept. 1. p. 1. The sale of Dannen Mills facilities in St. Joseph, Missouri, and the Great Plains states to the Farmers Union Cooperative Marketing Association (better known as CMA), Kansas City [Missouri], was announced Saturday by Dwight L. Dannen, chairman of the Dannen board of directors. Far-Mar-Co, Inc. 1970/03. “44% & 48.5% Soybean Meal. Degummed Soybean Oil” (Ad). *Soybean Digest Blue Book*. p. 7.

Note 1. The cooperative is now named Far-Mar-Co.

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 12. Far-Mar-Co, Inc. (Hutchinson, Kansas) (St. Joseph, Missouri, 1963).

Note 2. The 1975 NOPA yearbook also states that Far-Mar-Co., Inc. has a soybean processing plant in St. Joseph, Missouri.

288. *St. Joseph News-Press (Missouri)*. 1963. CMA to continue operating Dannen feed mill here. Oct. 22. p. 1-2, 5.

• **Summary:** Consumers Marketing Association (CMA) purchased the Dannen facilities in St. Joseph “primarily because of its soybean mill, grain elevator and Missouri River wharf.” After a period of indecision, the grain marketing cooperative has decided to continue operating the Dannen feed mill in St. Joseph. At the same time, however, “CMA will negotiate with Consumers Co-operative Association or any other interested cooperative concerning possible sale or lease of the feed mill”—which has an hourly production capacity of 25 tons and a potential annual capacity of 100,000 tons of feed. CMA plans to eventually sell Dannen’s 25 country elevators to co-operatives or independent firms or

newly organized co-operatives. "No decision has yet been made... concerning an integrated feed mill and feeding lot the Dannen firm has at Milliken, Colorado. A study also is being made of the 100,000 hen egg production plant which was acquired by CMA in the Dannen purchase." CMA has assets of \$32.5 million.

In a meeting at the Hotel Robidoux, Dwight L. Dannen, former owner of Dannen Mills, gave the main talk of the morning session, at which he discussed the development of the soybean processing industry. "Mr. Dannen termed soybeans the 'miracle crop of the 20th century' and stated soybean production is now the fastest growing segment of the agricultural industry." He said that when Dannen began processing, it had a production capacity of 600 bushels of soybean a day. That compares with 700 tons per day at present.

A photo (p. 5), captioned "Conference of CMA officials," shows "Dwight L. Dannen, manager of the new Dannen Mills division of CMA; Ed Johnson, Osborn, Kansas, president of CMA; and Pat J. Nash, general manager of CMA."

289. *Kansas Farm News (Kansas City)*. 1963. CMA acquires Dannen Mills: Purchase includes soybean plant. 29(9):1, 4-5. Oct.

• **Summary:** "Kansas City—The Farmers Union Cooperative Marketing Association acquired the assets of Dannen Mills Inc., on Sept. 9. The announcement was made jointly by P.J. Nash, CMA secretary-manager, and Dwight L. Dannen, chairman of Dannen Mills, following completion of negotiations and agreement between the two grain organizations.

"Included in the multi-million dollar transaction was a 750-ton per day capacity solvent soybean processing unit, a modern formula feed plant and a large terminal elevator with barge facilities, all at St. Joseph, Missouri, on the Missouri River; feed mills at Red Oak, Iowa, and Milliken, Colorado, and also a large number of feed stores and country elevators throughout Missouri, Kansas, Oklahoma, Illinois and Iowa.

"Grain storage doubled: Grain storage capacity in excess of 24 million bushels obtained in the purchase will almost double that of CMA's present facilities."

"Purchase of the Dannen properties fulfills the action of the CMA Board of Directors taken last March, according to Mr. Nash. Following the conclusion of an intensive study into the feasibility of a soybean processing operation by the regional cooperative made by the Farmers Cooperative of the Department of Agriculture [USDA], CMA directors voted to enter the soybean processing business either through construction of a new plant at the Fairfax elevator [in Kansas City, Kansas], or by acquisition of new facilities in the Kansas City area."

"CMA's main purpose in acquiring Dannen was because of the soybean processing plant and the additional grain storage capacity available with barge loading facilities along

the Missouri River," said Nash.

"CMA composed of some 220 local cooperative elevators in Kansas, Missouri, and Nebraska, was organized in 1914 as the Farmers Union Jobbing Association and changed to its present name in 1962.

Dwight L. Dannen will remain to manage the new Dannen divisions. Dannen Mills is one of the largest businesses in St. Joseph.

"Dannen established 40 years: Dannen Mills was founded in 1923 by the late H.L. Dannen at St. Joseph as a grain merchandising company. In 1935, the company started feed manufacturing and entered the soybean processing business three years later with the construction of a plant. Dwight L. Dannen became president of the company in 1963 and later was made chairman of the board."

Photos show: (1) Seven men and one woman in a room during contract negotiations. (2) P.J. Nash and Dwight Dannen shaking hands following contract negotiations. (3) Aerial view of the Dannen Elevator and feed mill extending along the Missouri River. (4) A scale model showing the interior of the soybean mill. (5) Close-up of the 24 million bushel terminal elevator with a large truck in the foreground. On one side is written: "Ask for Dannen Feeds." (6) Exterior of the soybean mill showing the galley at right that leads to the wharf. (7) A barge docked at the wharf being loaded. A map shows CMA's "terminal triangle" in St. Joseph, Kansas City, and Topeka.

290. *Soybean Digest*. 1963. Dannen Mills sold to Farmers Union [CMA] of KC [Kansas City, Missouri]. Oct. p. 24.

• **Summary:** "The purchase of Dannen Mills properties in St. Joseph, Missouri, and the Great Plains states by the Farmers Union Cooperative Marketing Association, Kansas City, has been announced by Dwight L. Dannen, chairman of the Dannen board of directors, and P.J. Nash, secretary-manager of the cooperative, better known as CMA.

"The acquisition includes the Dannen soybean processing plant at St. Joseph, which has a production capacity of 750 tons per day... Dannen's was founded in 1925 as a grain marketing business. It entered the feed manufacturing field in 1935 and placed its soybean mill in operation in 1938."

291. *Mankato Free Press (Minnesota)*. 1963. New operation timetable set at Honeyamead. Nov. 30.

• **Summary:** Equipment for making hydrogenated soybean oil is expected to be in operation at the Honeyamead Products Co. late this winter. The new equipment will be able to produce about 240,000 lb/day of the hydrogenated oil.

292. Anderson, Loyd V. 1963. The U.S. soybean story. *Chemurgic Digest*. Nov/Dec. p. 3-4.

• **Summary:** "Soybean acreage was stimulated by the droughts of the 1930's and by corn acreage allotments which made land available for beans... In 1929 a soybean labora-

tory was established in Ohio to conduct research aimed at the development of varieties high in oil and protein. The U.S. Regional Soybean Industrial Products Laboratory was located at Urbana, Illinois in 1936. It carried on industrial utilization research and, in cooperation with the experiment stations of the North Central states, it also conducted agronomic studies in the development of improved varieties.”

Soya Lecithin “has become almost the traditional example of Chemurgy whereby an agricultural by-product of little value is upgraded and is found to have value as the result of scientific investigation. Lecithin is nature’s wetting agent...” In pharmaceuticals, lecithin is a source of choline and inositol. “In the cosmetic industry, it is again a satisfactory and safe emulsifying agent. In soaps, it improves lather stability and represses alkalinity. In paint products, it acts as a wetting and dispersing agent and improves milling, paint leveling and brushing qualities. In rubber, it acts as an antioxidant and as a dispersing agent for the filler. As an additive to lubricating oils, it helps counteract bearing corrosion and otherwise lengthens the life of the product. In gasoline, it is an anticloud and anti-corrosive agent. It helps produce softer, silkier leather products.” Address: Honeymead Products Co., Mankato, Minnesota.

293. Knapp, Joseph Grant. 1963. *Farmers in business: Studies in cooperative enterprise*. Washington, DC: American Institute of Cooperation. xii + 450 p. Index. 24 cm. [32 ref]

• **Summary:** This is a collection of speeches and published articles by the author. Contents: Foreword. Preface. Part I: The nature of cooperative enterprise (15 chapters). Part II: Organization and operation (16). Part III: Lessons from experience (5). Part IV: Challenges and problems (7). Part V: The road ahead (11). Appendixes: (A) For further reading. (B) Current farmer cooperative statistics.

Although soybeans are not mentioned in this book, Land O’Lakes (a pioneering cooperative) is: (1) The subject of an excellent history, *Men to Remember* (1947) (p. 170). (2) It has created new outlets for quality butter, and is one of many well-known, high-quality cooperative brands, including Blue Diamond (almonds), Gold Kist (cotton, poultry), Ocean Spray (cranberries), Sun-Maid (Raisins, founded in 1912; brand launched in 1915), Sunsweet (prunes and other dried fruit), Challenge (butter), Nulaid (eggs), Tillamook (cheese), Sioux Bee (honey), etc. (3) An example of a horizontal integration following World War I. (4) A good example of diversification and the addition of complementary products to its basic line in order to better serve the needs of customers and reduce overhead costs (p. 268). (5) Brought new respect to dairy farmers for emphasis on quality (p. 325).

Joseph Knapp (born 1900) is considered America’s foremost authority on farmer cooperatives. On the rear dust jacket is a biography of Knapp with a portrait photo and list

of his major books. Address: [Administrator, Farmer Cooperative Service, USDA].

294. Dannen, Dwight L. 1963? *Dannen Mills, Inc.*, 1921-1963. St. Joseph, Missouri. 2 p. Unpublished typescript. Undated. 28 cm.

• **Summary:** An excellent, concise history of Dannen Mills, written by the son of the founder. 1909–H.L. Dannen graduated from the Capital City Commercial College in Des Moines, Iowa and came to St. Joseph, Missouri, to work for the St. Joseph Board of Trade in their building on the southwest corner of Main and Edmond. Later he was with the St. Joseph Hay & Grain Co.

1921–Henry Dannen went into business for himself, starting the Dannen Hay & Grain Co. It had offices in the Corby Building at 5th & Felix, and bought and sold carload lots of grain and hay throughout the middle west.

1925–The company opened a retail grain and feed store at 4th & Seneca, and began to supply farmers in the area with feed and farm supplies. That year the main office was moved to expanded space on the 2nd floor of the Missouri Valley Trust Building at 4th & Felix.

1934–A grain elevator for receiving trucked grain, and a feed warehouse were built at 8th & Atchison Street in St. Joseph.

1935–Feed mixing was started at the feed warehouse.

1936–A feed mill was constructed at the 8th and Atchison site for the manufacture of Dannen Feeds for livestock and poultry. Also in 1936 the company was incorporated and changed its name to Dannen Grain & Milling Co. The main office was moved to a remodeled store at 412 Felix St.

“Meanwhile elevators and feed stores were being built or purchased in the surrounding area and a feed distribution network of Dannen Feed Dealers was being set up throughout the four-state area of Missouri, Iowa, Kansas, and Nebraska.”

1938–“The Grain Belt Mill at 900 Lower Lake Road had been closed for several years and had become the property of the Missouri Pacific Railroad. In 1938 the mill was leased by a new company called Dannen Soybean Corporation (stockholders were H.L. Dannen, Dwight L. Dannen [his son], Walter W. Head, Leonard Guitar, and David Hopkins) and announcement was made that the old feed mill would be converted to a new modern soybean processing plant.

1939 Feb. 22–The new soybean mill started operation.

1940–The buildings were purchased from the railroad and the soybean processing capacity was expanded. Also in 1940 all of the stock in Dannen Soybean Corporation was purchased by H.L. Dannen and Dwight L. Dannen, and the name was Changed to Dannen Mills. The headquarters of both Dannen Mills and Dannen Grain & Milling Company remained at 412 Felix Street.

1941–The Excello Feed Mill at 22nd & Garfield was purchased and used for grain storage and sacked feed



warehousing until 1943.

1942 spring—The “Easthills Golf and Country Club property just east of St. Joseph was purchased and became Dannen Research Farm where livestock and poultry feeds were developed and tested under actual farm conditions. (The research farm eventually became Stonecrest housing development as the city limits pushed on east).

1943—The Excello Feed Mill was modernized and became the main production mill for Dannen Feeds. At that time Dannen Grain & Milling Co. and Dannen Mills were merged into one company and named Dannen Mills.

1944—A “new office building adjacent to the soybean mill at 900 Lower Lake Road was finished and the corporate office moved from 412 Felix.

1948—“An explosion and fire destroyed the soybean mill... It was rebuilt and enlarged on the west side of Lower Lake Road and went into operation in 1949.

1950—The “Grain and Jobbing Division, which was in reality the original business of the company, had become a very important part of Dannen Mills and had outgrown its space in the main office. Therefore in 1950 it moved into new office space on the 10th floor of the Corby Building where it was close to the St. Joseph Grain Exchange, railroad offices, and banks.”

1953—The Warehousing Division of Dannen Mills is formed. Dannen had become one of the largest storers of surplus wheat for the U.S. government by modifying unused buildings as well as using conventional grain storage facilities. It leased from the City of St. Joseph several empty buildings at Rosecrans Airport and equipped them for storing wheat owned by the Commodity Credit Corporation (CCC).

1953 Nov. 27—A fire completely destroyed the feed mill at 22nd & Garfield. Plans were made immediately to build a new mill adjacent to the soybean mill at 900 Lower Lake Road. While the new mill was being planned and constructed, employees were transferred to a company’s mill at Red Oak, Iowa, to continue manufacture of Dannen Feeds.

1954—A barge terminal dock is built on the Missouri River adjacent to the soybean processing plant. It has facilities for loading barges with grain, soybean meal, and soybean oil, and for unloading barges of molasses for the feed mill.

1955—The Warehousing Division of Dannen Mills purchases the Chase Candy Co. building at 5th and Sylvania in St. Joseph and fills all floors of the building with surplus wheat owned by the CCC.

1955 fall—Dannen’s new feed mill at 900 Lower Lake Road is completed.

1956—Dannen decides to convert the Chase Candy Co. building into new corporate offices. The work was begun in 1956 and finished in late 1958.

1958 Jan.—Dannen Mills leases (and later buys) that Gas Service Company’s gas storage tank at 2nd and Cedar streets. It had become unusable and the gas company had scheduled it for demolition. But Dannen converted it into a

1,000,000 bushel grain storage bin. It was filled with government owned wheat and later used to store soybeans at harvest time for later processing at the soybean mill.

1959 Jan. 16—Open house at Dannen’s new corporate offices at 5th and Sylvania. All corporate divisions, including Administration, Feed Mills, Soybean Mill, Grain & Jobbing, Country Stations, Research Farm, Sanitation, and Warehousing were moved to the new location.

1962—Consumers Marketing Association, with headquarters in Kansas City, Missouri, started negotiations for the purchase of Dannen Mills, Inc. By that time the corporation had expanded to over 600 employees, and had feed mills in Red Oak and Harlan, Iowa; Blackwell, Oklahoma; and Miliken, Colorado. Branch offices were in Kansas City, Omaha (Nebraska), Des Moines (Iowa), Denver (Colorado), and Albuquerque (New Mexico); and its 54 country stations and warehousing plants were scattered over Missouri, Illinois, Iowa, Nebraska, Kansas, Oklahoma, and Colorado.

1963 Sept.—The sales of Dannen Mills, Inc. to CMA is finalized. Address: St. Joseph, Missouri.

295. Dannen Mills Div., Farmers Union Cooperative Marketing Association. 1964. Dannen Mills, St. Joseph, Missouri—Soybean processors, serving the livestock and poultry feed manufacturer (Ad). *Soybean Digest*. May. p. 20.

• **Summary:** “Specializing in 50 to 100 ton export orders. Consistent quality of both 44% and 50% soybean meal. Modern plant, assuring fast, dependable service. Competitive prices.” An illustration shows the Dannen logo. Address: St. Joseph, Missouri.

296. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Arkansas Grain Corporation. Renamed Riceland Foods in 1970.

**Manufacturer’s Address:** Helena, Arkansas.

**Date of Introduction:** 1964. July.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Soybean Digest*. 1964. Oct. p. 13-15. “Arkansas Grain opens new plant at Helena.” See p. 16. “Construction of the terminal elevator at Helena was started in March 1963 and was ready to receive soybeans at harvest during September. The crushing plant was begun during November 1963, and began processing soybeans on July 4, 1964.”

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 9. Arkansas Grain Corporation (Helena, Arkansas, 1965).

Talk with Tommy Miller of Riceland Foods, Soybean Processing Div. 2005. July 25. Riceland sold this plant in 1984 to Quincy Soybean Co., which was acquired by ADM

in about 1998-2001. ADM shut down the plant in about 2003.

297. Dannen Mills Div., Farmers Union Cooperative Marketing Association. 1964. To buy or sell grain or ingredients... Dial Dannen! (Ad). *Soybean Digest*. Sept. p. 63.

• **Summary:** A photo in the quarter-page ad shows a rotary-dial telephone. In the center is printed: "Farmers Union CMA-Dannen." Three phone numbers are given: St. Joseph, Missouri: 816 AD3-6161. Denver, Colorado: 303-534-0649. CMA, Kansas City, Missouri: 816-VI2-5781. "Dannen market specialists can help you buy or sell at the *best* prices. Soybean, cottonseed, linseed meal-grain-fish and meat products-mill feeds, seeds, fertilizer-feed sugar, molasses.

"Dannen Mills Div., Grain & Jobbing Section, St. Joseph, Missouri." Address: St. Joseph, Missouri.

298. *Soybean Digest*. 1964. Arkansas Grain opens new plant at Helena. Oct. p. 13-15.

• **Summary:** This huge, modern facility just south of Helena, Arkansas, is a "new symbol of agricultural progress." It "is the largest soybean processing structure built at one time and is, in every respect, a model operation."

"The terminal elevator adjacent to the crushing plant has a storage capacity in excess of 5 million bushels. It is of monolithic concrete construction. The modern extraction plant has a crushing capacity of 50,000 bushels in a three-shift, 24-hour day."

With the addition of the Helena plant, the Arkansas Grain Corporation, headquartered in Stuttgart, Arkansas, "now operates two ultra-modern soybean processing plants with a daily crushing capacity in excess of 83,000 bushels. Backing up these plants are 50 elevators operated by 18 affiliates that receive, dry, condition and store the soybeans, shipping them to the Helena or Stuttgart plants as needed."

Arkansas Grain Corp. has grown dramatically "since it was organized in 1958 by members of the Arkansas Rice Growers Cooperative Association, which has been serving rice farmers in Arkansas since 1921." Originally, the Arkansas Grain Corp. marketed only raw soybeans. Then a soybean processing plant was built at Stuttgart, Arkansas, and put into operation during October 1960. Initially, the plant produced on soybean meal and crude soybean oil, but from 1961 to 1963 additional equipment was installed to make lecithin, pellets, and refined soybean oils.

"Construction of the terminal elevator at Helena was started in March 1963 and was ready to receive soybeans at harvest during September. The crushing plant was begun during November 1963, and began processing soybeans on July 4, 1964."

Photos show: (1) Plant manager Bill Higginbottom standing in front of the 108 towering concrete soybean storage tanks. (2) An aerial view of the mammoth soybean

storage and processing facility recently completed at Helena, Arkansas. In the background is the Mississippi River. (3) The aspirator, which completes separation of the hulls from the soybeans. (4) Lab assistant Dick Bass in the plant's modern lab, performing tests. (5) Portrait of L.C. Carter, vice president and general manager.

299. *Soybean Digest*. 1964. Soybean Council of America, Inc.: Pogeler new Council head. Oct. p. 31.

• **Summary:** Glenn H. Pogeler, manager of the North Iowa Soybean Cooperative in Mason City, Iowa, for the past 21 years, has been named president of the Soybean Council of America, Inc. He replaces Howard L. Roach, who will become chairman of the Council's board of directors. Mr. Roach had held the office since the Council was founded in 1956. The Council has offices in 15 foreign countries, and headquarters in Waterloo, Iowa. Ferenc Molnar will continue as the Council's executive vice president.

"Mr. Pogeler, age 49, has been in the grain business since 1934. He became manager of the North Iowa Cooperative Processing Association in 1943. This organization became the North Iowa Soybean Cooperative in 1962. He has been a member of the board of directors of the National Soybean Processors Association for 17 years [i.e., since 1947] and is past chairman of the board of that organization." A photo shows Glenn Pogeler.

Note: This is the earliest document seen (March 2008) that mentions the North Iowa Soybean Cooperative, or that says it was first given this name 1962.

300. Arkansas Grain Corporation. 1964. New plant triples Arkansas Grain's capacity to serve world soybean markets: Modern facilities at Helena and Stuttgart can process 83,000 bushels per day! (Ad). *Soybean Digest*. Oct. p. 26-27.

• **Summary:** "Production is underway at our new plant near Helena, Arkansas on the mighty Mississippi [river]... The two plants give Arkansas Grain Corporation a storage capacity of 22 million bushels." The company makes: 50% protein soybean meal. 44% protein soybean meal. Soybean mill run. Lecithin. Degummed soybean oil. Refined soybean oil. Fully refined & deodorized soybean salad oil. An illustration (architect's drawing) shows an aerial view of the new plant, and the company logo. Address: Stuttgart, Arkansas. Phone: 501 WAbash 2-5691.

301. *Soybean Digest*. 1964. From soybeans to hydrogenated oil at Honeymead. Nov. p. 6, 8-9.

• **Summary:** In April 1964 Honeymead began producing hydrogenated soybean oil at its plant in Mankato, Minnesota. It has a rated capacity of 240,000 pounds of "hardened" oil per day; this oil (which is solid at room temperature) is sold to makers of shortening and margarine.

Normally, the oil is removed from the soybeans at one plant, then it is refined at another, and hydrogenated at a

third. Honeymead Products Co. is one of the first firms in the USA to combine these three processes into one continuous operation. The process and storage are described in detail. Two large photos show the outside of the plant, seven small photos show the inside, and a final one shows Lowell Andreas and George Walker watching a tankcar being steam cleaned. Each tankcar holds 60,000 lb of the hardened oil. Honeymead has two stations for loading hardened soybean oil, and seven for loading regular soybean oil.

302. *Soybean Digest*. 1965. C.M. Gregory, leading Iowa processor, gone. Jan. p. 22.

• **Summary:** "Clifford M. Gregory, 51, manager of the Farmers Cooperative Co., Dike, Iowa, elevator and processor of soybeans, for 26 years,... died at his home at Dike Nov. 30 after a lengthy illness. Burial was at Dike." A portrait photo shows Gregory.

303. *Mankato Free Press (Minnesota)*. 1965. Honeymead enters field of hydrogenation processing: One of largest processors. Feb. 26. p. 4B. Business section.

• **Summary:** In 1964 Honeymead started hydrogenating soybean oil at its plant in Mankato. The compact plant can produce enough hydrogenated oil to fill four tank cars per day and can be operated by a single man, thanks to remote control panels designed by Honeymead engineers. A large photo shows the hydrogenation plant.

304. Nakamura, Hiroshi; Hieronymus, Thomas A. 1965. Structure of the soybean processing industry. *Illinois Agric. Exp. Station, Bulletin* No. 706. 84 p. Feb. [36 ref]

• **Summary:** Contents: Introduction. Growth and development of the soybean industry [excellent history]: Pioneering period, tariff problem, rapid growth, postwar period, expanding markets for soybean products (utilization of soybean oil, nonfood uses—as in soap and paint, food uses—especially soybean oil, exports, utilization of soybean meal, technological development), expanding soybean production (total acreage, geographical distribution of soybean acreage, development of soybean varieties, yields and production, government farm programs affecting soybean production), location of soybean processing plants (1954 situation), capacity and mill operations. Cost analysis of soybean processing: Yields and processing costs by types of operation (processing costs of different types of operation, economic advantage of solvent extraction, economies of scale in the soybean processing industry, changes in levels of processing costs, processing costs and revenue, effects of economies of scale). Analysis of processing margins: Processing margins for the industry and individual mills (definition of processing margins, annual variations in processing margins, seasonal variations in processing margins, determination of processing margins for individual mills), processing margins and net returns (importance of

operational factors, profitability of processing operations by area). Locational analysis of soybean processing: Economics of plant location (processing of soybeans in transit, effect of transit on soybean processors, location of soybean processing plants {Decatur, Illinois; New Orleans, Louisiana}), transportation by barge and truck (competition among railroads, barge, and truck), effects of pricing system in the industry (pricing of soybean products), competitive position of processing plants by area. Causes and effects of business integration in the industry: Types of integration, causes of integration (vertical integration in meal, vertical integration in oil, vertical integration in soybean acquisition, horizontal integration in processing operations, processing of other oilseeds), effects of integration. Summary and probable trends.

Tables: (1) Quantity of soybean processed by method of extraction, annual 1936-49, 1951, 1952, 1956, and 1957, year beginning October. (2) Changes in harvested acreages of soybeans and other selected crops [corn, cotton, hay, oats, wheat], Corn Belt, South, and total U.S., selected years, 1949-1960. (3) Geographical distribution of U.S. soybean processing plants, 1950-61. (4) Estimated processing capacity and quantities of soybeans processed in five major soybean states, and all others, 1951-52, 1957-58, 1960-61. (5) Yields of oil and meal by method of processing, and combined value from a bushel of soybeans, 1947-52.

(6) Price ratio of soybean oil to meal, averages 1931-35, 1936-40, 1941-45, and annual 1946-60 crop years (the ratio peaked at 6.54 in 1946-47). (7) Processing costs per bushel of soybeans by type of operation, 1951-52 and 1952-53. (8) Operating margins according to type and size of mills. Solvent, expeller and screw press, hydraulic. Large, medium, small. (9) Distribution of processing costs, solvent oil mills by size of mill, 1952-53 season. (10) Changes in levels of processing costs per bushel of soybeans (300 tons per day solvent plant).

(11) Calculated costs and returns of solvent soybean oil mills by size of mill, 1951-54 average. For 11 mill sizes (in thousands of bushels per year annual capacity) gives: Investment per bushel, total cost per bushel, gross revenue per bushel, net revenue (profit) per bushel, return per dollar of investment (the bigger the mill, the higher the return per dollar). A mill with annual capacity of 11 million bushels per year returns 13.2% per dollar invested. (12) Price spread between the value of products per bushel of soybeans crushed and farm price of soybeans, 1947-61. (13) Average processing margins in the soybean industry, monthly and season average, 1951-60, cents per bushel of soybeans processed. Highest in Sept., lowest in May. Ten year average 35.5 cents. (14) Yields [in pounds] of oil and meal per short ton [2,000 lb] of soybeans processed, specified states and U.S. average, 1959-61 crop years. Also gives average yields of oil and meal per bushel, 1959-61 average for each of the 10 states + other states. (15) Average processing margins for



Illinois processors, monthly and season average, 1951-60, cents per bushel of soybeans processed.

(16) Transportation costs in cents per bushel of soybeans under nontransit, as compared to the cost of transporting equivalent quantities of oil and meal under transit from Decatur, Illinois, to specified markets, 1946 and 1962. The markets are Boston (Massachusetts), New York City, Baltimore (Maryland), New Orleans (Louisiana), Los Angeles (California), Seattle (Washington). (17) Average price of soybean meal at specified markets, dollars per short ton, bulk, 1956-60. (18) Farm prices of soybeans in specified states, 1956-60 crop years, dollars per bushel. (19) Soybean processing margins in specific states, 1956-60, cents per bushel of soybeans processed. (20) Average freight rates paid on soybean meal in state-to-state movement by Class I railroads in 1960, dollars per sort ton, bulk carload. Gives many states of origin and destination.

(21) Average freight rates paid on soybean oil in state-to-state movement by Class I railroads in 1960, dollars per sort ton, bulk carload. Gives many states of origin and destination. (22) Average freight rates paid on soybeans in state-to-state movement by Class I railroads in 1960, dollars per sort ton, bulk carload. Gives many states of origin and destination. (23) Integrated operations at soybean processing plants by state, 1950 and 1960. (24) Share of total shipments accounted for by largest companies in the soybean processing industry, 1958 and 1947.

Graphs: (1, p. 31) Processing costs of solvent extraction plants by size in 1952-53. The larger the plant capacity, the lower the processing cost in cents per bushel. The plant capacity should be greater than 1.5 million bushels. The maximum plant capacity shown is 11 million bushels per year. (2, p. 37) Processing costs and return per dollar of investment for solvent extraction plants, by size in 1952-53.

In 1939, according to the *U.S. Census of Manufacturers*, some 47 soybean processing plants were operating in the USA as follows: Illinois 14, Ohio 7, Iowa 6, and 20 in other states. By 1942 this number had increased to 79, with a total capacity of 106 million bushels, 71% of which was in the four largest soybean producing states of Illinois, Iowa, Indiana, and Ohio. By 1944 this number had increased to 137 plants, with a total processing capacity of 172 million bushels, of which 81% was in the four states mentioned. In 1950 there were 251 plants crushing soybeans either exclusively or as part of their operations. Of this total number, 139 plants crushed only soybeans, and these plants were highly concentrated in the four states mentioned. In the early 1950s the total number of U.S. soybean plants began a long and fairly rapid decline (p. 15).

In the case of cooperative processing plants, during and immediately after World War II, forward integration by cooperative country elevators was motivated primarily by the desire on the part of farmers to obtain soybean meal from their soybeans at a time of shortage of high protein livestock

feeds (p. 77). Address: Dep. of Agricultural Economics, Univ. of Illinois.

305. *Soybean Digest*. 1965. [Dwayne O. Andreas named to advisory committee by President Johnson]. May. p. 47.

• **Summary:** Andreas, vice president of Farmers Union Grain Terminal Association (Minneapolis, Minnesota) has been "named by President Johnson as a member of a 14-man advisory committee to make on-the-ground evaluations of U.S. foreign aid programs and to recommend steps to improve them."

306. Arkansas Grain Corporation. 1965. When you need these products... Look to this symbol (Ad). *Soybean Digest*. May. p. 2.

• **Summary:** "From two modern plants in Helena and Stuttgart, we are supplying top grade Arkansas Grain Corporation soybean products to the growing world markets. We would like the pleasure of serving you." The company makes: 50% protein soybean meal. 44% protein soybean meal. Soybean mill run. Lecithin. Degummed soybean oil. Refined soybean oil. Fully refined & deodorized soybean salad oil.

307. *Dawson Sentinel (Minnesota)*. 1965. Sensational rescue affected at new Dawson water tank. 80(46):1. July 15.

• **Summary:** Two of the water tank painters were overcome by the fumes and intense heat in the tank located west of the soybean plant office.

308. Big 4 Cooperative Processing Assn. 1965. Manufacturers of quality: Felco Soy Bean Meal. At your dealer (Ad). *Soybean Digest*. Sept. p. 30.

• **Summary:** A 1/8 page ad. "71% protein expeller type meal. 44% protein solvent type meal. 48½% protein hexane extracted meal." Address: Sheldon, Iowa. Phone: (712) 324-2531.

309. National Soybean Processors Association. 1965. Year book, 1965-1966 (Association year). Chicago, Illinois. 63 p.

• **Summary:** On the cover (but not the title page) is written: "Year Book and Trading Rules, 1965-1966." Contents: Constitution and by-laws and code of ethics. Officers, directors and committees for 1965-66. Membership of the National Soybean Processors Association. Trading rules on soybean meal. Appendix to trading rules on soybean meal: Official methods of analysis (moisture, protein, crude fiber, oil {only method numbers listed}, sampling of soybean meal {automatic sampler, probe sampler}). Trading rules on soybean oil. Definitions of grade and quality of export oils. Tentative soybean lecithin specifications. Appendix to trading rules on soybean oil: Uniform sales contract, grading soybean oil for color (N.S.P.A. tentative method), methods of analysis (A.O.C.S. official methods): Soybean oil, crude;

soybean oil, refined; soybean oil, refined and bleached; soybean oil for technical uses; soap stock, acidulated soap stock and tank bottoms (only method numbers listed).

The section titled "Officers, directors, and committees" (p. 12-15) states: President: Robert G. Houghtlin. Secretary: J.W. Moore. Treasurer: R.E. Fiedler. Executive Committee: L.W. Andreas, Chairman, Wilfred F. Carle, T.W. Bean, B.A. Townsend (term ending Sept. 1966). J.W. Moore, M.D. McVay, R.E. Fiedler, E.B. Copeland (term ending Sept. 1967). R.G. Houghtlin.

Board of Directors: Chairman of the board: L.W. Andreas. Vice chairman of the board: T.W. Bean. Immediate past chairman of the board: S.E. Cramer. (Term expiring Sept. 1966): R.A. Denman, Joe C. Givens, R.G. Golseth, Floyd E. Hiegel, H.D. Rissler, R.B. Williams. Term expiring Sept. 1967: T.J. Barlow, Elmer L. Buster, Elster B. Copeland, F.L. Morgan, H.R. Scroggs, B.A. Townsend. Term expiring Sept. 1968: Donald B. Walker -> Win Golden, Wilfred Carle, Arthur Frank, M.D. McVay, William King Self, Harry E. Wiysel. General counsel: Raymond, Mayer, Jenner & Block, Chicago, Illinois. Washington counsel: Sellers, Conner & Cuneo, DC. Washington representative: George L. Prichard, DC. Managing director, National Soybean Crop Improvement Council: Robert W. Judd, Urbana, Illinois.

Standing committees: For each committee, the names of all members (with the chairman designated), with the company and company address of each are given—Traffic and transportation. Technical. Oil trading rules. Industrial oil. Lecithin. Meal trading rules. Uniform rules and standards for soybean meal. Crop improvement council. Soybean research council. Soybean grades and contracts. Safety and insurance. Regional: Illinois, Indiana, Ohio, Kentucky, and eastern Missouri; Iowa, Minnesota, Nebraska, the Dakotas, Kansas, and Western Missouri; Mississippi River Delta Sections.

The following organizations, and individuals are members of NSPA: Allied Mills, Inc., Chicago, Illinois; Taylorville, Illinois; Guntersville, Alabama. Archer-Daniels-Midland Co., Minneapolis, Minnesota; Decatur, Illinois; Mankato, Minnesota; Fredonia, Kansas; Bloomington, Illinois. Arkansas Grain Corp., Soybean Division, Stuttgart, Arkansas (Wilfred F. Carle); Helena, Arkansas (W.E. Higginbotham). Big 4 Co-op. Processing Assn., Sheldon, Iowa (Kenneth J. McQueen). Buckeye Cotton Oil Div. of, The Buckeye Cellulose Corp., Cincinnati Ohio (R.B. Williams); Little Rock, Arkansas; Augusta, Georgia; Memphis, Tennessee. Cargill, Inc., Minneapolis, Minnesota (M.D. McVay, Jay Haymaker); Chicago, Illinois (Robert Cournoyer); Cedar Rapids, Iowa (C.W. Bohlander); Des Moines, Iowa (W.J. Wheeler); Fort Dodge, Iowa (George J. Cox); Sioux City, Iowa (A.L. Peterson), Washington, Iowa (William R. Matson); Wichita, Kansas (Ralph S. Moore); Memphis, Tennessee (Philip St. Clair); Norfolk, Virginia (D.H. Leavenworth). Central Soya Co., Inc., Fort Wayne, Indiana

(B.A. Townsend); Decatur, Indiana (T.H. Alwein); Indianapolis, Indiana (R.E. Syster); Chicago, Illinois (Willard C. Lighter); Gibson City, Illinois (George R. Walter); Belmond, Iowa (J.R. Wright); Bellevue, Ohio (Harry Stokely); Marion, Ohio (Leroy Rich); Chattanooga, Tennessee (Jack Rosenberger). Delphos Soya Products Co., Delphos, Ohio (Floyd E. Hiegel). Delta Cotton Oil and Fertilizer Co., Jackson, Mississippi (Alfred Jenkins). Farmers Grain Dealers Assn. of Iowa (Cooperative) Soybean Processing Division, Mason City, Iowa (H.D. Rissler). Farmers Union C.M.A. [CMA], St. Joseph, Missouri (Arthur E. Frank). Fremont Cake & Meal Co., Fremont, Nebraska (Harry E. Wiysel). Galesburg Soy Products Co., Galesburg, Illinois (Max Albert & Regi Simon -> Elnathan Anderson, Box 711). General Vegetable Oil Co., Fort Worth, Texas (J.D. Morton). Gooch Milling & Elevator Co., Lincoln, Nebraska (M.R. Eighmy). Grain Processing Corp., Muscatine, Iowa (G.A. Kent, F.J. Prochaska, H.P. Woodstra). Honeymead Products Co., Mankato, Minnesota (L.W. Andreas, W.B. Cox, J.I. Maslon, C.T. Mullan, L.K. Rasmussen); Huegely Iowa Milling Co., Cedar Rapids, Iowa (Joe Sinaiko, Bob Scroggs, Les Liabo). Kansas Soya Products Co. (The), Emporia, Kansas (Elmer L. Buster). Lauhoff Grain Co., Danville, Illinois (Ralph G. Golseth, Loren R. Larrick, Laurie J. Slocum). Marshall Mills Co., Marshalltown, Iowa (J.B. Saccaro). Minnesota Linseed Oil Co., Minneapolis, Minnesota (R.J. Lindquist, Jr.). Mississippi Cottonseed Products Co., Jackson, Mississippi (H.E. Covington). Missouri Farmers Assn., Grain Div., Mexico, Missouri (Kermit F. Head). Owensboro Grain Co., Owensboro, Kentucky (William M. O'Bryan). Paymaster Oil Mill Co., Houston, Texas (T.J. Barlow, C.R. Bergstrom); Phoenix, Arizona (O.C. Harris); Jackson, Mississippi (John Bookhart). Perdue (A.W.) & Son, Salisbury, Maryland (Robert L. Brodey). Planters Industries, Inc., Rocky Mount, North Carolina (W.T. Melvin). Planters Manufacturing Co., Clarksdale, Mississippi (A.K. Shaifer). Quincy Soybean Products Co., Quincy, Illinois (Theodore W. Bean, John Franks). Ralston Purina Co., St. Louis, Missouri (Donald B. Walker, W.L. Golden); Kansas City, Missouri (A.V. Couch); Bloomington, Illinois (R.C. Witte); Decatur, Illinois (R.E. Baer); Lafayette, Indiana (A. Hardy); Iowa Falls, Iowa (W. Bower); Louisville, Kentucky (J. Gardner); Raleigh, North Carolina (J.L. Bumgardner); Memphis, Tennessee (J.K. Sartain). Riverside Oil Mill, Marks, Mississippi (William King Self). Sisketon, Missouri (P.B. Bartmess). Southern Cotton Oil Div., Hunt Foods and Industries, Inc., New Orleans, Louisiana (F.L. Morgan); Newport, Arkansas (Jerry Jeffrey); Macon, Georgia (M.S. Long); Greenville, Mississippi (M.D. Kolb); Goldsboro, North Carolina (W.W. Davis). Southern Soy Corp., Estill, South Carolina (R.A. Denman). Southern Soya Corp. of Cameron, Cameron, South Carolina (Charles Everett Bullard). Staley (A.E.) Manufacturing Co., Decatur, Illinois (J.W. Moore, E.C. Lane, H.E. Lents); Painesville,

Ohio (D.J. Hopkins). Swift & Co., Chicago, Illinois (Scott E. Cramer, W.W. Moore). Townsends, Inc., Millsboro, Delaware (P.C. Townsend). Tri-County Co-op Soybean Assn., Dawson, Minnesota (Joe C. Givens). West Tennessee Soya Mill, Inc., Tiptonville, Tennessee (Tyler Terrett). Yazoo Valley Oil Mill, Inc., Greenwood, Mississippi (N.F. Howard).

Associate Members: American Feed Stores Home Organization, Inc., Minneapolis, Minnesota. Anderson Clayton & Co., Foods Div., Dallas, Texas. Armour & Co., Chicago, Illinois (Harry K. Bean [crossed out]). Capital City Products Co., Div. of Stokely-Van Camp, Inc., Columbus, Ohio. Cereales y Concentrados, Mexico City, Mexico (Francis Tovar [crossed out]). Colchester Processing Co., East St. Louis, Illinois [crossed out]. Cooperative Mills Inc., Baltimore, Maryland. Corn Products Co., New York City, New York (R.W. List). General Mills, Inc., Kankakee, Illinois (Gerald G. Wilson) [handwritten in]. Grasas Vegetales, S.A., Guadalajara, Jalisco, Mexico (Mr. Collighon) [handwritten in]. Greendale Soy Products, Inc., Kinmundy, Illinois (Elwin G. Ingram) [handwritten in]. Glidden Co. (The), Durkee Famous Foods, Div., Chicago, Illinois (Gerald J. Daleiden). Hartsville Oil Mill, Hartsville, South Carolina (Edgar H. Lawton, Jr.). Huegely Elevator Co., Nashville, Illinois (J.W. Huegely). HumKo Products—Div. of National Dairy Products Co., Memphis, Tennessee (Sam Cooper). Kraft Foods Div. of National Dairy Products Corp., Chicago, Illinois (G.M. Gibson). Lever Bros Co., New York City, New York. Maple Leaf Mills Ltd., Toronto, Ontario, Canada (W.G. Milliken) [handwritten in]. Nebraska Consolidated Mills Co., Omaha, Nebraska [crossed out]. Pacific Vegetable Oil Corp., San Francisco, California. Procter & Gamble Co. (The), Cincinnati, Ohio. Quaker Oats Co. (The), Chicago, Illinois. Spencer Kellogg Div. of Textron Inc., Buffalo, New York. Supersweet Foods Div., International Milling Co., Minneapolis, Minnesota. Valley Mills, Vicksburg, Mississippi. Wesson Div., Hunt Foods and Industries, Inc., Fullerton, California. Ralph Wells & Co., Monmouth, Illinois (Willis H. Wells). Address: 3818 Board of Trade Building, Chicago 4, Illinois.

**310. Product Name:** Bac\*O's (Meatless Fried Bacon Bits from Spun Soy Protein Fiber).

**Manufacturer's Name:** General Mills, Inc.

**Manufacturer's Address:** Minneapolis, Minnesota.

**Date of Introduction:** 1965. December.

**Wt/Vol., Packaging, Price:** Frozen or dried (3.25 oz jar).

**New Product—Documentation:** Ziemba. 1966. Food Engineering. 38(4):58-60. April. "Create new foods with textured soy proteins." General Mills is test marketing this product as Bacon Bits (as garnish or condiment) in Bac-O-Chips for the institutional trade and Bac\*Os under the Betty Crocker consumer label. GMI has registered these textured meat analogs under the name Bontrae. They are made from

spun soy protein fibers. "These spun monofibrils are then blended with supplementary ingredients (fats, egg solids, sugars, etc.), binders, flavors, and colors. They are then cooked (to heat-set) and shipped frozen (55 to 60% moisture) or dried (2% moisture). A.D. Odell is manager of the GMI Isolated Protein Program. A photo shows the label of a jar of Betty Crocker Bac\*Os. "New. Net wt. 3.25 oz. Say 'BAY-kôz. Crispy bits with a flavor like smoke-cured bacon. High in vegetable protein."

Ziemba. 1966. Food Engineering. May. p. 82-91. "Let soy proteins work wonders for you." Business Week. 1966. July 23. p. 82-87. "Soybeans move up on the menu."

David Sanford. 1968. New Republic. May 18. p. 13-15. "Unfoods: Do you know what you're eating?" Indicates that test marketing of Bac\*Os in Denver, Buffalo, and Sacramento began in about Dec. 1966 and that they are about to be advertised nationally. The label now reads "Bac\*Os—Crispy Bontrae bits with a flavor like bacon." They are made with spun soy protein isolate fibers.

*Soybean Digest Blue Book*. 1969. p. 114, 112. Bac\*O's are made from spun soy protein fiber. Company is at 9000 Plymouth Ave. N., Minneapolis, Minnesota 55427. Head office at 9200 Wayzata Blvd., Minneapolis. American Soybean Assoc. 1974? "Soybeans: From America's fertile soils the world's versatile protein resource." A photo shows the jar.

Talk with Pam Becker of General Mills in Minneapolis (Phone: 612-540-2470). 1989. Dec. 13. She reads from an undated internal company publication compiled by the Consumer Relations Dept. and titled "Consumer Foods Products Information." This product was introduced to test markets in December 1965. The introduction was the result of extensive R&D work which began in the late 1950s. Foreseeing the future problem of increased worldwide malnutrition, General Foods acquired a patent license for a process then only in the initial stages of development to spin soy protein fibers (like the techniques used for Nylon or Rayon) into a fibrous material similar in form and consistency to meat. The fibers were combined with such binding ingredients as egg albumen and wheat gluten with oils, flavors, and dyes to produce a high protein food. After considerable consumer research, the decision was made to first market isolated soy protein in the form of bacon (Bac\*O's). Bacon was a popular food with consumers but was considered to be expensive and often a nuisance to prepare. In Dec. 1965 Bac\*O's was test marketed in Buffalo and Syracuse (New York), Sacramento, Stockton, and Fresno (California), and Denver (Colorado). It was extremely convenient, required no cooking or refrigeration, and there was no waste. It contained 67% more protein, 42% less fat, and 19% fewer calories than bacon. It contained no animal or meat fat and was kosher. 1 tablespoon (¼ oz.) contained 35 calories, 2 gm of fat, 3.6 gm of protein and no cholesterol. It was sold in glass jars. A variety of recipes were



developed with the crispy vegetable protein bits including egg dishes, salads, and sandwiches. It was expanded out of test market to all areas but the West Coast in 1968, and it became available nationally in Dec. 1969.

In 1983 Bac\*O's was reformulated to improve flavor and color. It had a less salty, milder, and less smoky flavor. In March 1985 Bac\*O Bits were introduced nationally. They were smaller sized pieces which could be used as a more subtle seasoning.

Dawson Foods bought the Bontrae spinning line, plus exclusive rights to General Mills soy isolate and patented spinning technology, equipment, and frozen spun products marketed to food processors and institutional customers. Central Soya got a long term leasing and licensing agreement for exclusive rights to General Mills' patented steam textured vegetable protein technology, equipment, and products to market to institutional customers and food processors. The company archivist, who knows history well, is Jean Toll (X-2679).

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan*. 4th ed. p. 174. The ingredients in "BacO's (General Mills)" are soy protein, vegetable oil, salt, HVP, sugar, dried egg white, artificial flavor, artificial color.

311. Fite, Gilbert C. 1965. *Farm to factory: A history of the Consumers Cooperative Association*. Columbia, Missouri: University of Missouri Press. viii + 288 p. Illust. Index. 25 cm. [634\* footnotes]

• **Summary:** This organization was founded in 1929 by Howard A. Cowden as the Union Oil Company (Cooperative) in 1929. The general purpose of the new company was to deal in, handle, and distribute petroleum and various products and by-products and to purchase, lease, build, construct, maintain and operate warehouses, filling stations, pumping plants, compounding plants, refineries, and all other appliances and conveniences for use in connection with the manufacturing, purchase and sale of gasoline, petroleum, lubricating oils and all other petroleum and oil products." In 1931 the company was incorporated in Kansas. In 1935 it became Consumers Cooperative (CCA) to reflect expansion into other products.

Chapter 1, titled "Farm problems and the cooperative movement, 1865-1920," contains a good history of the cooperative movement. In 1966, shortly after publication of this book, it became Farmland Industries, Inc. An updated history titled *Beyond the Fence Rows: A History of Farmland Industries, Inc., 1929-78*, by the same author, was published in 1978.

Note: This is the earliest document seen that describes the origins of Farmland Industries. However, neither Farmland Industries nor soy are mentioned. Address: Research Prof. of History, Univ. of Oklahoma.

312. Brandemuhl, William. 1965. *Soybean utilization in Japan*. San Francisco, California. xxii + 478 p. Unpublished manuscript. 28 cm. [189 ref]

• **Summary:** A superb, in-depth, pioneering study, based on extensive original field research in Japan. Contains 30 tables and 190 excellent photos—including 7 of the author. Table of contents: Preface. Notes. List of tables. List of figures. Map. Part I: Background. 1. The soybean: Birth and spread (legend, botanical inception, Nagata's theory of origin, spread to Japan and beyond, the American story).

Part II: Japan's production and supply of soybeans. 1. Japan the country and supply of domestic soybeans (Japan the country, domestic soybean production, planting and harvesting, marketing domestic soybean). 2. Importation of Red Chinese soybeans (background, mechanics, advantages, and prospects). 3. Importation of U.S. soybeans (history, method and mechanics of importation, the American shippers, concluding comments on importation). 4. Distribution (use in brief, super-wholesaler, wholesaler, retailer wholesaler, Japan's grain exchange).

Part III: Soybean utilization in Japan. 1. Utilization of soybeans for oil and meal (oil crushing history, soybean source, delivery of soybeans, the crushing industry, liberalization of soybean oil and meal, oil utilization in Japan, meal utilization in Japan). 2. Tofu (history, use of soybeans, manufacture, the tofu factory, marketing tofu products, recently developed tofu products, tofu as food, concluding comments). 3. Miso (importation, home production of miso, quantity of miso produced, soybean used for producing miso, kinds of miso, fermentation time, comparison of miso firms, manufacturing, packing and marketing, price, instant miso, use of miso, miso consumption outlook). 4. Shoyu (introduction, production and manufacturers, manufacture, raw materials, preparation of raw materials for natural shoyu, preparation of materials for chemical method shoyu, preparation of materials for mixed method shoyu, fermentation, filtering and pressing, sterilization, bottling, price, use of shoyu, miscellaneous shoyu products, concluding comments). 5. Natto (description, history, Daitokuji natto, the natto industry, consumption, natto soybeans, processing, making cost and price, marketing, use of natto, problems, new ideas and natto products). 6. Frozen tofu (history, development, frozen tofu soybeans, processing, freezing, defrosting, drying, treatment with ammonia and packing, marketing, preservation, use). 7. Kinako. 8. Yuba (history and development, the plight of the yuba industry, soybeans for yuba, manufacture, classification of yuba, use). 9. Tsukudani and nimame (description, soybean tsukudani, nimame). 10. Hamanatto (history, manufacture, use). 11. Edamame. 12. Moyashi (manufacture, use). 11. Miscellaneous products (fermented soybean curd, MSG, confectionary products, other products). Conclusion. Sources. Sources (alphabetically arranged).

Tables: 1. U.S. soybean production, 1924-1963. 2. United

States, Red China, and world production of soybeans (bushels), 1950-1963. 3. U.S. soybean importation, exportation and amount processed for oil and meal, 1924-1963. 4. U.S. exportation of soybeans (1,000 bushels) total, by continent, and to six largest importing countries, 1958-1962. 5. Japan's soybean acreage, production, and merchandising rate. 6. Japan's importation of soybeans, total, and Red China's portion, 1945-1963. 7. Japan's total importation of soybeans and U.S. portion, 1945-1963. 8. Soybean usage in Japan, 1963. 9. Japan's processing of oilseeds, 1963. 10. Crushing capacity of selected Japanese oilseed crushers. 11. Eight largest crushers of soybeans and amount of soybeans crushed per month in 1963. 12. Total quantity of soybeans crushed in Japan, 1950-1963. 13. Japan's daily per capita intake of edible fats and oils. 14. Japan's consumption of edible fats and oils, 1945-1961. 15. Use of soybean meal. 16. Chemical composition of tofu and aburaage. 17. Quantity of soybeans and soybean meal used for tofu-aburaage productions (all Japan), 1950-1963. 18. Miso production and quantity of soybeans and soybean meal used, 1950-1963. 19. Composition of miso. 20. Daily per capita consumption of miso in Japan, 1950-1963. 21. All Japan production of shoyu and use of soybeans and soybean meal, 1950-1963. 22. Composition of shoyu. 23. Yearly per capita consumption of shoyu, 1950-1963. 24. Composition of natto. 25. Production of frozen tofu and use of soybeans. 26. Composition of frozen tofu. 27. Yearly per capita consumption of frozen tofu. 28. Composition of kinako. 29. Composition of yuba. 30. Monosodium glutamate production and use of soybeans and soybean meal. Continued.

This typed manuscript was sent to Soyfoods Center in July 2004 by Tomoko Brandemuhl, the wife of the author. About the author (based on several interviews with Tomoko, July 2004): William Victor Brandemuhl was born on 30 Nov. 1940 at Iron Mountain, Michigan. He grew up in Florence, Wisconsin, then attended the University of Wisconsin at Madison. He roomed for 3-4 years with various Japanese cancer researchers at the university. He also became close to Tomoko Arai (born 12 Dec. 1937 in Tokyo), a Japanese woman, who was doing graduate studies in social work there as a Rotary International Fellowship student. William initially intended to graduate in June 1962, but stayed an extra year in order to pursue independent studies in Japanese language and soybeans. He became interested in the soybean and its history in an anthropology class taught by Dr. R.J. Miller; William finished his excellent research paper on soybeans in Jan. 1963. He also took one year of Japanese language instruction (night classes). William graduated in Jan. 1963 with a BSc degree in economics.

William obtained a grant (no strings attached) from Honeymead Products Co. of Mankato, Minnesota, to study soybean utilization in Japan. Only one American had studied this subject in Japan after World War II—Alan K. Smith of the USDA, who visited Japan and wrote short but detailed

reports in 1948-49 and 1958. In Jan. 1963 Brandemuhl arrived in Japan and became research fellow at the Department of Agricultural Economics, Kyoto University, Kyoto, Japan. Between Feb. 1963 and May 1964 (15 months) he conducted field research on soybean utilization in Japan. In June 1963 (after William had been in Japan for 4 months), Tomoko completed her graduate studies, graduated from the University of Wisconsin, and (since her scholarship was finished), returned to Japan—to be with William and to help him with his research in Japanese, which he spoke only moderately well. She traveled with him throughout Japan and translated for him during the many interviews he conducted. At each destination, she spoke about America to the local Rotary club—which paid her transportation, room, and board. William's monthly check from Honeymead paid for his room and board—but not for his travel and research, so he had to work part time doing English translation for a Japanese company. On trips, he took many photos using his expensive Nikon camera. Tomoko's family lived near Kobe, where she and William were married on 8 Aug. 1964—three months after he finished his field research. Several days after the marriage, they returned to the USA to visit his parents in Florence, Wisconsin, and enjoy a wedding party there.

William now knew he wanted to pursue a career in international business. He was soon offered a job at Crocker Citizen National Bank (International Division) in San Francisco, California. They drove to San Francisco and got an apartment at 1701 21st Avenue; he began work that fall, and was soon learning the basics of international business. Every evening after work at the bank he returned home to work on transforming his field notes into a manuscript. As he wrote the rough draft, Tomoko (a skilled pianist but not a skilled typist) typed it on a manual typewriter. The next day he would correct any mistakes and she would retype each page into final form. In 1965 he had the best carbon copy bound and sent it to Honeymead; he kept the original. It was never published and he received no academic credit for it.

On 26 May 1966 their first son and only child, Konrad Victor Brandemuhl, was born in San Francisco. They bought a house in Pacifica. In 1967 he was offered a job with Caterpillar Tractor Co. (International Div.) in Peoria, Illinois. In 1968 he moved with his boss to Allis-Chalmers in Co., West Illis, Wisconsin. In 1969 he was transferred to Tokyo, Japan, as Far East Representative of the company. In 1970 he was transferred to Singapore as Far East Manager of the company.

William and Tomoko later lived for about 10 years near Tokyo, Japan (mostly in Mitaka), and for a while in Singapore. Over they years he showed his typescript on "Soybean Utilization in Japan" to many people, but nobody was interested. In 1986 he started his own trading company, specializing in textiles, natural rubber, latex thread, and various machine mechanisms. Tragically, William died on 2 April 1998 in Bangkok, Thailand, of pneumonia, during a

business trip. He loved the excitement of international business and interaction with people of different cultural backgrounds. Address: San Francisco, California.

313. *Soybean Digest*. 1966. Dwayne Andreas leaves Grain Terminal Assn. Feb. p. 59.

• **Summary:** “Resignation of Dwayne O. Andreas, who has been executive vice president of Farmers Union Grain Terminal Assn. (GTA), St. Paul, Minnesota, since 1960, has been announced.” He plans to devote more time to his other business interests.

Mr. Andreas joined GTA when it acquired Honeymead Products Co. (Mankato, Minnesota), a soybean processor which was owned by Mr. Andreas and his brother, Lowell W. Andreas. Lowell will remain general manager of Honeymead. A portrait photo shows Dwayne Andreas.

314. *Soybean Digest*. 1966. [Dwayne O.] Andreas to ADM board. April. p. 37.

• **Summary:** “Election of Dwayne O. Andreas, Minneapolis [Minnesota] businessman, to the board of directors and the executive committee of Archer Daniels Midland Co. was announced at the board’s quarterly meeting. Mr. Andreas succeeds Walter G. Andrews, St. Paul, on the ADM board. Mr. Andrews, associated with ADM for 25 years, had submitted his resignation, saying he wishes to devote more time to his personal business enterprises. Mr. Andreas is chairman of the board of First InterOceanic Corp., a Minneapolis investment company. Until his resignation in early January he was executive vice president of the Farmers Union Grain Terminal Association, St. Paul.”

Note: This is the earliest document seen (Feb. 2005) concerning any of the Andreas brothers and ADM.

315. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmland Industries, Inc.

**Manufacturer’s Address:** Van Buren, Arkansas.

**Date of Introduction:** 1966. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 69-75. On 1 Sept. 1966 Consumer Cooperative Association was renamed Farmland Industries, Inc.

316. *Soybean Digest*. 1966. Honorary life members [American Soybean Assoc.]: D.W. McMillen and Dwayne O. Andreas. Sept. p. 6.

• **Summary:** “Dale W. McMillen, a pioneer in the soybean processing industry, demonstrated his belief in the future of the soybean by founding Central Soya at Decatur, Indiana, in the depression year of 1934 when he was 54 years of age.

“He believed that soybean meal could become an impor-

tant ingredient in animal feeds, and the founding of Central Soya to process soybeans and manufacture Master Mix feeds was his way of putting his belief into action.

“Mr. McMillen was one of the first in the industry to take the major step in 1937 of converting from the expeller method of processing soybeans to the now universally accepted solvent extraction method of processing soybeans into meal and oil. For a company scarcely 3 years old, this was a courageous move.

“In the late thirties, soybean meal had so little standing in the feed industry that one of Mr. McMillen’s first jobs was that of making soybean meal respectable. Through cooperative work with agricultural colleges, utilizing nutrition conferences for veterinarians and livestock feeders, Mr. McMillen and his staff helped dispel false ideas about soybean meal and give soybean meal the place it deserved in the nation’s feedlots. Mr. McMillen’s personal salesmanship and his continuing emphasis on improving the product through technological advances in processing techniques also contributed significantly to building a market for soybean meal, and thus for the soybean itself.

“Now an active 86 years of age, Mr. McMillen has lived to see the soybean crop grow from 23 million bushels in 1934 to a figure approaching the 1-billion-bushel mark in 1966.

“Dwayne O. Andreas, of Excelsior, Minnesota, has had a lifelong association with the processing of soybeans. He believes he has been involved in planning, building, or actually operating about 30% of the soybean processing capacity of the nation at one time or another. Also, he has had a hand in the manufacture of almost every product made from soybeans.

“Mr. Andreas was born on a farm near Worthington, Minnesota, and spent his early years on the farm. During his school years he worked in the family country elevator and seed business at Lisbon, Iowa.

“From 1938 to 1945 he was principal executive officer of the family-owned company, Honeymead Products Co., which had soybean processing facilities at Cedar Rapids and Washington, Iowa.

“From 1946 to 1952 he was vice president of Cargill, Inc., with soybean processing plants in Chicago, Illinois; Fort Dodge, Iowa; Springfield, Illinois; Savage, Minnesota; and Memphis, Tennessee.

“From 1961-65, he was executive vice president of Farmers Union Grain Terminal Association, which owns a processing plant [Honeymead] at Mankato, Minnesota.

“At present, Mr. Andreas is a member of the board of directors and the executive committee of Archer Daniels Midland Co., which has soybean processing plants at Bloomington, Galesburg and Decatur, Illinois; Fredonia, Kansas; and Mankato, Minnesota.

“Mr. Andreas is also chairman of the board of directors of First InterOceanic Corp., a privately owned investment



company, Minneapolis; chairman of the executive committee, National City Bank of Minneapolis; and president of the Andreas Foundation, Minneapolis.”

Photos show D.W. McMillen and Dwayne O. Andreas.

317. *Mankato Free Press (Minnesota)*. 1966. '63 Mankato soybean tank collapse not caused by blast, court rules. Oct. 28.

• **Summary:** The Minnesota Supreme Court ruled today [to nobody's surprise] that the rupture of a huge soybean oil storage tank at Honeymead Products Co. at Mankato in Jan. 1963 was not caused by an “explosion.” Sixty companies carried policies insuring Honeymead against “direct loss by... explosion.” Honeymead had other insurance, but with less coverage than under an explosion. The court turned down Honeymead's contention that the jury should have been permitted to look at the insurance policies during the trial.

Experts at the trial blamed the tank collapse on the extremely cold weather, which caused welded steel plates to become brittle. Lowell Andreas, president of the company, was out of the country and could not be reached for comment.

318. *Soybean Digest*. 1966. Lowell W. Andreas is named director of ADM. Dec. p. 38.

• **Summary:** “Archer Daniels Midland Co.'s shareholders increased the ADM board of directors to 11 members with the election of Lowell W. Andreas, Mankato, Minnesota, at the annual meeting recently. Mr. Andreas is manager of Honeymead Products and treasurer and a director of First Interoceanic Corp., Minneapolis investment company.” A portrait photo shows Lowell Andreas. Reelected to the board was Dwayne O. Andreas, chairman of First Interoceanic Corp.

319. *Soybean Digest*. 1967. Arkansas Grain Corp. to double capacity. Jan. p. 48.

• **Summary:** “An expansion program for 1967 which will double the soybean processing capacity of Arkansas Grain Corp.'s Stuttgart plant, was announced by L.C. Carter, executive vice president and general manager.” Construction is expected to start about Feb. 1. The expansion will give the company a total processing capacity of 100,000 bushels/day.

“The firm's newest venture, a soybean oil canning plant located in New Orleans, Louisiana, was placed into operation only 6 weeks ago.” This plant is currently canning salad oil for the export market 24 hours a day, 6 days a week.

320. Thompson, W.H. 1967. Transportation factors in marketing soybeans, cottonseed, and their products: 16 selected cooperatives. *USDA Farmer Cooperative Service, General Report No. 145*. 36 p. Sept. [1 ref]

• **Summary:** Note: This is the earliest document seen (Jan.

2005) by or about USDA's Farmer Cooperative Service and soybeans. Address: Washington, DC.

321. *Soybean Digest*. 1967. ADM names L.W. [Lowell] Andreas executive vice president. Dec. p. 40.

• **Summary:** Lowell Andreas lives in Mankato, Minnesota. John H. Daniels, president and chief executive officer of ADM, says the announcement is effective immediately. “With the addition of Mr. Andreas to the management staff the office of the president will be established, composed of the president and executive vice president.” The company's two operating groups, agricultural and chemical, will report to Mr. Andreas, who recently resigned as manager of the Honeymead Products division of Farmers Union Grain Terminal Association. A portrait photo shows Lowell Andreas.

322. **Product Name:** Lecithin.

**Manufacturer's Name:** M.F.A. Grain Division. Missouri Farmers Assoc., Inc.

**Manufacturer's Address:** Mexico, MO 65265.

**Date of Introduction:** 1967.

**New Product—Documentation:** *Soybean Digest Blue Book*. 1967. p. 100.

323. Tri-County Cooperative Soybean Association. 1967. Annual report: 15th anniversary 1951-1966. Makers of Dawson Soybean Meal. Dawson, Minnesota. 16 p. 22 x 28 cm.

• **Summary:** An excellent historical document, with many photos. Contents: Fifteen years of progress (year by year overview). Manager's report to the stockholders, by Joe Givens. Comparative balance sheet (31 Aug. 1966 and 1965). Comparative statement of operations. Distribution of net savings for the year ending Aug. 31. 1966 member patronage (all members are elevators; location of elevator, bushels marketed, and location on a map showing relative size and counties). Summary, by Givens. Comparative statement of operations (1966 vs. 1965): Soybeans processed, oil produced, meal produced, yields of meal and oil, average price of soybeans, meal, and oil, trucking operations—miles traveled, tons of soybeans and of meal hauled. Bar graph of bushels of soybeans processed each year from 1952 to 1966 (steady increase from about 100,000 to almost 6,000,000). Graph of net worth and fixed assets from 1952 to 1966 (rapid increase, with net worth growing from about \$250,000 to about \$1.8 million). Graph of operating costs in cents per bushel from 1952 to 1966 (steady decrease from \$0.45 to \$0.17).

Summary: “An initial investment of \$205,000 fifteen years ago has been parlayed into \$3.5 million in savings for the soybean growers in western Minnesota and eastern South Dakota. This is slightly more than 11 cents for each bushel of soybeans marketed through this soybean cooperative.

Over a million dollars in cash refunds have been made to these same growers. The farmers in the Tri-County trade area now own a business which has a net worth of over \$2.5 million.” The number of employees has grown from an original group of 11 to over 70 full time employees. The payroll last year was over \$400,000. Most of this money stayed in the community. “In addition, goods and services purchased locally have done much to keep the community healthy.”

Photos show: (1) Office. (2) Present officers seated at table. (3) First board of directors, with names. (4) Planning committee—1951: Seated together talking in a cafe booth: John Hanson, Bert Dahl, Glenn Blomquist, and Art Lee. (5) Original employees. (6) Laboratory—1952. Art Shurb, chemist. (7) Plant buildings—1953 (exterior). (8) Plant buildings—1958 (exterior). (9) Plant buildings—1960 (aerial view). (10) Plant buildings—1966 (aerial view). (11). 1964 extractor. (12) Truck fleet and office. (13) Current employees: Office, drivers, plant personnel. Address: Dawson, Minnesota.

324. *Soybean Digest*. 1968. CPA plans soybean plant in Georgia. Jan. p. 37.

• **Summary:** Cotton Producers Association (CPA) plans to construct a \$6-million soybean processing plant (1,500 tons/day capacity) and grain storage facility (4 million bushels) at Valdosta, Georgia. It will be operated as Gold Kist Soya, a division of CPA. The location will provide easy access to the export areas of Savannah, Georgia, and Jacksonville, Florida.

The soybean facility will be designed and engineered by Blaw-Knox Co. of Pittsburgh, Pennsylvania. The grain storage will be designed and constructed by Gulf States Construction Co., Atlanta, Georgia. The plant will make both 44% and 50% protein soybean meal.

Cargill also recently constructed a plant in Georgia, at Gainesville.

Note: This is the earliest document seen (March 2008) concerning Gold Kist in connection with soybeans.

325. *Mankato Free Press (Minnesota)*. 1968. Old seed is refined by firms into new oil. April 3. Business section.

• **Summary:** The old seed comes from the sunflower. It is said to be the lowest in poly-unsaturates of all oils. Lowell Rasmussen, president of Honeyamead, said the Minnesota Linseed Oil Co. of Minneapolis is now crushing sunflower seeds and extracting the oil. It is shipped to Honeyamead in Mankato, where it is refined and hydrogenated. From Honeyamead, it goes to the Nu-Maid Margarine plant in Albert Lea. Sunflower oil is brand new on the market. It will not take the place of soybean oil at Honeyamead.

326. *Mankato Free Press (Minnesota)*. 1968. Honeyamead talks scheduled [concerning strike]. July 16. Business

section.

• **Summary:** Eighty-eight employees of Honeyamead Products Co. in Mankato went out on strike July 1 to obtain wage, insurance, and fringe benefit increases. Since then, the plant at 720 Minneopa Road has been shut down and soybean processing stopped.

Another negotiation session has been scheduled for Friday at the Federal Office Building, Minneapolis, between representatives of Local 62 of the American Federation of Grain Millers, Honeyamead attorney Sheffield West, federal labor conciliator Bart Hess, and Honeyamead officials.

327. Far-Mar-Co., Inc. 1968. Soybean Meal. Degummed Soybean Oil. Barge-rail-truck (Ad). *Soybean Digest*. Sept. p. 56.

• **Summary:** This small (4.5 by 1.75 inch black-and-white) ads states that the meal is bulk or bagged. “Serving agriculture with dependability.”

Note: This is the earliest document seen (Sept. 2005) that mentions Far-Mar-Co, Inc. Note that the company has a plant, located in St. Joseph, Missouri, that crushes soybeans. Address: 5th & Sylvania, St. Joseph, Missouri 64502. Phone: 816-233-6161.

328. *Soybean Digest*. 1968. White County, Arkansas, producers organize. Sept. p. 83.

• **Summary:** “White County, Arkansas, soybean growers recently held an organizational meeting at Searcy and elected Francis Mason as county committee chairman. He is a producer and manager of the local Arkansas Grain Coop... Another Arkansas county, Phillips, had disappointing attendance due to conflicting events. However, interest of those that attended was very good.”

“In Tennessee, two counties held meetings: Carroll County and Henry County.”

329. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Arkansas Grain Corporation. Renamed Riceland Foods in 1970.

**Manufacturer’s Address:** Stuttgart, Arkansas.

**Date of Introduction:** 1968. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 9. Arkansas Grain Corporation (Stuttgart, Arkansas, 1968).

330. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Gold Kist Soya (Div. of Cotton Processors Association).

**Manufacturer's Address:** Valdosta, Georgia.

**Date of Introduction:** 1968. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *Soybean Digest*. 1968.

“CPA plans soybean plant in Georgia.” Jan. p. 37. Cotton Producers Association (CPA) plans to construct a \$6-million soybean processing plant (1,500 tons/day capacity) and grain storage facility (4 million bushels) at Valdosta, Georgia. It will be operated as Gold Kist Soya, a division of CPA.

Perdue, Elmer J.; McVey, Daniel H. 1971. “Growth of cottonseed and soybean processing cooperatives.” *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 “Cooperative soybean processing associations operating in 1970.” 13. Gold Kist, Inc. (Atlanta, Georgia, Gold Kist Soy Division) (Valdosta, Georgia). Built in 1968. Dunn, John R. 1981. “Re: History of U.S. cooperative soybean processors.”

Letter to William Shurtleff at Soyfoods Center. 3 p. Gold Kist operated a soybean crushing plant in Valdosta, Georgia, from 1968 to present.

331. *Soybean Digest*. 1968. Plan new Eagle Grove, Iowa, processing plant [Boone Valley]. Oct. p. 6.

• **Summary:** “Member cooperatives of Boone Valley Cooperative Processing Association have voted to build a new 1,500-ton-per-day soybean processing plant at Eagle Grove Iowa. The present plant has a capacity of 400 tons per day.”

“The new plant will be completed by Sept. 1, 1969. The machinery and equipment will be supplied by French Oil Mill Machinery Co., Piqua, Ohio. The plant will cost in excess of \$2 million. Both 44% and 50% protein soybean meal will be produced from the new plant. Keith M. Voigt is general manager.”

332. Eastman, Whitney H. 1968. The history of the linseed oil industry in the United States. Minneapolis, Minnesota: T.S. Dennison & Co. 277 p. Sponsored by First Interoceanic Corporation. Foreword by Thomas L. Daniels. Reviewed in *Soybean Digest*, June 1968, p. 31. [460\* ref]

• **Summary:** A good, very readable work—with a large bibliography but no documentation of individual sources. All references pertain to flax. Chapter 2, titled “Growth and decline of flaxseed production in the United States along with the rise and fall of the linseed oil processing industry” offers a chronology of early developments concerning linseed oil:

Early colonists brought flaxseed to America, primarily for the production of fiber to be spun and woven into linen cloth. As population increased, there was a growing need for linseed oil at home to use in making paints for buildings and machinery, and for linseed cake as a livestock feed.

1793—The first linseed oil was produced in the USA—the

same year the cotton gin was invented. Note: This may also have been the first vegetable oil produced in the USA. Small family-owned processing plants, usually bearing the family name, began to spring up along the Atlantic Seaboard. This new industry followed the westward movement of American civil and the flax crop.

1795—The horizontal hydraulic press is invented; efficient but expensive, it soon comes to be used for making linseed oil (in the early 1800s).

1810—There are now 283 flaxseed processing plants in the USA, with a combined annual capacity of less than 300,000 bushels. About 60% of these plants are located in Pennsylvania. Many of them used hand-turned screw presses (resembling apple cider presses), which were much less efficient than the Dutch (stamper) press or the new horizontal hydraulic press. The movement of flax westward often left East-Coast processors in short supply.

1850—The vertical hydraulic press, invented and patented by Edwin Hills, appears on the market. It is widely used in larger, modern plants until the 1930s.

1860—East Coast linseed processors now feel the competition of inland processors; 26 plants are concentrated in the Miami River Valley near Dayton, Ohio. For many years Ohio was the leading flaxseed producing area in the USA.

1870—Thirty Eastern Seaboard processing plants are still in business, many using imported flaxseed with a higher oil content. 1887—The National Linseed Oil Company is established to consolidate small processors into a so-called Trust to improve processing margins. It ends up controlling about two-thirds of processing capacity, but 21 of its plants were so old and inefficient that they soon had to be dismantled and written off. At this time 70 linseed oil plants are in operation in the USA, with 20 of them in Ohio. During the 1880s many such trusts—but smaller—were formed.

1900—Only 13 Eastern Seaboard processing plants remain in business, six each in New York State and Philadelphia, and one in New Jersey.

1909—Spencer Kellogg and Sons, Inc. builds a large, modern linseed oil processing plant on the Hudson River in Edgewater, New Jersey; it had its own deep-water pier and was equipped with hydraulic presses.

1911—Midland Linseed Products Co., a fast-growing oil processor based in Minneapolis, Minnesota, also builds a large, modern linseed oil plant on the Hudson River in Edgewater, New Jersey; it has 64 hydraulic presses and a deep-water pier.

1922—Archer-Daniels Linseed Co., based in Minneapolis, Minnesota, is the third major company to build a large, modern linseed oil processing plant on the Hudson River in Edgewater, New Jersey; it has 48 hydraulic presses.

Contains an excellent, detailed history of Spencer Kellogg and Sons, Inc. The company, which has headquarters in Buffalo, New York, dates back through 5 generations of the Kellogg family. The Kellogg name has been prominent in the



linseed oil industry longer than any other family, dating back to 1824, only 31 years after the first linseed oil was produced in America.

Spencer Kellogg was the “first linseed oil processor in America to do any serious fundamental research on linseed oil in this country. They built a modern research laboratory at Buffalo, New York, in 1909, and under the able leadership of Dr. Alex Schwarzman, carried on an aggressive program in fundamental research on linseed oil. Dr. Schwarzman received thirty-four United States and Canadian patents over a period extending from 1914 to the present time.” The company was sold in 1961 to Textron, Inc. It has since been operated as the Spencer Kellogg Div. of Textron, Inc., a publicly owned corporation.

Also contains a history of Archer-Daniels-Midland Co. (p. 40-), one of the largest linseed oil processors in the industry. Formed under that name in 1923, it has roots going back 130 years. ADM was said to be a bit slow in recognizing the value of research. As late as 1932 ADM’s entire technical staff consisted of only a few people, but when the new laboratory was completed the following year, the department was expanded. The list of new products developed through research began to grow rapidly starting in about 1940, so that an increasingly large proportion of ADM’s output of linseed oil was sold in refined or chemically processed form.

Chapter 4, titled “The Evolution of Processing Equipment” (p. 107+) gives a good history of the subject. The horizontal hydraulic press, invented in 1795, came into use in the early 1800s. The vertical hydraulic press first appeared on the market in 1850 and was widely used until the 1930s; French Oil Mill Machinery Co. of Piqua, Ohio, dominated the market. The French Oil Mill Machinery Co. made an excellent model. The Spencer Kellogg plant at Edgewater, New Jersey, built in 1909, eventually had 190 hydraulic presses—the largest in the USA. Mechanical screw presses replaced the vertical hydraulic press in the 1930s. The main manufacturer of these presses were V.D. Anderson (Expeller) and French.

“The continuous solvent extraction of oilseeds was first developed in Europe and had been used successfully there for a number of years before the process was used in the United States. The first continuous solvent extraction plant in this country was placed in operation in Chicago [Illinois] in 1934 by Archer-Daniels-Midland Company to operate on soybeans. This plant, like several others of the earlier plants in this country, was designed and built in Europe.” Early U.S. manufacturers of continuous solvent extraction equipment were Allis-Chalmers of Milwaukee (Wisconsin), V.D. Anderson of Cleveland (Ohio), French of Piqua, and Blaw-Knox of Pittsburgh (Pennsylvania). Flaxseed, which has a much higher oil content than soybeans, required prepressing by use of the mechanical screw press.

When [in 1960] Honeymead sold their Mankato soybean processing plant to Farmers Union Grain Terminal Associa-

tion (FUGTA a farmers co-op), the flaxseed prepressing unit was included. Sometime later [in 1961], First Interoceanic Corporation purchased the solvent extraction plant of the Minnesota Linseed Oil Co., and after operating it for a while, resold it to FUGTA.

A review of this book in *Soybean Digest* (June 1968, p. 31) shows a small photo of Whitney Eastman, who started in the vegetable oil processing industry in 1911, and in addition to linseed oil has been associated with the soybean crop and industry since its early beginnings in the USA. “Mr. Eastman has served as vice president of both Archer Daniels Midland and General Mills, Inc. In recent years he has been a director of First Oceanic Corp., which is the largest stockholder of ADM.”

333. Eastman, Whitney H. 1968. The Andreas brothers’ linseed oil operations (Document part). In: Whitney H. Eastman. 1968. The History of the Linseed Oil Industry in the United States. Minneapolis, Minnesota: T.S. Dennison & Co. 277 p. See p. 53-54. [460\* ref]

• **Summary:** During the 1930s in Iowa, R.P. [Reuben Peter] Andreas built several small soybean processing plants and feed plants. At an early age, the Andreas boys [his sons] began to learn the intricacies of the buying and processing of oilseeds.

Four of his sons—Albert, Dwayne, Lowell, and Glenn—devoted themselves to linseed oil processing and refining. Albert was the first of the four brothers to take an interest in this industry.

In 1937 Joseph Sinaiko established The Northwest Linseed Company. He built a linseed oil processing plant in Fridley (a north suburb of Minneapolis) and installed four French mechanical screw presses. At a later date he installed three French screw presses. Note: Ray Lindquist, Jr. (personal communication 10 July 2003) says that the Northwest Linseed Co. was in Minneapolis, not in Fridley. He does not know who founded it, but Albert Andreas later owned it. Talk with Sally Dogon, Joseph Sinaiko’s daughter. 2003. Oct. 25. Sally’s husband recalls clearly that Joe Sinaiko established The Northwest Linseed Company near Minneapolis.

In 1940 Albert Andreas purchased financial control of the company and in 1948 sold the plant to Cargill, Inc. None of the other Andreas brothers were involved in this venture with Albert. Glenn Andreas went into banking.

Meanwhile, Dwayne and Lowell Andreas had become involved with soybean processing in Iowa and Minnesota. In 1945 Dwayne became associated with Cargill, Inc. at its headquarters in Minneapolis. That same year he was elected assistant vice president, and in 1946 a vice president. He was hired by Cargill to develop its vegetable oil processing and refining division to include flaxseed processing. In 1952 he “retired” from Cargill to be able to devote more attention to Honeymead Products Company, a rapidly expanding

business owned by Dwayne and his brother, Lowell. For a while, Honeymead was operating one of the largest soybean processing plants in the USA—or the world. In 1958 Honeymead added a prepressing auxiliary unit ahead of its continuous solvent extraction unit in order to be able to process flaxseed as well as soybeans.

In 1960 the Andreas brothers sold the Honeymead plant to Farmers Union Grain Terminal Association (GTA)—a farmers' cooperative. For a while, Whitney Eastman served as a director of Honeymead along with Dwayne and Lowell.

"At the time of the sale of the Honeymead plant to GTA, the Andreas group organized Interoceanic Industries, Inc.—later changed to First Interoceanic Corporation—to act as a family investment corporation for their far-flung activities. Interoceanic then entered into a management contract with GTA to manage the operations of Honeymead. This management contract continued until 1967.

"In 1961, Interoceanic purchased Minnesota Linseed Oil Company—jointly owned by National Lead Co. and Minnesota Linseed Oil Paint Company. Interoceanic operated this large, modern, continuous solvent extraction plant and refinery located in Fridley—a suburb of Minneapolis—until 1964, when Interoceanic sold the Minnesota Linseed Oil Company to GTA. Interoceanic entered into a management contract with GTA to manage their linseed oil operations. This arrangement continued from 1964 to 1967.

"The two Andreas brothers, Dwayne and Lowell, and the author [Eastman] are still serving as directors of First Interoceanic Corporation.

"In 1966 Interoceanic purchased a large block of stock of Archer-Daniels-Midland Company, becoming the largest stockholder." That same year Dwayne was elected to the Board of Directors and the company's Executive Committee. Lowell was elected to the Board of Directors and a member of the executive and finance committees. In 1967 he was elected executive vice president. On 2 Feb. 1968 he was elected president.

334. American Soybean Association. 1969. Soybean Digest Blue Book Issue. Hudson, Iowa: American Soybean Assoc. 180 p. Index. Advertisers' index. 22 cm.

• **Summary:** The title page of this year's Blue Book has a new design; it states: "Soybean Digest Blue Book Issue. Vol. 29, No. 6. March, 1969.

"Official publication for: American Soybean Association / Soybean Council of America, Inc. / Arkansas Soybean Association. / Indiana Soybean Growers Association. / Iowa Soybean Association. / Land of Lincoln [Illinois] Soybean Association. / Minnesota Soybean Growers Association. / Mississippi Soybean Association. / Missouri Soybean Association. / Ohio Soybean Association. / South Carolina Soybean Association. / Tennessee Soybean Association. / Texas Soybean Association."

In this issue the name "Dawson Mills" (Dawson, Minne-

sota) first appears. The company had been listed in 1968 as "Tri-County Co-op Soybean Assn." Address: Hudson, Iowa.

335. Stuart, Clyde, Jr.; Morrison, W.R. 1969. Economies of size in soybean processing plants. *Arkansas Agric. Exp. Station, Bulletin* No. 743. 18 p. May.

• **Summary:** Contents: Introduction: Purpose of the study, methods and assumptions. Capital investment requirements: Soybean storage facilities, processing facilities, miscellaneous facilities and buildings. Manufacturing costs: Plant operating costs, general administrative costs, financial cost, total manufacturing costs. Acquisition costs. Total processing costs. Summary and Conclusions.

In 1950 soybean production in Arkansas was 12.5 million bushels (4% of total U.S. soybean production), increasing in 1960 to 50 million bushels (9% of total), and in 1967 to 91.7 million bushels.

"Soybean production in Arkansas is concentrated in the Delta counties of Eastern Arkansas. Approximately 95% of the 1967 production came from 25 Delta counties. Production per county ranged from a low of 813,000 bushels in Drew County to a high of 6,555,000 bushels in Mississippi County... Crittenden and Mississippi counties [both bordering the Mississippi River] had the highest production density with each producing more than 7,000 bushels per square mile.

"Soybean processing capacity in Arkansas has increased substantially since 1960, yet less than half of the 1966 production was processed within the state. Only three of the 11 oil mills crushing soybeans in 1960 were built exclusively for soybean processing. These 11 mills had a total crushing capacity in excess of 1,150 tons per day.

"In 1964, one of the largest and most modern soybean processing plants in the industry was constructed on the Mississippi River in Phillips County [at Helena, on the Mississippi River]. The plant has a rated capacity of 1,500 tons per day, which more than doubled the existing crushing capacity in the state. During 1967 a processing plant with a daily rated capacity of 750 tons was built in Mississippi County [probably at Osceola, on the Mississippi River] and an extractor with a capacity of about 800 tons per day was added to existing facilities in Arkansas County [at Stuttgart]. By the end of 1967, total soybean processing capacity in Arkansas was over 4,500 tons per day. If all the crushing plants operated at capacity—330 days per year—they could process 49 million bushels or slightly more than half of the 1967 soybean crop."

Tables: (1) Estimated capital investment per mill or per bushel of soybeans crushed, for three model solvent soybean processing plants. (2) Estimates and distribution of manufacturing costs, by size of mill, 1965-66 season (The cost per bushel for a 500-tons-day mill is \$22.875 vs. \$17.733 for an 1800-tons-day mill). (3) Average acquisition cost per bushel for various levels of density, 1966 Arkansas soybean

production (The lowest per-bushel cost is for a small mill near high-density soybean production).

A photo on the cover shows the Arkansas Grain Cooperative soybean processing facility at Helena, Arkansas, one of the nation's largest solvent plants. Address: Div. of Agriculture, Univ. of Arkansas, Fayetteville, Arkansas.

336. *Foreign Agriculture*. 1969. Four visiting teams view two different aspects of soybean use. 7(28):13. July 14.

• **Summary:** Teams from Sweden, Portugal, India, and Pakistan, sponsored by the Soybean Council of America, Inc., toured soybean production, processing, and shipping facilities in the USA during May and June. The Indian and Pakistani teams were chiefly interested in soybean oil and the different methods of processing, refining, and shipping this commodity. They arrived in the USA separately but during June combined their itineraries from Minnesota (Minneapolis, Mankato, Albert Lea), to Iowa (Mason City [The plant formerly managed by Glenn Pogeler, now of SCA]), Illinois (Peoria—USDA's Northern Utilization Research Lab.), Arkansas, and finally Louisiana (New Orleans—USDA's Southern Utilization Research Lab.). "India, for example, is the second largest market for semirefined U.S. soybean oil, and our exports to that country in 1968 were 200 million pounds. About the same amount will be shipped by the United States in 1969 to India under P.L. 480. The names of the team members from India and from Pakistan are listed.

By contrast, the Swedish and Portuguese teams were primarily interested in the processing and use of soybean meal. Portugal is working to develop a modern beef industry, whereas Sweden is developing a poultry industry. The Portuguese team (whose members names are given) began their U.S. visit on May 16 with a tour of the Chicago Board of Trade, then visited soybean storage and milling facilities, and farms in the area that produce soybeans and feed the cattle rations containing soybean meal. Then they visited sites in St. Louis, Missouri, and Dallas, Texas. The Portuguese and Swedish teams joined temporarily on May 26-27 in Kansas City, Missouri, to participate in the Third National Feed Production School, sponsored by the American Feed Manufacturers Association.

The names of the Swedish team members are given. On May 21 they visited the USDA's research facilities on the feeding of animals in Beltsville, Maryland, followed by visits to a cooperative poultry processing plant (Rockingham, Virginia), a large integrated farm cooperative (Des Moines, Iowa), and the Chicago Board of Trade.

337. *Eagle Grove Eagle (Iowa)*. 1969. Fire official suspects dust [in Boone Valley explosion]. Dec. 18. p. 2.

• **Summary:** The deputy state fire marshal said the explosion was "most likely caused by spontaneous combustion of dust. 'It's a good assumption in any kind of feed mill explosion.'"

Note: He was wrong.

338. *Eagle Grove Eagle (Iowa)*. 1969. Time clock at Boone Valley stopped at 5:08. Dec. 18. p. 2.

• **Summary:** "The Eagle Grove Volunteer Fire Department was notified of the Boone Valley plant explosion... some 5 to 10 minutes after the actual blast occurred."

339. *Eagle Grove Eagle (Iowa)*. 1969. Pre-dawn explosion shatters Boone Valley plant: 3 injured; damage is "extensive." Dec. 18. p. 1-2.

• **Summary:** The fire occurred on Wednesday morning, Dec. 17, at about 5:10 a.m. The plant extracted oil from soybeans using hexane solvent. Three men from Eagle Grove were injured: Clarence Crovisier, Reuben C. Erland (age 58), and Robert Egesdal (age 20). The first two men are listed in "fair" condition and the 3rd as "satisfactory." Two of the injured men were rushed to the Fort Dodge hospital. General manager Keith Voigt estimated the preliminary damage in 6 figures and "said he believed the explosion was spontaneous combustion of dust in the plant." Eleven men were on duty in the plant at the time of the blast. The plant's headhouse, atop six silos, each 120 feet tall, was ripped apart. The feed part of the firm may be back in business in a few days.

"Plant officials quickly discounted hexene [sic, hexane], the volatile chemical used in the soybean oil extraction process, as a cause of the explosion."

Large photos show: (1) Ruben Erland, injured, dazed and face covered with blood. (2) Freight cars on the Boone Valley siding, covered with rubble. (3) A shattered wall in the feed plant, with roof collapsed, pointed out by Bob Craven, age 24, a Boone Valley employee.

340. *Eagle Grove Eagle (Iowa)*. 1969. Feed plant could operate soon [Boone Valley]. Dec. 18. p. 2.

• **Summary:** "Boone Valley Feed Division Manager C.W. (Chuck) Bartley... said the main feed plant could be in production again in a 'few days.'" He also said the soybean oil extractor apparently came through the accident in good shape. "Two other smaller operations, a mineral plant and a molasses and feed pellet plant, are heavily damaged and may have to be replaced." The soybean preparation room, where whole soybeans are cracked and flaked prior to extraction, was also heavily damaged. Thus it will be some time before the plant can resume the oil extraction process.

"Fire doors pay off: Two \$5,000 fire doors which separate the cooperative's new 24,000 square feet bagged feed warehouse from the rest of the plant paid for themselves Wednesday morning when they closed automatically and prevented heat from triggering a sprinkler system in the new building." The bagged feed was not damaged.

341. *Eagle Grove Eagle (Iowa)*. 1969. Hexene [sic, Hexane] vapor triggered blast: Separate explosions at Boone Valley.



Dec. 25. p. 1.

• **Summary:** Officials investigating the explosion at the Boone Valley soybean processing plant last Wednesday morning now believe it was set off initially by hexene [sic, hexane] vapors. All three men injured in the accident were interviewed. General Manager Keith Voigt said that Crovisier and Erland “were both in the plant’s soybean preparation room just before the explosion and one apparently said to the other: ‘The hexene’s terrible in here, let’s get out!’ The two men were starting to leave the building when the blast went off. Voigt said it is believed the hexene vapors backed up into the prep room from the extraction area ‘as a consequence of a back draft in a meal dryer.’ Ignition of hexene vapor is believed to have knocked down a firewall separating the prep room from the feed plant, at the same time stirring up dust. The dust then ignited in other areas of the plant, causing the widespread damage.

“This version of the blast lends credence to reports at the scene by people who reported hearing several distinct explosions.

“Hexene is a petroleum derivative used in the chemical extraction of soybean oil from the flaked and cracked beans. The plant has always taken elaborate safety precautions with the chemical...”

342. *Eagle Grove Eagle (Iowa)*. 1969. Explosion claims one life [at Boone Valley]. Dec. 25. p. 1.

• **Summary:** Clarence L. Crovisier, age 57, died on Dec. 19, Friday, at Bethesda General Hospital in Fort Dodge, Iowa. He lapsed into a coma at about 6 p.m. and died three hours later. Funeral services were held last Monday morning at Sacred Heart Catholic Church in Eagle Grove. He started working for the cooperative on March 5, 1949, company records show. He was about to receive his 20-year service pin.

343. *Eagle Grove Eagle (Iowa)*. 1969. Feed plant could run this week [at Boone Valley]. Dec. 25. p. 1.

• **Summary:** A portion of the Boone Valley feed manufacturing plant could be in production this week, possibly on Wednesday (Dec. 24) according to general manager Keith Voigt.

344. Boone Valley Cooperative Processing Association. 1969. Fire or explosion in solvent extraction plant. Eagle Grove, Iowa. Dec. 17.

• **Summary:** *Eagle Grove Eagle (Iowa)*. 1969. “Pre-dawn explosion shatters Boone Valley plant: 3 injured; damage is ‘extensive.’” Dec. 18. p. 1-2. The fire occurred on Wednesday morning, Dec. 17, at about 5:10 a.m. The plant extracted oil from soybeans using hexane solvent. Three men were injured.

*Eagle Grove Eagle (Iowa)*. 1969. “Hexene [sic, Hexane] vapor triggered blast: Separate explosions at Boone Valley.”

Dec. 25. p. 1.

Crabbe, Carolyn; McCutcheon, Connie. eds. 1981. *Eagle Grove, Iowa 1881-1981 centennial*. Eagle Grove, Iowa: Eagle Grove Centennial Committee. vi + 218 p. See p. 21. “1969 Dec. 17—Explosion in soy and feed plants.”

Kingsbaker, C. Louis. 2005. “List of fires and explosions in extraction plants.” Atlanta, Georgia. 3 p. Aug. 4. Unpublished manuscript.

Letter (e-mail) from Joe Givens with more basic information about explosion or fire. 2005. Aug. 8. Magnitude: 6 (where 10 is the most severe). Address: Eagle Grove, Iowa.

345. National Soybean Processors Assoc. 1969. Year book & trading rules—1968-1969. Washington, DC: National Soybean Processors Association. 23 cm. Spiral bound. \* Address: 1800 M. St., N.W., Washington, DC 20036. Phone: 202/452-8040.

346. Knapp, Joseph G. 1969. The rise of American cooperative enterprise, 1620-1920. Danville, Illinois: Interstate Printers and Publishers, Inc. [xviii] + 532 p. Index. 24 cm. [1952 ref]

• **Summary:** This is widely viewed as the best history of the early U.S. cooperative movement. It may be considered the first of a two-volume set. Its successor is *The Advance of American Cooperative Enterprise*, which examines the great expansion of cooperative development from 1920-1970.

Contents: Part I: Probings [1620-1896]. 1. Early exploration. 2. Urban experimentation. 3. The agrarian groundswell. 4. Growth of the independent agricultural cooperatives. Part II: Formative forces [1897-1920]. Part III. Cooperative marketing progress [1920+]. Focuses on California, especially the Southern California Fruit Exchange (formed in 1893, incorporated Oct. 1895), which became the California Fruit Growers Exchange (in 1905 when it had 5,000 members; adopted the brand name “Sunkist” in 1908 for its highest quality oranges, and so was the first to brand fruit), which became Sunkist Growers, Inc. Part IV: The development of cooperative purchasing [1920+]. Part V: The expanding cooperative universe [1920+].

Joseph Knapp is considered America’s foremost authority on farmer cooperatives. Gives a very good background of how and why cooperative associations were established, particularly in the post Civil War period, as the economic response by such farm groups as the Grange, Alliance, and Farmers Union, to what they viewed as an inadequate, even exploitive service provided by private companies at the time. The book is dedicated to Edwin G. Nourse, Dean of Scholars in American Cooperative Enterprise, and Knapp’s mentor.

The foreword is a brief biography of Knapp from 1920 to the present and some cooperative milestones of the period. In the mid-1920s, agricultural cooperation was in the national spotlight; it was the beginning of what was later called “The Golden Age of Cooperation in America,” by

Charles W. Holman. In 1925 the American Institute of Cooperation was founded, as a national forum for cooperative discussion and planning under the intellectual leadership of Dr. Edwin Nourse, chair of its program committee. In 1926, the Division of Cooperative Marketing was established by the Cooperative Marketing Act of 1926. Its gifted chief was Chris L. Christensen, who knew well the long history of Danish cooperation. In 1929 the National Marketing Act of 1929 was passed; it led to a all-out effort to fashion strong national marketing cooperatives with the support of the Federal Farm Board.

The Great Depression of the 1930s gave further momentum to the cooperative movement in America; cooperatives were seen as the solution to many economic problems of the era.

From 1953-1966 Knapp was administrator of USDA's Farmer Cooperative Service. A portrait photo of Knapp, holding a pipe (for smoking) appears on the rear dust jacket. His brief biography appears on the inside rear dust jacket.

In 1620 the Pilgrims were a cooperative organization, joined by the Mayflower Compact. Cooperation as a form of business enterprise first arose in the field of fire insurance. In 1736 Benjamin Franklin and others "founded the pioneer Union Fire Company as an association for mutual assistance in fighting fires. In Feb. 1750 it expanded into America's first mutual fire insurance company. In March 1752, based on an idea proposed by Franklin, the Philadelphia Contributorship for the Insurance of Houses from Loss by Fire was established. The basic organization of the Contributorship was patterned on "The Amicable Contributorship, and Hand-in-Hand Fire Office," which were established in London in 1696. In 1806 the first experiment in industrial cooperation began when the Journeyman Cordwainers of Philadelphia [shoemakers] "became their own employers by opening a warehouse to market at wholesale and retail the boots and shoes manufactured by the organization's members."

In 1785 the first agricultural society was founded, again in Philadelphia by Franklin—the Philadelphia Society for promoting Agriculture. Soon many such societies, dominated by "gentleman farmers, were formed mainly to improve agricultural techniques through agricultural education.

On page 193 is a half-page history of the Missouri Farmers Association (MFA), which was founded in 1917 by William Hirth.

Pages 216-17 describe the rise of cooperative creameries and dairies and the movement "toward the formation of a state-wide federation of cooperative creameries,..." In "1921 the Minnesota Cooperative Creamery Association—later to be known by its Land O'Lakes brand—was formed with over one-half of the 645 cooperative creameries in the state enrolled as stockholder members." Address: [USDA].

347. *Soybean Digest*. 1970. Missouri plans checkoff referen-

dum. March. p. 38.

• **Summary:** In February, Missouri soybean farmers were signing petitions for a voluntary legislated ½ cent per bushel soybean checkoff program in the state. Leaders of the Missouri Soybean Association, which is circulating the petitions, expect that the necessary 2,500 signatures would be obtained before March 1.

Tentative plans call for 7 hearings in seven Missouri districts in early March. To pass, the referendum must receive a "yes" vote representing 51% of Missouri soybean growers and 51% of the acreage of those registered. Only registered farmers can vote.

"The Missouri Soybean Assn. is receiving a great deal of help from the State Extension Service, the Missouri Farmers Assn., the Missouri Farm Bureau Federation, the county ASCS [Agricultural Stabilization and Conservation Service, USDA] offices, and vo-ag teachers in telling the story of the referendum and handling the work involved. Chances for success appear good." The referendum will probably be held in the spring.

A photo shows Don Pemberton, American Soybean Assoc. director from Cape Girardeau, Missouri, standing at a podium as he presides over the meeting where referendum plans were made.

348. Dawson Mills. 1970. Quality Soybean Products (Ad). *Soybean Digest Blue Book*. p. 6.

• **Summary:** No product names or types are given in this very simple, small (4½ by 1½ inch) ad. Note: In 1979, the company made soybean meal and crude soybean oil. Address: Dawson, Minnesota 56232. Phone: (612) 769-4386.

349. Far-Mar-Co, Inc. 1970. 44% & 48.5% Soybean Meal. Degummed Soybean Oil (Ad). *Soybean Digest Blue Book*. p. 7. March.

• **Summary:** A ¼-page ad. The meal is bulk or bagged, shipped by rail, barge, or truck. Address: St. Joseph, Missouri 64502.

350. *Eagle Grove Eagle (Iowa)*. 1970. Big day at Boone Valley (Photo caption). June 25. p. 1.

• **Summary:** This photo shows many men, wearing hard hats, lined up along both sides of railroad tracks, each man with one foot on the track. In the background is the new, tall soybean solvent extraction plant.

"Monday [June 22] was a big day at Boone Valley, marking the end of more than 6 months of rebuilding from the Dec. 19 [1969] explosion, which knocked much of the plant out of production. On hand to switch on the soybean oil extraction operation" were members of Boone Valley management and the board of directors. "At left are Keith Voigt, general manager, and Charles Loux, plant superintendent." At right are Ralph A. Olson of Ellsworth and members

of the board, whose names are given. French Oil Mill and Machinery installed the solvent extraction equipment.

351. *Eagle Grove Eagle (Iowa)*. 1970. Boone Valley soy plant running again. June 25. p. 1.

• **Summary:** Six months and one week after the explosion on Dec. 19 destroyed its plant, Boone Valley is almost back to full production capacity. "The soybean oil extraction plant was switched on Monday morning and is now producing soybean meal and oil from about 25,000 bushels (750 tons) of beans per day.

General manager Keith Voigt said it will probably take 3 or 4 weeks, maybe longer, to reach the full processing capacity of 1,500 tons a day. Officials of the Iowa Bureau of Labor were on hand for the start-up and "will be observing the operation all this week with an eye to safety procedures."

Making soybean oil and meal is one half the Boone Valley operation. "The other half, the manufacture of livestock feeds, was interrupted only a few weeks by the Dec. 19 explosion.

"Voigt said Boone Valley has been manufacturing 1,400 to 1,500 tons of mixed feed per week since Jan. 1, but has been buying all of the soybean meal, a principal ingredient, from other processors."

352. Far-Mar-Co. 1970. Silent partners (for profits): Ultra-Soy may prove to be a refreshing and profitable new partner for you (Ad). *Food Processing (Chicago)*. July. p. 38.

• **Summary:** A photo shows three Ultra-Soy textured soy protein products, each on a Liberty silver dollar: Chunks #1, Chunks 10-D, and Chiplets. Note: These are textured soy flours. Address: Foods Div., 960 North Halstead, Hutchinson, Kansas 67501. Phone: (316) 663-1571.

353. *Food Processing (Chicago)*. 1970. Plants, laboratories [Far-Mar-Co., Inc.]. July.

• **Summary:** Far-Mar-Co., Inc. (Hutchinson, Kansas) announced the creation of a new foods division, which will make specialized ingredient from soybeans and grains.

354. Witham, W.C. 1970. Re: Memorandum—Three items of information regarding soybean operations. Letter to F.R. Senti, Deputy Administrator, USDA, ARS, NCIUR [Nutrition, Consumer, and Industrial Use Research], Washington, DC, Aug. 27. 1 p. Typed, without signature (carbon copy).

• **Summary:** While at the annual meeting of the American Soybean Association, Dr. Cowan was given the following information. (1) Cargill is constructing a plant to manufacture textured soy proteins from soy flour at their facility in Cedar Rapids, Iowa. These products will be similar to those produced by Swift and ADM. Staley also announced its intention to make such products, but may be delayed because of a strike that is now 4 weeks old.

(2) Land O'Lakes has purchased the Felco operations, a

cooperative in Iowa with one division operating a 700- to 1000-ton a day soybean processing plant. Note: This is the earliest document seen (March 2008) that mentions "Land O'Lakes" in connection with soybeans, or that mentions Felco (in any connection).

(3) "The General Mills' plant at Cedar Rapids has gone on-stream for the manufacture of Bac\*Os. They expect to be making a complete line of Bontrae products shortly before or just after Labor Day [the first Monday in September]. The latter will be sold to institutions, restaurants, etc. initially." Address: Acting Director of Div., NRRL, Peoria, Illinois.

355. *Soybean Digest*. 1970. ASA directors of 50 years. Aug. p. 39.

• **Summary:** These directors of the American Soybean Assoc. are listed alphabetically by last name: O.H. Acom, Wardell, Missouri 1948-64; Howard Adler, Sharpsville, Indiana 1969-70; W.E. Ayres, Stoneville, Mississippi 1925-29, 1932-33.

Hubert Baker, Dalton, Illinois 1959-61; G.H. Banks, Osceola, Arkansas 1937-38; K.E. Beeson, West Lafayette, Indiana 1934-38; Harris Barnes, Clarksdale, Mississippi 1961-69; Chester B. Biddle, Remington, Indiana 1949-1969; C.E. Bowen, Champaign, Illinois 1964-67; G.M. Briggs, Madison, Wisconsin 1922-23, 1937-38; J.B. Buchanan, Guelph, Ontario, Canada 1928-30; W.L. Burlison, Urbana, Illinois 1929-31; John Butterfield, Pana, Illinois 1956-62; Frank Byron, Waseca, Minnesota 1969-70.

C.E. Carter, Columbia, Missouri 1921-22; Roy Chasteen, Crothersville, Indiana 1929-30; G.I. Christie, Guelph, Ontario, Canada 1928-29; Harvey S. Clapp, Accotink, Virginia 1928-29; H.I. Cohn Sr., St. Louis, Missouri 1949-52; Joe Coleman, Clare, Iowa 1967-70; J.S. Cutler, Columbus, Ohio 1925-28.

E.J. Delwiche, Madison, Wisconsin 1925-28; Gilles DePutter, Appin, Ontario, Canada 1953-56; Albert Dimond, Lovington, Illinois 1951-59; W.R. Dodson, [Louisiana] 1932-33; John Dries, Saukville, Wisconsin 1940-51; E.S. Dyas, Ames, Iowa 1934-36.

J.B. Edmondson, Clayton, Indiana 1928-29, 1935-49; W.C. Ethridge, Columbia, Missouri 1929-31; John Evans, Montevideo, Minnesota 1949-69.

Milton Farough, Maidstone, Ontario, Canada 1968-70; Robert Ford, Merlin, Ontario, Canada 1966-68; Taylor Fouts, Camden, Indiana 1926-28; Eugene Funk, Bloomington, Illinois 1935-37.

Frank Garwood, Stonington, Illinois 1946-49; Harry Gatton Jr., Rumsey, Kentucky 1959-66; Ben Gildersleeve, Hudson, Illinois 1961-67; Thomas Gilmore, Sandersville, Georgia. 1935-37; Walter Godchaux, New Orleans, Louisiana. 1926-28, 1932-33; John P. Gray, Baton Rouge, Louisiana. 1932-35, 1938-40.

J.C. Hackleman, Urbana, Illinois 1935-37; Joe Hammer, Des Moines, Iowa 1960-62; Jacob W. Hartz Sr., Stuttgart,



Arkansas 1938-49; Jake Hartz Jr., Stuttgart, Arkansas, 1949-69; Calvin Heilman, Kenton, Ohio 1949-52; E.A. Hollowell, Washington, DC. 1930-31; Frank Hoxie, Shenandoah, Iowa 1967-70; H.H. Huddleston, Lamont, Mississippi 1950-57; H.C. Hughes, Ames, Iowa 1931-32; Frank W. Hyatt, Wheatley, Ontario, Canada 1962-64.

E.C. Johnson, Stryker, Ohio 1923-25; Joe Johnson, Champaign, Illinois 1941-44; A.E. Jolly, Chatham, Ontario, Canada 1956-59.

Harold Keller, Dyersburg, Tennessee 1966-70; Roger Killingsworth, Jonesville, Louisiana. 1967-70; Harold Kuehn, Du Quoin, Illinois 1967-70.

F.P. Latham, Belhaven, North Carolina 1925-27; F.C. Laughinghouse, Pantego, North Carolina 1967-70; Frank W. Lewis, Ursa, Illinois 1962-64; Seeley Lodwick, Wever, Iowa 1964-69; Lester Longhurst, St. Thomas, Ontario, Canada 1964-66; J.G. Loo Jr., Baton Rouge, Louisiana. 1932-33; Harold Lumsden, Essex, Missouri 1954-57.

Martin Manning, Ladd, Illinois 1966-70; C.K. McClelland, Fayetteville, Arkansas 1928-29, 1932-35; G.G. McLlroy, Irwin, Ohio 1938-50; Walter McLaughlin, Decatur, Illinois 1943-47; L.C. Meade, West Lafayette, Indiana 1962-70; C.L. Meharry, Attica, Indiana 1923-26, 1930-35; Wm. Merschman, West Point, Iowa, 1969-70; Gerald Michaelson, Dawson, Minnesota 1969-70; Roy H. Monier, Carrollton, Missouri 1943-44; W.J. Morse, Washington DC. 1923-25, 1931-32; Glen Myers, Memphis, Missouri 1959-68.

Stuart D. Ormsby, Belleville, New York 1941-43; W.A. Ostrander, Lafayette, Indiana 1920-23.

J.B. Park, Columbus, Ohio 1930-32, 1936-38; R.H. Peck, River Canard, Ontario, Canada 1947-53; Don Pemberton, Cape Girardeau, Missouri 1969-70; Joe Pepper, Weston, Missouri 1968-70; W.R. Perkins, State College, Mississippi 1934-35; LeRoy Pike, Pontiac, Illinois 1948-56; Harry A. Plattner, Malta Bend, Missouri 1944-48; Wm. Prichard, Louisville, Georgia. 1969-70.

Howard Roach, Plainfield, Iowa 1941-67; J.L. Robinson, Ames, Iowa 1923-25; Everett Royer, Irwin, Ohio, 1968-70.

John Sand, Marcus, Iowa 1943-46; John Sawyer, London, Ohio 1952-69; Walter M. Scott Jr., Tallulah, Louisiana 1957-61; Richard Simcoke, Kennett, Missouri 1964-69; C.G. Simcox, Assumption, Illinois 1949-61; Chas. Simpson, Waterville, Minnesota 1957-69; Gilbert Smith, Taylorville, Illinois 1944-46; J.T. Smith, Tolono, Illinois 1925-26; Richard Smith, Tilbury, Ontario, Canada 1960-62; Robert Smith, Walnut Ridge, Arkansas 1969-70; L.F. Stoner, Holly Bluff, Mississippi 1946-48; Bert S. Strayer, Hudson, Iowa 1930-31; George Strayer, Hudson, Iowa 1937-67; Jeanne Strayer, Hudson, Iowa 1944-46; Hays Sullivan, Burdette, Arkansas 1960-70.

C.W. Tabaka, Ivesdale, Illinois 1926-28; Edward Tillman, Caruthersville, Missouri 1952-54; Leslie Tindal, Pinewood, South Carolina 1967-70; W.B. Tilson, Plainview, Texas 1967-70; Lyle Trisler, Fairmont, Illinois 1961-66.

W.W. Wallace, Woodslee, Ontario, Canada 1959-60; Ersel Walley, Fort Wayne, Indiana 1941-62; P.A. Webber, Madison, Tennessee 1933-35; W.G. Weigle, Van Wert, Ohio 1946-49; R.G. Wiggins, Ithaca, New York 1937-38; F.S. Wilkins, Ames, Iowa 1925-26, 1929-30; Harry D. Wilson, [Baton Rouge, Louisiana] 1932-33; David G. Wing, Mechanicsburg, Ohio 1940-68; John Wing, Mechanicsburg, Ohio 1969-70; LaVerne Workman, Chatham, Illinois 1967-70.

Note: These directors come from only 16 U.S. states plus Ontario, Canada. Illinois has the most directors with 21, followed by Iowa with 14 and Indiana with 10.

356. Boone Valley Cooperative Processing Association. 1970. New and expanded facilities (Ad). *Soybean Digest*. Sept. p. 33.

• **Summary:** “Now ready to serve feed manufacturers, local cooperatives, and farmers with our new 1500 ton per day soybean processing plant. Co-op 44% Protein Soybean Meal. Co-op High-Protein Soybean Meal. Co-op mixed feeds and ingredients.

“Owned by 120 local cooperatives in Iowa.” Keith M. Voigt is general manager. Address: Eagle Grove, Iowa. Phone: 515-448-4711.

357. Riceland Foods. 1970. A new name—and new horizons of opportunity (Ad). *Soybean Digest*. Sept. p. 9.

• **Summary:** Arkansas Grain Corporation is now named Riceland Foods. Note: This is the earliest document seen (March 2008) that mentions “Riceland Foods.” Address: Riceland Foods, P.O. Box 926, Stuttgart, Arkansas.

358. *Soybean Digest*. 1970. Formulation for vegetable proteins. Dec. p. 24.

• **Summary:** Formulations are now available from Far-Mar-Co. Inc. (Hutchinson, Kansas) for the use of Ultra-Soy textured vegetable protein products in a wide variety of commercial meat products.

359. *Mankato Free Press (Minnesota)*. 1970. Honeymead fire (Photo caption). Dec. 5.

• **Summary:** This large photo shows several tall storage tanks where Mankato firefighters battled a blaze on Friday for more than 2 hours, starting at 7 p.m., at the Honeymead Products Co., 814 Minneopa Road. The fire, which involved 3 tanks, is thought to have started when heat from steam pipes ignited oil-soaked insulation surrounding the pipes.

360. **Product Name:** Ultra-Soy (Textured Vegetable Protein: Extruded Textured Defatted Soy Flour).

**Manufacturer's Name:** Far-Mar-Co, Inc.

**Manufacturer's Address:** St. Joseph, MO 64502.

**Date of Introduction:** 1970. December.

**New Product—Documentation:** *Soybean Digest*. 1970. Dec. p. 24. “Formulation for vegetable proteins.” Horan et

al. 1971. PAG Bulletin No. 13. p. 26. "The Farmarco Co. (Kansas, USA). "This company manufactures texturized soy food products for food processors and institutional use; process used is thermoplastic extrusion."

Soybean Digest Blue Book. 1973. p. 110. Extruded textured vegetable proteins. Address is now 960 N. Halstead, Hutchinson, Kansas 67501. Wolf and Cowan. 1971. Soybeans as a food source. p. 69. Ultra-Soy is textured vegetable protein simulated meats, made from defatted soy flour.

Horan. 1974. Meat analogs. p. 380. Calls its Ultrasoy.

Duda. 1974. Vegetable protein meat extenders and analogues. p. 81. Far-Mar-Co, Inc. (960 North Halstead, Hutchinson, Kansas) now makes Ultra Soy, a textured soy protein product.

Soya Bluebook. 1981. p. 57. "Ultra-Soy textured soy protein." The company is now Farmland Agriservices, Inc. Hutchinson, Kansas.

361. Missouri Farmers Association. 1970. Fire or explosion in solvent extraction plant. Mexico, Missouri.

• **Summary:** Kingsbaker, C. Louis. 2005. "List of fires and explosions in extraction plants." Atlanta, Georgia. 3 p. Aug. 4. Unpublished manuscript.

Letter (e-mail) from Joe Givens with more basic information about explosion or fire. 2005. Aug. 8. Magnitude: 8 (where 10 is the most severe). Address: Mexico, Missouri.

362. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Land O' Lakes.

**Manufacturer's Address:** Sheldon, Iowa.

**Date of Introduction:** 1970.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Perdue, Elmer J.; McVey, Daniel H. 1971. "Growth of cottonseed and soybean processing cooperatives." *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. See p. 9. Table 4 lists 13 "Cooperative soybean processing associations operating in 1970." 3. Farmers Regional Cooperative (Fort Dodge, Iowa, Big 4 Division). (Sheldon, Iowa, 1943). Footnote: Big 4 Cooperative Processing merged with Farmers Regional in 1967. In 1970 Farmers Regional merged with Land O'Lakes.

363. VioBin. 1970. Fire or explosion in solvent extraction plant. Monticello, Illinois.

• **Summary:** Kingsbaker, C. Louis. 2005. "List of fires and explosions in extraction plants." Atlanta, Georgia. 3 p. Aug. 4. Unpublished manuscript. VioBin was processing fish meal, not soybeans or wheat germ. Address: Monticello, Illinois.

364. Horan, F.E.; Odell, A.D.; Forman, M.J. 1971. Textured vegetable proteins. *PAG Bulletin* 2(1):22-26. Winter. No. 13.

• **Summary:** This paper was compiled from background documents presented by the authors at the 18th PAG [Protein Advisory Group] meeting held on 9-12 Feb. 1971 at Rome, Italy. Contents: Introduction. Spun monofilament products. Extrusion-expansion products (currently marketed at about \$0.45/lb). General considerations. Case studies: Thailand (ADM's TVP), Brazil (Swift & Co.'s textured meat analogs), India (Swift & Co., ditto). Textured vegetable protein products: Fibroprotein–Spun Protein Fibers (Worthington Foods Div., Ohio), Textured Edi-Pro (Ralston Purina Co., Missouri), Texgran (Swift & Co., Illinois), Bontrae (General Mills, Minnesota; spun vegetable protein products), Carne Vegetal (Industria e Comercio de Productos Alimenticios Vegetal Ltd., Brazil). LiveLong–VP (Nisshin Flour Milling Co. Ltd., Japan; a wheat gluten extract in the form of a dried or frozen mincemeat-like product. "It seems to be made by a filament extrusion process using isolated wheat gluten protein"). The Farmarco Co. (Far-Mar Co., Kansas), The Fuji Oil Co. (Japan; thermoplastic extrusion), and Shefa Protein Foods Ltd. (Israel) each manufactures texturized soy food products by thermoplastic extrusion.

Introduction: "The chief virtue of the individual members of this new class of foods rests in their ability to supply precisely reproducible balanced dietary inputs of essential amino acids with greatly enhanced agronomic efficiency and with high consumer acceptance... At the moment two broad classes of meat analogues are apparent. The extrusion–expansion products sell for US 10-15¢ per pound; the spun monofilament products sell at present in the USA for 20-25% less than meats, but are still too expensive to be of interest for developing countries."

"General considerations: Meat analogs do not appear to have a negative connotation to vegetarians; there are many examples of eager acceptance of meat analogs by such groups. The textured protein approach is also a stride forward in food efficiency, since conversion of soy to animal protein averages about 7% efficiency."

"Over the past few years US/AID has entered into contracts with twelve different U.S. commercial companies to investigate and evaluate low-cost proprietary protein products in some ten developing countries."

Note 1. This is the earliest document seen (June 2001) concerning the work of Fuji Oil Co. (Osaka, Japan) with soy.

Note 2. This is the earliest English-language document seen (Dec. 2004) that uses the word "Fibroprotein" to refer to edible spun soy protein fiber. Address: 1. ADM, Decatur, Illinois; 2. General Mills, Minneapolis, Minnesota.

365. Wolf, Walter J. 1971. Re: Soy protein concentrate plant. Letter to Wayne Henry, Far-Mar-Co, Inc., 960 North Halstead, Hutchinson, Kansas 67501, July 6. 1 p. Typed, without signature (carbon copy).

• **Summary:** Dr. Wolf encloses two reprints dealing with the composition of whey solids, as requested. He adds a hand-

written note at the bottom: "Henry said that EMI is setting up a plant for them for preparation of soy protein concentrates by alcohol extraction."

Note: On Aug. 31, Dr. Henry called A.C. Eldridge at Peoria and enquired about patents on the use of alcohol for producing protein concentrates. "Apparently Far-Mar-Co is building a three million dollar concentrate plant and planning to use isopropyl alcohol." Address: Head, Meal Products Investigations, Oilseed Crops Lab. [NRRL, Peoria, Illinois].

366. Perdue, Elmer J.; McVey, Daniel H. 1971. Growth of cottonseed and soybean processing cooperatives. *USDA Farmer Cooperative Service, FCS Information No. 75*. 82 p. July. [9 ref]

• **Summary:** Soybean cooperatives' percentage of the total U.S. soybean crush rose from 3.8% in 1949 to 15.2% in 1968. In 1968-69 roughly 15% of the soybeans grown in America were marketed through cooperative oil mills. Returns to patrons [farmers] of cooperative soybean mills during these 21 crushing seasons amounted to \$51 million, or 7.5 cents per bushel.

"Cooperative soybean and cottonseed mills have held joint annual conferences since 1955. An outstanding accomplishment of these conferences was the organization in 1962 of Soy-Cot Sales, Inc., Des Plaines, Illinois. This coordinated joint sales agency markets products manufactured by 22 member mills." Cooperative mills are expected to move toward production of soybean flour and cottonseed flour for use in human food.

Cooperative activity with soybeans began when soybean producers (farmers) in western Kentucky and eastern Indiana formed the Ohio Valley Soybean Cooperative and built the first cooperative soybean plant at Henderson, Kentucky, in 1940-41. "This was an effort to increase bean prices, to encourage production by offering another market, and to have a source of high protein feed for livestock. During and immediately following World War II, it became almost impossible for soybean producers to obtain soybean meal either as meal or in the form of mixed feeds. To alleviate this situation, they built cooperative mills..."

"Between 1940 and 1949, soybean producers constructed 21 soybean mills—19 of them from 1940 to 1945. These plants were in Pennsylvania, Ohio, Indiana, Illinois, Iowa, Wisconsin, Kansas, and Missouri. During the period 1950 to 1970, eight cooperatives constructed or acquired 10 mills. These were in Minnesota, Missouri, Arkansas, and Georgia in areas where bean production has been increasing rapidly.

"Thus between 1940 and 1970, 29 cooperatives built or acquired 31 processing plants. In 1970, 13 of these cooperatives were still in operation with 15 crushing plants... All the early plants were small and were built for the primary purpose of serving as a source of high protein feed. Most of them had a capacity of only 10 to 50 tons a day.

"By the early 1950's, larger plants had been constructed and protein was more readily available through commercial channels. As the situation became more competitive, the small plants (many of them poorly located) found they could not produce and sell meal at competitive prices without operating at a loss. By the mid-1950's many of them had closed and by 1960 most had ceased operation.

"Only three screw press plants were operating in 1970; each one processing only 40 to 50 tons a day. The other 12 plants were large solvent plants ranging in capacity from 250 to 1,700 tons a day. Most of the recently constructed plants have a daily capacity of about 1,500 tons" (p. 8-10).

Table 4 (p. 9) lists 13 "Cooperative soybean processing associations operating in 1970," together with the plant location and the year the "plant was built or acquired." The headquarters is listed if it is different from the plant location. The earliest is the Farmers Grain Dealers Assoc. (FGDA), Des Moines, Iowa, Soybean Division; plant at Mason City, Iowa, built in 1943. It was originally located at Manly, Iowa (1943-51), moved to Mason City in 1951, and merged with FGDA in 1967. Note 1. The original name was North Iowa Cooperative Processing Association, and the manager was Glenn Pogeler from 1943 to 1964.

The associations (companies) are: 1. FGDA, started 1943. 2. Boone Valley Cooperative Processing Assoc. (Eagle Grove, Iowa, started 1943). 3. Farmers Regional Cooperative, Fort Dodge, Iowa, Big 4 Division (Sheldon, Iowa, 1943; Big 4 Cooperative Processing Assoc. merged with Farmers Regional in 1967. In 1970, Farmers Regional merged with Land O'Lakes). Note: We can say that on 1 April 1970, Land O'Lakes began operating the soybean processing plant at Sheldon, Iowa.

4. West Bend Elevator Co. (West Bend, Iowa, 1943). 5. Farmers Cooperative Assoc. (Ralston, Iowa, 1944). 6. Missouri Farmers Assoc., Columbia, Missouri, Soybean Div. (Mexico, Missouri, 1946). 7. Producers Cooperative Assoc. (Girard, Kansas, 1948). 8. Dawson Mills (Dawson, Minnesota, 1951). 9. Arkansas Grain Corp. (Stuttgart, Arkansas, 1958). 10. Farmland Industries, Kansas City, Missouri, Soybean Processing Div. (Van Buren, Arkansas, 1960; Farmland Industries acquired Co-op Processing Assoc. in 1968). 11. Farmers Union Grain Terminal Association, St. Paul, Minnesota, Honeymead Products Div. (Mankato, Minnesota, 1960). 12. Far-Mar-Co, Hutchinson, Kansas (St. Joseph, Missouri, 1963). 13. Gold Kist, Inc., Atlanta, Georgia, Gold Kist Soy Div. (Valdosta, Georgia, 1968).

Table 5 (p. 10) lists 13 "Cooperative soybean processing plants that had ceased operations as of 1970." "1. Ohio Valley Soybean Cooperative (Henderson, Kentucky, 1940). 2. Coshocton Farmers Exchange (Coshocton, Ohio, 1943). 3. Ohio Farm Bureau Cooperative Assoc., Columbus, Ohio (Springfield, Ohio 1943). 4. Farmers Cooperative Elevator (Martelle, Iowa, 1943). 5. Farmers Cooperative Company (Dike, Ohio [sic, Iowa], 1943). 6. Indiana Farm Bureau



Cooperative Assn., Indianapolis, Indiana (Danville, Indiana, 1943; Wabash, Indiana, 1944; Vincennes, Indiana, 1944; Rushville, Indiana, 1945). 7. Alhambra Grain and Feed Company (Alhambra, Illinois, 1944). 8. Consumers Cooperative Association, Kansas City, Missouri (Coffeyville, Kansas, 1945). 9. Jersey Shore Cooperative Soybean Association (Jersey Shore, Pennsylvania, 1945). 10. Northwest Co-op Mills, St. Paul, Minnesota (Menomonie, Wisconsin, 1945). 11. Farmers Cooperative Elevator (Hubbard, Iowa, 1945). 12. Farmers Cooperative Elevator Association (Blooming Prairie, Minnesota, 1950). 13. Halstad Elevator Company (Halstad, Minnesota, 1956)."

Table 6 (p. 11) shows: "Soybeans crushed and percent of U.S. total crushed by cooperative mills, selected years 1949-68." The number of U.S. cooperatives crushing soybeans decreased from 19 in 1949 to only 13 in 1968. But the amount of soybeans crushed by these cooperatives increased from 7.37 million bu in 1949 (3.8% of total soybeans crushed) to 92.13 million in 1968 (15.2% of total crushed).

Photos show: (1) Soybean processing plant of Gold Kist Inc. (formerly Cotton Producers Assoc.) at Valdosta, Georgia (p. 12). (2) "Loading dock area of modern warehouse at Boone Valley Cooperative Processing Assoc., Eagle Grove, Iowa. This association operates a truck fleet for receiving soybeans from local elevators and shipping meal" (p. 55).

Note 2. This is the earliest document seen (June 2005) that mentions Gold Kist in connection with soybeans. Address: USDA Farmer Cooperative Service.

367. Laine, Iris Coyn. 1971. Soy goes to school. *School Lunch Journal* 35(7):41-43. July/Aug.

• **Summary:** "On February 22, 1971, USDA authorized the use of textured vegetable protein, fortified with vitamins and minerals, to meet part of the minimum requirement of two ounces of cooked meat for the Type A school lunch." Discusses: What this means: Main dishes, sandwiches. What are textured vegetable proteins? Look and taste. Nutritional content. What products are available? Want more information? Contact the Food Protein Council. The nine regular members of the Council are listed: ADM, Cargill, Central Soya Co, Far-Mar-Co, Griffith Laboratories, Miles Laboratories, Ralston Purina Co., A.E. Staley Manufacturing Co., and Swift Chemical Co.

"For schools that prepare their own foods, there are several recipes in USDA's 'Quantity Recipes for Type A School Lunches', that are ideal for including textured vegetable protein products." The names of ten main dishes (with the USDA Card No. for each) and 2 sandwiches are given. A photo shows three school lunch dishes which include textured vegetable proteins: Hamburger, sloppy joe, and spaghetti sauce. Address: Foodservice Relations Director, Food Protein Council.

368. Witham, W.C. 1971. New soy protein concentrate plant

licenses NMN patent. *Notes from the Director of the Northern Division (Peoria, Illinois)* No. 1045. p. 2. Sept. 17.

• **Summary:** "Far-Mar-Co officials visited OC [Oilseed Crops] and ED [Engineering and Development Laboratory] on September 9 to discuss alcohol extraction and flash desolventizing of defatted soybean meal. Far-Mar-Co. (organized from four marketing cooperatives) plans to build a plant at Hutchinson, Kansas, to produce protein 70 concentrate. The process to be used in this 3 million dollar plant will be based on our U.S. Patent 3,268,503, 'Method of Preparing Edible Soybean Characterize by Greatly Enhanced Water Absorption,' by G.C. Mustakas and E.L. Griffin (ED). The Department has issued Far-Mar-Co. a nonexclusive license. Engineering Management, Inc. [EMI], Des Plaines, Illinois, will be designing and building the plant installation.

"Far-Mar-Co. now has an extrusion-cooking plant in operation, producing textured soy protein; marketing of this product has been quite successful and sales are going very well. In November 1968, 5 months after this organization was formed, Far-Mar-Co. officials visited us to explore possible diversification into more profitable end products."

Note 1. NMN probably stands for Northern Marketing and Nutrition Division—according to Dr. Walter Wolf who worked there for many years. It was later called Northern Regional Research Center (Peoria, Illinois). Note 2. Attached to this document is a business card from Floyd K. Shoup, Ph.D., Group Leader of Far-Mar-Co., Inc., Research Center, Hutchinson, Kansas. Address: Acting Director.

369. *Food Processing (Chicago)*. 1971. What can textured vegetable protein mean in your formulation? Far-Mar-Co's Dr. Wayne Henry and his laboratory staff will be happy to explore the possibilities of Ultra-Soy in your products (Ad). Sept. p. 41.

• **Summary:** A photo shows Dr. Wayne Henry. Note: He earned a PhD in food science from Michigan State Univ. in 1962. Worked at Carnation Research as a group leader starting in 1962. Address: Foods Div., Far-Mar-Co, Inc., 960 North Halstead, Hutchinson, Kansas 67501. Phone: (316) 663-1571.

370. *Food Processing (Chicago)*. 1971. Textured vegetable protein in school lunch program: Reduces ingredient cost for meat dishes up to 20 per cent. Autumn. p. F4-F9. Foods of Tomorrow section.

• **Summary:** A major, comprehensive cover story with 3 color photos and one black-and-white photo. Discusses: "Textured vegetable protein" [textured soy flour], "hydrated vegetable proteins," "products fabricated from spun fibers," "spun protein products," "extruded and expanded products," FNS Notice 219 (by USDA's Food & Nutrition Service), "vegetable protein ingredients," spun vegetable protein—Bontrae from General Mills, Temptin from Miles Laboratories, "granular soy concentrate" [from Swift & Co.],

Promosoy SL from Central Soya, Mira-tex 210-1 from A.E. Staley Manufacturing Co., unflavored textured vegetable protein from ADM, Ultra-Soy from Far-Mar-Co, and Patty-Pro from Griffith Laboratories.

371. *Soybean Digest*. 1971. What's ahead for soy protein? Nov. p. 11-13.

• **Summary:** Discusses the work of the Food Protein Council, established this year as an autonomous organization within the National Soybean Processors Association. "The goal of the new FPC is to centralize promotion of edible vegetable protein for use in human food." The focus in 1972 will be on the school foodservice market, plus the institutional and commercial restaurant market. "The Food Protein Council, like its parent association, the National Soybean Processors Assn., is managed by Smith, Bucklin & Associates Inc... Member companies of the Council are: Archer Daniels Midland Co.; Cargill Inc.; Central Soya Co. Inc.; Far-Mar-Co, Inc.; Griffith Laboratories; Miles Laboratories Inc.; Ralston Purina Co.; A.E. Staley Manufacturing Co.; and Swift Chemical Co."

372. Free, W. Joe. 1971. The future of the South in the soybean processing industry, 1975. *Southern Cooperative Series, Bulletin* No. 168. 80 p. Nov. [30 ref]

373. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Land O'Lakes.

**Manufacturer's Address:** Ft. Dodge, Iowa.

**Date of Introduction:** 1971.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Dunn, John R. 1981. "Re: History of U.S. cooperative soybean processors." Letter to William Shurtleff at Soyfoods Center. 3 p. Land O'Lakes started operating soybean crushing plant in Dawson, Minnesota, in 1980.

374. **Product Name:** Lecithin.

**Manufacturer's Name:** Riceland Foods Inc.

**Manufacturer's Address:** Home office: 2120 S. Park Ave., Stuttgart, AR 72160. Plants in Stuttgart and Helena, Ark.

**Date of Introduction:** 1971.

**New Product–Documentation:** *Soybean Digest Blue Book*. 1971. p. 110.

375. *Food Processing (Chicago)*. 1972. Plants, companies, personalities: New Far-Mar-Co plant. June. p. 8.

• **Summary:** An illustration shows Far-Mar-Co's prestressed concrete building in St. Joseph, Missouri, which has recently been completed, with about 30,000 square feet of operating space. It will soon be producing a full line of soy grits and soy flour.

376. Far-Mar-Co, Inc., Foods Division. 1972. Formulating the new nutrition (Ad). *Soybean Digest*. Nov. p. 28.

• **Summary:** The top half of this half-page black-and-white ad shows a stylized soybean plant rising out of a round-bottom beaker. "Far-Mar-Co, internationally known merchandiser and grain processor, has committed itself to the development of the New Nutrition... natural proteins derived from grains.

"Since the consolidation of four regional grain marketing cooperatives which formed Far-Mar-Co, we've grown into a giant agri-business with assets of over \$70 million. We serve over 300,000 farmers in eight states. Our 13 terminal elevators have a storage capacity of 100 million bushels."

"Our multi-million dollar Foods Division is dedicated to the development, processing, marketing, and research of vegetable proteins. To meet the demands of a booming market for meat supplements, we're conducting research on products manufactured from soybeans, wheat, sorghum grains, and other agricultural products." Address: 960 North Halstead, Hutchinson, Kansas 67501. Phone: (316) 663-1571.

377. Dawson Mills. 1972. Fire or explosion in solvent extraction plant. Dawson, Minnesota.

• **Summary:** Kingsbaker, C. Louis. 2005. "List of fires and explosions in extraction plants." Atlanta, Georgia. 3 p. Aug. 4. Unpublished manuscript.

Letter (e-mail) from Joe Givens with more basic information about explosion or fire. 2005. Aug. 8. "This explosion was caused by an outside welder who slipped into the plant unknown to anyone to make a small weld. He had been warned but didn't appreciate the danger. He was the only person in the room. He was standing in the middle of the explosion which blew out 4 large explosion relief windows and made a heavy steel rectangular flake conveyor elliptical. He was not injured because he was wearing a heavy leather apron, and gloves, goggles, and helmets. About \$50,000 damage and a week of processing was lost. People who have had explosions are reluctant to talk about them." Address: Dawson, Minnesota.

378. Snider, Nancy. 1972. Soybean (protein) recipe ideas. New York, NY: Arco Publishing Co., Inc. 112 p. Illust. Food category / recipe index. 18 cm.

• **Summary:** Contents: Preface. About this book. Who makes what: Archer Daniels Midland Co. (TVP), Central Soya (Promosoy), Far-Mar-Co (Ultra-Soy), General Mills, Inc. (Bac\*os, Bontrae), The Griffith Laboratories, Inc., Ralston Purina Co. (Edi-Pro), A.E. Staley Co. (Mira-Tex), Swift & Co. (Texgran), H.B. Taylor Co. (Extrasoy), Worthington Foods, Inc. (Fibrotein). The facts about soy protein. Soy what? Cooking with soy protein. Cover-ups. Things to do with bacon-flavor soy protein. Soy cooking tips. Breakfast ideas. Breakfast put-ons. Appetizers. Soups. Garnishes for

soups. Entrees. Soy sandwiches. Breads. Desserts. Food category / recipe index (within each major food category {appetizers, bread, breakfast ideas, desserts, etc.}, recipes are listed alphabetically).

379. Dawson Mills. 1972. Annual report. Dawson, Minnesota. 16 p. 22 x 28 cm.

• **Summary:** The "Manager's report," by Joe Givens (p. 1), notes that the fiscal year ended 31 Aug. 1972 was one of strong growth, following the major additions to facilities made in 1971. The volume of soybeans processed increased by 37% to almost 11 million bushels, while operating costs decreased by 12% per bushel. Soybean oil was in surplus and declined in price over the year. "Foreign vegetable oils—mostly palm oil, coconut oil and rapeseed oil—have consistently been selling at lower prices than soybean oil." Higher soybean meal prices (\$8.16/ton over last year) helped offset the lower oil prices. "Dawson Mills had net savings [profit] for its patrons of \$851,691 or 8½ cents a bushel. Although this is down from previous years," it represents a return of 12½% on invested capital. "A total of \$470,225 was paid out in cash following the close of fiscal year. Of this amount, \$6,146 was stock dividends, \$295,000 was 1966 revolving capital called for redemption, and \$169,109 was cash patronage refund on this year's business."

Dawson Mills' total assets are now \$11,102,983. Pages 11-14 contain a detailed description of the pre-processing (storage, cleaning drying) and processing of soybeans, and the finishing of soybean meal, with many black-and-white photos. In the report are color photos of Givens, members of the board of directors, and some employees. Address: Dawson, Minnesota. Phone: 612/769-4386.

380. Lockmiller, N.R. 1973. Increased utilization of protein in foods. *Cereal Science Today* 18(3):77-81. March. [13 ref]

• **Summary:** Details are given on each type of soy protein product and the way each is used. Table 4 gives the price per pound for various soy protein foods, the estimated annual production in 1972, and the current uses. Soy flour and grits, \$0.15-\$0.17/lb, 352-500 million pounds produced in 1972. Used as ingredients for baked goods, dog foods, sausages.

Soy protein concentrates, \$0.21-\$0.25/lb, 40-50 million pounds produced. Used in manufacturing textured products. Ingredients in processed meats, baby foods, and health foods.

Soy protein isolates: Regular \$0.41-\$0.45/lb, modified isolates \$0.92-\$1.33/lb. Production of both types: 35-40 million pounds. Regular isolates are used in manufacturing analogs such as meatless ham, bacon, hot dogs, etc. Modified isolates are used in whipping agents.

Textured soy protein products: Extruded flours, \$0.27/lb and up. Spun isolates \$0.50/lb and up. Production of both combined: 35-40 million pounds in 1972. Textured soy protein products are used in bacon bits, bacon strips and

similar foods.

Table 6 shows what companies supply which of the following types of edible soy-based ingredients: Soy flour and grits (defatted, low-fat, full-fat), concentrates, isolates, spun fibers, textured soy prod. The companies are ADM (soy flour and grits—defatted, low-fat, and full fat, textured soy prod.), Cargill, Central Soya, Far-Mar-Co, General Mills, Griffith Labs, Gurley, Inc., Lauhoff Grain Co., Miles (Worthington), National Protein, Ralston Purina, A.E. Staley, Swift & Company. Address: A.E. Staley Mfg. Co., Decatur, Illinois.

381. *Business Week*. 1973. Dwayne Andreas' affair with the soybean. June 2. p. 54.

• **Summary:** Andreas has great interest in and hopes for TVP, though it presently accounts for only a tiny fraction of ADM's total sales. "Andreas believes its potential as a food extender and meat substitute in the U.S. could lead to sales of 2.7 billion pounds by 1980. Now ADM has an estimated 60% of the business, with the rest produced under license. Talks are also under way for ADM to construct TVP plants in Brazil and Yugoslavia, an ADM TVP plant is under construction in Great Britain and one is in the planning stages in Australia.

"The 55-year-old Andreas seems the very antithesis of an entrepreneur... His father, Reuben P. Andreas, was farming at Lisbon, Iowa, near Cedar Rapids, when he took over a bankrupt country elevator during the Depression and ran it as a family enterprise with his four sons. Honeymead Products Co. [sic, R.P. Andreas & Son], as it was called, bought processed soy meal until 1938, when the 20-year-old Dwayne persuaded his father to buy the machinery to process its own. Honeymead built the plant in Cedar Rapids.

"In 1945, the Andreases sold the family-owned business to another private company, the giant Cargill, Inc., in Minneapolis [Minnesota]. For seven years Andreas ran Cargill's soybean business.

"In 1952, he left Cargill and again set up Honeymead [in Mankato, Minnesota], which promptly reentered the soybean business in competition with his former employer. Andreas and his brothers, Lowell, Albert and Glenn, sold Honeymead to the Grain Terminal Association, which operated the soybean business of Farmers Union, a large farmer-owned co-operative...

"In 1966, Minneapolitans were startled to learn that he had bought an interest in Archer Daniels Midland, an old-line family-controlled grain company. With a foothold in ADM, which Andreas says he was 'invited' to take by the Archer family, Andreas began buying ADM stock on the open market. Andreas was invited to sit on the board, and became chairman of the executive committee in 1968. 'I knew that ADM was a dozen years ahead of everyone else in textured vegetable protein research, and I believed that was where the important action was going to be,' Andreas recalls.



‘One of the first things I did was to take the edible soy out of the lab and construct a plant in Decatur to make all the grades of edible soy protein in 1969. When we first built it, we thought we had the capacity to make all the product we could sell through 1976. We have already doubled production, and are short.’”

A photo shows Dwayne Andreas.

382. *Food Engineering*. 1973. New plant for textured vegetable protein. 45(8):57. Aug.

• **Summary:** Construction has begun on the new plant which will significantly increase the capacity of Far-Mar-Co, Inc. (Hutchinson, Kansas) to make Ultra-Soy textured vegetable protein. The \$2 million expansion is scheduled for completion in mid-September, 1973.

383. Ross, Irwin. 1973. Dwayne Andreas’s bean has a heart of gold. *Fortune*. Oct. p. 136-41, 243-45.

• **Summary:** One of the best articles and histories seen on Dwayne Andreas and A-D-M. In the 7 years since Andreas took over the leadership of A-D-M, he has nearly tripled sales (from \$371,626,000 in fiscal 1967 to \$967,710,000 in fiscal 1973) and quintupled operating profits (from \$3,225,000 to \$16,895,000). Meanwhile, the price of the stock has nearly quadrupled.

Dwayne Andreas was born in 1918, the fourth son in a family of 5 boys and a girl. They lived on a 160-acre farm in Lisbon, Iowa. “His father, Reuben, came from a Mennonite family, and the children were brought up in something akin to Mennonite discipline—no movies, no Sunday papers, no ball games on Sundays, a surfeit of religious devotions, and unending hard work.

“In 1928, Reuben Andreas was persuaded by the local banker to take over a bankrupt grain elevator in Lisbon. The whole family worked at the business, and it prospered. After graduating from high school, Dwayne went off to Wheaton College, in Illinois, for a year and a half and then entered the family business. Once a year he would travel 300 miles to Decatur, Illinois, to negotiate for his annual supply of soybean meal from the A.E. Staley Manufacturing Co. On a memorable day in 1938, Staley took him to lunch and suggested that the Andreases build a soybean-crushing plant in Iowa. Staley pointed out that Iowa farmers were about to plant a lot of soybeans; Staley’s people did not want to expand geographically, so here was a golden opportunity. A few days later, the Andreas family contracted to build a factory in Cedar Rapids. Business was excellent...

“By 1945 the Honeyamead Products Co., Inc., was earning \$150,000 a year after taxes. Dwayne Andreas was by now largely running the business, his father having retired and his older brother Albert having sold out. Dwayne was classified 1A in the draft, and in anticipation of departure for the Army he sold the Cedar Rapids plant, and later two smaller operations, to Cargill. In the end, Andreas was not called up

and he found himself the 40 percent owner of a corporate shell, still called Honeyamead, with a net worth of about \$2.5 million. Thus he became a millionaire at the age of twenty-seven.

“After the sale, Andreas went to work for Cargill, whose president, John H. MacMillan Jr., offered him a 4 percent stock interest. Andreas remained for seven years, making a \$400,000 after-tax profit when he sold his stock back to the company. He built a number of soybean and other oilseed plants, traveled widely, and for the first time got an inside view of the operations of an international trading organization.

“Meantime, his younger brother Lowell had come out of the Army and put Honeyamead Products back into the soybean business in Mankato, Minnesota. Dwayne by this time owned the bulk of Honeyamead shares. He left Cargill and went to work developing export markets and handling transportation logistics at Honeyamead, while Lowell ran the plant. In seven years after-tax earnings went from \$300,000 to \$1 million.

“In 1960, Andreas received a phone call from M.W. Thatcher, the veteran manager of the Grain Terminal Association, which represented thousands of farmers in Minnesota and the Dakotas who sold soybeans to Honeyamead. Thatcher told him that his farmers now wanted to process their own beans and share in the profits.”

So G.T.A. bought Honeyamead for a sum that eventually came to about \$10 million. “The proceeds went to a corporate shell named First Interoceanic Corp., and both brothers were hired by G.T.A., Dwayne becoming executive vice president.” But they were not happy there, in part because of the very different ways that cooperatives and private companies run their businesses.

The Andreases used Interoceanic to invest in several small businesses, and to buy a soybean crushing plant in Decatur. In 1963 they put up \$2.5 million to start the first new bank in downtown Minneapolis in over 40 years; in June 1964 the National City Bank opened and was very successful.

“The move into Archer-Daniels-Midland came in September, 1965, in an unusual way: the Andreases were invited in to provide new leadership. A-D-M not only was a diversified agricultural processing company, but also had a large chemical operation. It was controlled by the Archer and Daniels families of Minneapolis; John Daniels, a grandson of a founder, had served as president since 1958. In 1965, after a three-year decline in earnings, the company could not cover its dividend. Shreve M. Archer Jr., a director, took the lead in inviting the Andreases to join the company, offering to sell a block of 100,000 shares from the holdings of the Archer trust... To Dwayne Andreas, the request to lead A-D-M out of the doldrums looked almost irresistible...

“There were more practical considerations, of course. The stock was a good buy, for at \$33 a share it was nearly \$26 below book value. Andreas could also see great growth

potential in A-D-M... Moreover, Andreas was greatly impressed with textured vegetable protein (TVP), a soybean product edible by humans, which A-D-M's laboratories had developed. At the time, TVP was being produced only in the lab, but Andreas could see a host of possibilities for it as a meat extender and as a cheap protein in a variety of foods—from cereals to tuna-fish salad...

"Through First Interoceanic the Andreases bought 100,000 shares of A-D-M, later extending their holdings to 181,900 shares. They assumed personal authority gradually and with faultless diplomacy. Dwayne joined A-D-M's board and executive committee in February, 1966; early the following year Lowell became executive vice president in the newly created office of the president, where he formally shared authority with John Daniels. After a year, Lowell became president and Daniels chairman of the board. While Lowell ran the company on a day-to-day basis, Dwayne, who owned most of Interoceanic, became the ultimate boss in everything but title. He finally assumed the title of chief executive in 1971.

"In 1969, A-D-M and First Interoceanic merged, with the result that the two Andreases increased their holdings to 16.6 percent of the shares, and A-D-M became owner of the Minneapolis bank. Lowell Andreas remained president until 1972, when he retired at the age of fifty, as he had long warned he would.

"The Andreases' first significant move to revamp A-D-M came in April, 1967 when the entire chemical division was sold to Ashland Oil for \$65 million... Later in the year A-D-M's unprofitable alfalfa-dehydrating plants were sold for \$5 million... With this sizable bundle of cash, expansion started in a big way." They invested much of the new money in soybean processing and constructing a TVP plant in Decatur. They increased the capacity of one Decatur soybean crushing plant to 4,000 tons a day—making it the largest single soybean plant in the world. During a 3-year period A-D-M's soybean crushing capacity was increased to 120 million bushels a year from 50 million.

Two dramatic graphs show: (1) U.S. soybean production, exports, and cash price per bushel from 1964 to 1974 est. (2) A-D-M's net sales and net earnings during the same period. The caption: "As the bean goes... so goes Archer-Daniels-Midland."

384. **Product Name:** Soy Flour.

**Manufacturer's Name:** Far-Mar-Co, Inc.

**Manufacturer's Address:** Plant: St. Joseph, Missouri. Offices: 960 N. Halstead, Hutchinson, KS 67501.

**Date of Introduction:** 1973.

**New Product—Documentation:** *Food Processing* (Chicago). 1972. June. p. 8. "Plants, companies, personalities: New Far-Mar-Co plant" in St. Joseph, Missouri, will soon be producing a full line of soy grits and soy flour.

*Soybean Digest Blue Book*. 1976. p. 44. Southern opera-

tions in Shreveport, Louisiana; Western: Seattle, Washington; Midwestern: Overland Park, Kansas.

385. Ruble, Kenneth D. 1973. *Land O'Lakes: Farmers make it happen*. Minneapolis, Minnesota. x + 205 p. Illust. No index. 21 cm.

• **Summary:** This is a sequel to the author's "Men to Remember" (1947), which chronicled the origin and first 25 years of the co-operative association now known as Land O'Lakes. Chapter 1 summarizes some of the progress made during Land O'Lakes first quarter century (p. 4-5): (1) Created a new standard of butter quality by selling only sweet cream butter that scored 93 points or more. "Up to that time, virtually all butter was made from sour cream and had a harsh taste." (2) Revolutionized butter packaging, by using one pound cartons and rolls of butter, and selling its butter under a brand name—Land O'Lakes. Previously, grocers had scooped bulk butter out of wooden tubs. (3) Originated government grading of butter (at L.O.L. expense) and printed the resulting "certificate of guarantee" on each carton. When L.O.L. began using this as a powerful sales and advertising tool, the competition panicked. (4) Pioneered farm and creamery quality control. This "upstream" control assured enough sweet cream to meet the stringent new butter tests. (5) Popularized quarter-pound sticks of butter. (6) Broke old distribution patterns. "Instead of joining other [butter] producers in glutting the New York commission houses, L.O.L. developed direct sales to large retailers, and established sales branches in all key markets, on its way to becoming—by far—the nation's No. 1 [brand of] butter." (7) Capitalized on the scarcity of butter during World War II. While many long-established brands disappeared, "L.O.L. sponsored a memorable series of good-humored cartoon ads which kept the brand name alive and emphasized Land O'Lakes quality, while sugar-coating the scarcity." (8) Became the world's largest producer of powdered milk. (9) Kept innovating and expanding—into dry milk, ice cream, cheese, turkeys, eggs, fluid milk and other related foods.

One of the major figures at L.O.L. was president John Brandt.

In 1950 Congress passed the Margarine Act, which repealed the tax system and all federal restrictions on coloring margarine yellow. "This was a bitter blow to Land O'Lakes and all the nation's dairymen" (p. 9).

Chapter 13 (p. 107-14) begins: "With organizations that adjoined each other geographically, Land O'Lakes and Iowa-based Farmers Regional Co-operative began informal talks in 1969 to explore possible ways of working together on an egg marketing program in northern Iowa and southern Minnesota. The Iowa co-operative, using 'Felco' as its trademark, specialized in a wide variety of quality farm supplies... and also operated a soybean processing plant. Its sales in 1969 totaled \$84 million" [vs. more than \$300 million for L.O.L.]. Soon "the idea of broader, long-term

cooperation began to take form... The Land O'Lakes board... was impressed by the opportunity to diversify its already profitable agricultural supply business and to enter the field of soybean processing." They both hired the Battelle Memorial Research Institute to evaluate the pros and cons of such a merger. In Oct. 1969 Battelle submitted its report "concluding that the future of both organizations would be made more secure by merging. On 1 April 1970 the merger became official, and a new name—Land O'Lakes, Inc.—was adopted for the combined organization. The word "creameries" as dropped from the corporate name. The new organization manufactured Felco brand feeds in 6 locations and operated a soybean processing plant (producing soybean oil and meal) at Sheldon, Iowa.

In "four counties comprising the northwest corner of Iowa, the Big Four Co-operative (organized in 1943) was 'king' of the Iowa soybean business, processing 6 million bushels per year for 116 elevator members by 1967, and also selling about \$5 million worth of mixed feed and ingredients." On 1 Oct. 1967 Big Four, an important handler of Felco feeds, merged with Farmers Regional Co-operative. The combination of Felco and Land O'Lakes established a "coordinated systems approach," which resulted in a full circle of service to the farmer, selling him his inputs and buying what he produced (his outputs). The new merger departed from the norm among co-ops of "like merging with like—a this was one of the main reasons the union made sense."

Felco had nearly 500 employees, most of them at the Fort Dodge, Iowa, headquarters. Land O'Lakes had about 5,000 serving many decentralized plants and its home office in Minneapolis, Minnesota. In 1972 Land O'Lakes ranked no. 173 (with sales of \$748 million) on *Fortune* magazine's list of the largest U.S. industrial corporations. The two highest ranked food companies were Kraftco (No. 30) and General Foods (No. 38). Others, specializing in dairy products, were Borden (No. 44), Beatrice Foods (No. 58), and Carnation (No. 111).

Chapter 17, titled "How to 'dry clean' a bean," is about soybeans, and Land O'Lakes' soybean plant in Sheldon, Iowa. In 1943, twelve co-operative elevators joined to build the original "Big Four" plant. In 1959 a million-dollar expansion was added, "including construction of a central feed plant which produced Felco-brand feeds prior to the consolidation of Big Four with Farmers Regional Co-operative" in Oct. 1967. Then, following the merger into Land O'Lakes [in April 1970], the L.O.L. Board of Directors authorized another major investment to modernize and enlarge the soybean oil extraction facilities. As of 1972, the Sheldon plant handles about 33,000 bushels/day of soybeans (12 million bu/year). In 1971 "Land O'Lakes purchased another soybean processing plant formerly operated by Cargill, Inc. in Fort Dodge, Iowa."

To extract the oil from soybeans, they are cleaned, then

passed between corrugated steel rollers, which are positioned to crack each bean into exactly 14 little pieces. These pieces are then "conditioned" by being warmed to 165 degrees, after which they are crushed between smooth steel rollers, that squeeze each bean particle into a tissue-thin wafer looking much like a light-colored oily corn flake. This process ruptures the beans oil cells. The flakes are then conveyed into a giant 3-story extractor, where they are mixed with hexane solvent. This removes the oil in much the same way that a dry cleaner removes grease spots from clothing. Nearly all the hexane is removed and re-used. "Efficiency of this modern solvent process is so complete that only one gallon of hexane is lost per ton of finished product" [oil + meal]. A color photo (p. 152A) shows an aerial view of the Fort Dodge, Iowa, soybean processing plant.

Chapter 20 tells how Land O'Lakes entered the margarine business. In the 1950s, margarine was a naughty word at L.O.L. "When discussed at all, it was called oleo, or just 'oley,' and its origin was scornfully referred to as 'the coconut cow.' Years ago, coconut oil was the main oil used to make margarine in the USA. But today, soybean oil is No. 1 by far, and corn oil is a distant second. So it made sense for L.O.L. to use the soybean oil it made as a major margarine ingredient.

A bar graph (p. 174) shows Land O'Lakes' sales every 5 years from 1948 to 1972. In 1972, co-operative in the USA market only 26% of the nation's food and a minority of these (including Land O'Lakes) is involved in "further processing which *adds value to the farmer's product* and brings him a greater return" [profit]. Dairy products are the only category where co-ops control the lion's share of the market—73% in 1970. In butter production, Land O'Lakes has become the acknowledged national leader by far, in both quantity and quality. So it is no coincidence that butter leads all other food by bringing 71½ cents of the consumer's dollar back to the producer.

In 1972 butter, eggs, ice cream and turkeys were lower priced than in 1947—25 years earlier!

Note: As with the first book, this one would be greatly improved by the inclusion of an index and chronology.

386. Dawson Mills. 1973. Annual report. Dawson, Minnesota. 16 p. 22 x 28 cm.

• **Summary:** The report "To the members, by Joe Givens (p. 1-2), notes that the fiscal year ended 31 Aug. 1973 was "exceptionally good by almost any statistical measure. Net savings for patrons of \$5,670,269 were 7 times larger than the previous year... Over 12 million bushels of soybeans were processed—an increase of 15 per cent. Prices paid for soybeans were at the highest levels in history.

"The reasons for this year's large net savings were many. However the most important reason was the tremendous demand for soybeans and soybean products by people all



over the world which pulled prices up to unprecedented levels. The strong demand for soybean meal and oil resulted in excellent 'crushing margins' for the industry during most of the year. Some of the increase in demand was brought about because: (1) the protein usually supplied by fish caught off the shores of Peru was not available, (2) much of the world had poor crops, (3) large sales of soybeans and soybean products were made into new markets (mainly Russia and China), and (4) the devaluation of the dollar which made U.S. farm commodities a more attractive buy for people in other countries."

"The decision was made during the year for your cooperative to enter the soy food specialties field as soon as possible. The opportunities in manufacturing and marketing specialty products from the meal portion of the soybean have been studied for several years. Conditions developed during the year which prompted a decision to go ahead rapidly. Demand for food products made from soybeans which are high in protein and relatively low in price developed strongly during this year. Edible soy grits were manufactured most of the past year and this business has been profitable. The opportunities to manufacture and market more specialized soy products appear promising for the future. At the present time special desolventizing, grinding, screening, and texturizing equipment has been ordered and construction has begun on a soy specialties building. The cost of this project is expected to be about two million dollars. By the end of fiscal 1974 this new plant should be ready to produce a number of different types of soy flours, grits and texturized soybean products. This expansion should result in an improved market for your soybeans."

Page 5, titled "What is Dawson Mills? Aims and purposes," is by E.S. Boraas, president.

Pages 8-12 show patronage refunds by state (Minnesota, South Dakota, Iowa, and North Dakota), and within each state by cooperative elevator name. Dawson Mills' total assets are now \$25,340,650—more than double the previous year. In the report are color photos of Givens, members of the board of directors, and some employees and facilities. Address: Dawson, Minnesota. Phone: 612/769-4386.

387. Knapp, Joseph G. 1973. The advance of American cooperative enterprise: 1920-45. Danville, Illinois: The Interstate Printers and Publishers, Inc. 646 p. Index. 24 cm. [95\* ref]

• **Summary:** Part 1. The cooperative explosion: The cooperative movement began in 1920 as the U.S. government confronted the agricultural depression of 1921-24. Consumers' co-ops started during the same period. Part 2. The New Deal impetus, 1933-40. Part 3. The impact of World War II, 1941-45. There was a boom in agricultural cooperation during this war. Soy is not mentioned in the index, but the following agricultural cooperatives that presently process soybeans are discussed: Farmers' Union Grain Terminal

Association (GTA; p. 163, 486, 522), and Land O'Lakes Creameries, Inc. (p. 72, 168, 413-15, 482, 486, 492, 612). The author has written 7 other books on cooperatives.

Note: Land O'Lakes originated in the 1920s as the Minnesota Cooperative Creameries Association. Address: Bethesda, Maryland.

388. Horan, Frank E. 1974. Soy protein products and their production. *J. of the American Oil Chemists' Soc.* 51(1):67A-73A. Jan. Proceedings, World Soy Protein Conference, Munich, Germany, Nov. 11-14, 1973. [12 ref]

• **Summary:** Contents: Abstract. Introduction. History of the soybean in the U.S. Economic impact. Soybean protein. Textured soy protein. References.

Table XII states that U.S. producers of edible soy protein products are: ADM, Cargill, Central Soya, Far-Mar-Co, General Mills, Griffith Labs, Lauhoff Grain Co., Miles Labs (Worthington), National Protein, A.E. Staley, Swift & Co. All make textured soy protein products except National Protein (which makes only grits and flours). Central Soya, Ralston Purina, and Staley make soy protein isolates. Central Soya, Far-Mar-Co, Griffith Labs, and Swift & Co. make soy protein concentrates. Address: Archer Daniels Midland Co., Decatur, Illinois.

389. Far-Mar-Co, Inc. 1974. Other vegetable protein suppliers copy our claims. But they can't copy our people (Ad). *Food Processing (Chicago)*. Feb. p. 37.

• **Summary:** Far-Mar-Co claims to make "the best textured vegetable protein available today." Address: Foods Div., 960 North Halstead, Hutchinson, Kansas 67501-. Phone: (316) 663-5711.

390. Gaston, W.W. 1974. Trends in soybean production. *Tennessee Valley Authority, Bulletin Y-69*. p. 10-16. March. Soybean: Production, Marketing, and Use.

• **Summary:** Contents: Introduction. First crushing in England. Breeding emphasis. World production: U.S. and Brazil lead in expansion. United States production: Factors associated with soybean trends. Production in the South: Good potential in South. Summary. Address: Senior Vice President, Gold Kist, Inc., Atlanta, Georgia.

391. *Mankato Free Press (Minnesota)*. 1974. All systems go for Honeymead. June 25.

• **Summary:** The Mankato Housing and Redevelopment Authority (HRA) approved a land sale contract with Honeymead Products Co. for the Woodland-Givens renewal property in West Mankato. Honeymead, which will pay \$160,000 for the land, plans to build office and storage buildings and an employee parking lot as part of its expanded soybean processing plant presently under construction.

392. Kakade, M.L.; Rackis, J.J.; McGhee, J.E.; Puski, G. 1974. Determination of trypsin inhibitor activity of soy products: A collaborative analysis of an improved procedure. *Cereal Chemistry* 51(3):376-82. May/June. [4 ref]

• **Summary:** Describes a more accurate and reproducible process for measuring the trypsin inhibitor activity of soybeans than the method developed by Kakade in 1969 for measuring the antitryptic activity in raw soybeans. This new method is recommended for use in evaluating the percentage of trypsin inhibitors destroyed by heat in soybean samples. "Both raw and toasted, dehulled, defatted soy flours were evaluated for their trypsin inhibitor activity." Address: 1. Land O'Lakes, Minneapolis, Minnesota; 2-3. NRRL, Peoria, Illinois. 4. Central Soya.

393. Dimler, R.J. 1974. Cooperation with soybean co-op. *Notes from the Director: Northern Regional Research Laboratory (Peoria, Illinois)* No. 1165. p. 1-2. July 12.

• **Summary:** "Last month [June 26], Mr. Joe Givens, Dawson Mills, Dawson, Minnesota, and six of his engineering, sales, and operating staff flew to Peoria to consult with OC [Oilseed Crops] and ED [Engineering and Development] staff on flavor problems of soybean meal products. Industry reports had reached them of a significant flavor improvement in the last 2 years. Our consultations were centered on: quality control relating to enzyme inactivation and flavor improvement; azeotropic solvent extraction to improve flavor of defatted flakes; flash desolventizing of soybean products; and extrusion processing. After the discussions they visited our soybean processing and extruding facilities in the pilot plant. A sizable portion of Dawson's production (1,500 tons per day) is slated to go into human soybean food products: grits, flour, and texturized products."

Note: Givens and co-workers expressed concerns with getting a new plant and new soy processes going, including texturized proteins, isolates, concentrates, etc. Address: Area Director, NRRL, NCR, ARS, USDA.

394. **Product Name:** Ultra-Pro (Soy Protein Concentrate).

**Manufacturer's Name:** Far-Mar-Co, Inc.

**Manufacturer's Address:** 960 N. Halstead, Hutchinson, KS 67501.

**Date of Introduction:** 1974. October.

**New Product-Documentation:** W.J. Wolf states on 17 Oct. 1974, based on information from Bert Miner of the Farmers Cooperative Service, that Far-Mar-Co is producing about 30 tons/day of soy protein concentrate. However the concentrate plant is now down because of an previous explosion in the alcohol recovery unit.

*Soybean Digest Blue Book*. 1976. p. 38, 46, 48. Page 38 says "Processed meat additives."

Talk with Far-Mar-Co. They no longer make a soy protein concentrate.

395. Adolphson, L.C.; Horan, F.E. 1974. Textured vegetable protein products as meat extenders. *Cereal Science Today* 19(10):441-44, 446. Oct.

• **Summary:** "During the 1971-72 school year, about 23 million pounds of textured soy protein (hydrated) were used; in 1972-73 the amount was doubled; and during the past school year an estimate is that at least 50 million pounds (hydrated) were employed..."

"In order for the commercial manufacturers to have a common goal in the development of novel protein systems, such as textured vegetable protein products, a number of industrial companies have banded together to form the Food Protein Council (Food Protein Council, Suite 1150, 1730 Pennsylvania Ave., N.W., Washington, D.C. 20006. George M. Perrin, Executive Secretary).

"The council consists of the following regular members: Archer Daniels Midland Co.; Cargill, Inc.; Central Soya Co., Inc.; Far-Mar-Co, Inc.; General Mills, Inc.; Grain Processing Corp.; Griffith Laboratories; Lauhoff Grain Co.; Miles Laboratories, Inc.; National Protein Corp.; Procter & Gamble Co.; Ralston Purina Co.; A.E. Staley Manufacturing Co.; and Swift Edible Oil Co."

A photo shows the two authors, with a brief biography of each. Address: Archer Daniels Midland Co., Decatur, Illinois.

396. Henry, Wayne. 1974. Re: Literature on soy grits and flour. Letter to Walter Wolf, Northern Utilization Research Lab., 1815 University, Peoria, Illinois 61601, Dec. 20. 1 p. Typed, with signature on letterhead.

• **Summary:** He encloses a technical bulletin on the company's soy flour and grits. "As of this date, we do not have any printed literature on our soy protein concentrate."

Printed across the bottom of the letterhead: "Far-Mar-Co food operations: (headquarters) Hutchinson, Kansas; Overland Park, Kansas; St. Joseph, Missouri; Shreveport, Louisiana; Seattle, Washington; Los Angeles, California."

Note: Dr. W.J. Wolf states on 17 Oct. 1974, based on information from Bert Miner of the Farmer Cooperative Service, that Far-Mar-Co is producing about 100 tons/day of defatted edible soy flour and 30 tons/day of soy protein concentrate. However the concentrate plant is now down because of a previous explosion in the alcohol recovery unit. They also have a small pilot plant in Hutchinson, Kansas, making "TVP" [textured soy flour] in unknown amounts. Dr. Henry told Dr. Wolf on 19 Dec. 1974 that they make soy protein concentrates but have not promoted them much. They are using some of it internally and are not yet up to capacity on production. Address: Vice President, Food Operations, Far-Mar-Co, Inc., 960 North Halstead, Hutchinson, Kansas 67501. Phone: 316-663-5711.

397. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Gold Kist.

**Manufacturer's Address:** Decatur, Alabama.

**Date of Introduction:** 1974.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Dunn, John R. 1981. "Re: History of U.S. cooperative soybean processors." Letter to William Shurtleff at Soyfoods Center. 3 p. Gold Kist operated a soybean crushing plant in Decatur, Alabama, from 1974 to 1981.

398. Dawson Mills. 1974. Annual report. Dawson, Minnesota. 16 p. 22 x 28 cm.

• **Summary:** The "Manager's report," by Joe Givens (p. 1-2), notes that the fiscal year ended 31 Aug. 1974 was "an extraordinary year in the life of your cooperative. New records were established in all phases of your business. Net savings for patrons reached a new high of \$7,039,188. Over 13 million bushels of soybeans were processed into oil and meal. Prices paid for soybeans were at the highest in our history and averaged \$6.01 a bushel." "A Soy Specialties Division has been established... The processing equipment being installed in the new soy specialties tower should be operational in early 1975. A new product development and technical service laboratory is also under construction."

A page titled "DawSoy" states: "The world's requirement for food and especially for vegetable protein is ever increasing. The new soy food specialties plant provides Dawson Mills the opportunity to be involved in meeting this pressing need" by manufacturing soy grits, soy flour, and textured soy flour. "By using various heat treatments, soy flour and grits provide materials with a wide range of applications. Lightly toasted soy flour in combination with wheat flour produces a high protein material used in baking products. Moderately toasted flour and grits are used extensively in the pet food and milk replacer industries. Toasted soy grits combine with various grains to improve the nutritive value of these many food products. Textured soy flour is a fibrous material which is used to simulate meat in many meat and food products."

Pages then show: Patronage refunds by state (Minnesota, South Dakota, Iowa, and North Dakota), and within each state by cooperative elevator name. A decade of progress (processing and financial statistics 1965-1974). Bushels of soybean processed 1952-1974. Balance sheet. Contains many photos—both color and black-and-white. Address: Dawson, Minnesota. Phone: 612/769-4386.

399. Henry, Wayne. 1975. Far-Mar-Co's edible soy protein operations. Paper presented at the Soybean and Cottonseed Conference. 8 p. Held 9-12 March 1975 at Las Vegas, Nevada.

• **Summary:** "Bert Miner suggested that since Far-Mar-Co was one of the few cooperatives engaged in production of edible soy protein, a discussion of our operation may be of interest to the group. More specifically he requested that I

discuss the following questions:

(1) Why Far-Mar-Co entered the field? (2) Kinds of edible soy protein products produced. (3) Manufacturing processes used and why. (4) Problems encountered and how they have been resolved. (5) Evaluation of available equipment. (6) Market outlets for various products. (7) What you see ahead. (8) How cooperatives can work together to get a bigger share."

"Far-Mar-Co was formed June 1, 1968, with the consolidation of four regional cooperatives. The four grain marketing regionals were located in Hutchinson, Kansas, Kansas City, Missouri, and two in Lincoln, Nebraska. These regionals served Kansas and Nebraska in total and parts of Colorado, Wyoming, South Dakota, Iowa, Missouri, and Oklahoma. The merger of these regional cooperatives brought together over 250,000 farmers which represent over 600 local cooperatives, which in turn represent the ownership of Far-Mar-Co. The name indicates the principal function of these cooperatives is to market grain, i.e., soybean, wheat, milo, and corn. The managers and directors of these regionals knew that the storage and marketing function provided by the cooperatives was a major step in insuring the farmer a fair return for his product, however, they also knew it was not good enough.

"As most of you know, the net margin on storage and marketing of grain is pretty slim."

"Our managers and directors are very aggressive and believe totally in the 'added value concept.'" This is the main reason Far-Mar-Co entered the field of soy protein products. The company currently manufactures soy grits, soy flour, textured vegetable protein (30 varieties of textured soy flour, using Wenger extruders for thermoplastic extrusion), and soy protein concentrate (SPC, 70% protein using aqueous-alcohol extraction; the plant was designed and built by Blaw-Knox Co.). "I can truthfully say, however, that we have had more problems than you would believe in trying to get our SPC plant on stream."

Note: This is the earliest English-language document seen (May 2005) that contains the term "added value." Address: PhD, Vice President, Food Operations, Far-Mar-Co, Inc., 960 North Halstead, Hutchinson, Kansas 67501. Phone: 316-663-5711.

400. Doty, Harry O., Jr. 1975. Decisionmaking in the oilseed processing industry. *USDA Economic Research Service, ERS* No. 598. 19 p. [1 ref]

• **Summary:** Cover title: "Speech before the 21st annual conference of Cooperative Soybean and Cottonseed oil Mills, Las Vegas, Nevada, March 10, 1975." Contents: Introduction: Soybean crushings, oil yields, value of products, oilseed processing mills, processing capacity, processing margins, components of oil products margins.

Possible changes ahead for the oilseed crushing industry: Increased food production, palm oil, sunflowers, peanuts,



Brazilian soybean production, edible soy protein (soy flour and grits, extruded textured soy protein), polyunsaturated fatty acids (for concern over blood cholesterol and heart attacks), refining, new processing methods and equipment. Oil crops research program: New research, automating price and quantity data in a data bank.

Tables show: (1) Soybean crushings, oil and meal production by regions and states, year beginning September, selected years, 1954-1973. (2) Soybean crushings, by months, actual and percent of total, 1960-1974. Soybeans are crushed year-round, but slightly larger amounts are crushed in Nov., Dec., and Jan. (3) Soybean crushings and yields of oil per bushel crushed. (4) Soybean exports by months, actual and percent of total, 1960-1974. (5) Estimated number of soybean oil mills and processing capacity in the United States, 1963-1974. (8) Estimated number of soybean oil mills in the United States, and soybeans crushed by regions and states, 1969-1973. (9) Soybean oil mills. Number of companies and plants, concentration ratios, production and value of shipments for products, Census years, 1947-72. (10) Salad and cooking oil: Components of margins per 24-ounce bottle, 1973. (11) Margarine: Components of margins per 1-pound package, 1973. (12) Vegetable shortening: Components of margins per 3-pound can, 1973.

"In recent years, a big boost was given to the use of vegetable soy protein by the development of an inexpensive texturizing process. Another boost took place when the USDA School Lunch Program allowed 30 percent textured soy protein to be added to beef to make a beef-soy patty in February 1971. Then, U.S. edible soy protein use for its protein value was here to stay. Use of edible soy protein in the School Lunch Program has continued to grow ever since. Production of soy flour and grits was 326 million pounds in 1962 and increased to 474 million pounds in 1972" (p. 7). Address: USDA Economic Research Service, Washington, DC 20250.

401. *Sioux City Journal (Iowa)*. 1975. Farmland gets first beans (Photo caption). Aug. 5.

• **Summary:** A large photo shows a huge truck, with one end lifted high in the air by a hydraulic truck lift, emptying its load of soybeans into a dumping pit at the new Farmland Industries soybean crushing plant south of Sioux City. Three towering concrete silos and an even higher head house (bearing the Coop logo) looms in the background. Several more trucks filled with soybeans wait to be dumped, and tiny people look on. The plant, one of the largest of its type in the USA, has a processing capacity of 2,000 tons/day of soybeans. Processing will begin later this month. Note: This is the earliest document seen (Aug. 2005) concerning the soybean crushing plant at Sergeant Bluff, Iowa.

402. *Food Processing (Chicago)*. 1975. Protein update: Guides to protein products and companies. Aug. p. 28, 33-

34, 36, 38, 40-41, 44, 48, 50.

• **Summary:** Discusses soy protein products made by: ADM, Baltimore Spice, Cargill, Carnation Co., Central Soya Co., Custom Food Products Inc., DMI Inc., Far-Mar-Co., General Mills, Grain Processing Corp., Griffith Laboratories, Industrial Grain Products Ltd., Lauhoff Grain Co., Miles Laboratories, Nabisco, National Protein Corp., Paniplus Co., Ralco Foods, Ralston Purina, Staley (A.E.) Co. (Protein Div.), Swift & Co.

Note: A table (p. 25) shows what soy proteins are available from what companies. Address: Assoc. Editor.

403. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Farmland Industries, Inc.

**Manufacturer's Address:** Sergeant Bluff, Iowa.

**Date of Introduction:** 1975. August.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *Sioux City Journal* (Iowa).

1975. Farmland gets first beans (Photo caption). Aug. 5. The new Farmland Industries soybean crushing plant south of Sioux City, one of the largest of its type in the USA, has a processing capacity of 2,000 tons/day of soybeans. Processing will begin later this month. Note: "Sergeant Bluff" is not mentioned.

National Soybean Processors Association. 1975. Year Book and Trading Rules 1975-1976. Washington, DC. [Oct.] See p. 11. Farmland Industries, Inc., William C. Lester, Box 200, Sergeant Bluff, Iowa 51504. Phone: (712) 943-4282.

404. Morrissy, J.D. 1975. Riceland Foods: Innovative cooperative in the international market. *USDA Farmer Cooperative Service, FCS Information* No. 101. 128 p. Sept. [44 ref]

• **Summary:** A chronology titled "Historical landmarks" (p. 12) states: 1921 Sept. 23—Organized as Arkansas Rice Growers Cooperative. 1958—Initial marketing of soybeans. 1961—Startup of soybean crushing plant at Stuttgart, Arkansas. 1965—Startup of crushing plant at Helena, Arkansas. 1970 Aug. 1—The Arkansas Rice Growers Cooperative Association adopted the trade name Riceland Foods. By now its 20,000 soybean grower-members outnumbered rice growers four to one. Its sales volume of hundreds of millions of dollars ranked it midway among the top 500 U.S. industrial firms listed by *Fortune* magazine. 1970 Sept. 3—The company dedicates a modern new headquarters building in Stuttgart, Arkansas.

Chapter IV, titled "Soybean growers: A new branch of the Riceland Foods family" (p. 45-53) tells the story of the rise of soybeans in a rice cooperative. The 1955 rice acreage controls legislation cut back rice production and prompted Riceland to initiate a soybean program—which soon sent the company's sales skyrocketing.

A graph (fig. 2, p. 6) shows Riceland Foods' sales from

1943 to 1973, including total sales (\$563.7 million in 1973), sales of soybean and other grains (\$337.5 million), and sales of rice (\$210.8 million).

Note: This is the earliest document seen (June 2005) that mentions "Riceland Foods" in connection with soybeans. Address: Washington, DC.

405. Food Systems Branch and Research Branch, Agriculture Canada; Grain Marketing Office. Industry, Trade and Commerce. 1975. U.S. Food Protein Council (Document part). In: *Plant Proteins in Canada: Utilization for Human Food*. 1975. Canada. iii+ 163 p. See p. 50. Sept. 28 cm. [1 ref]

• **Summary:** The three objectives of the Council are listed. "Members of the Council include: Archer Daniels Midland, Cargill, Central Soya, Far-Mar-Co., General Mills, Griffith Laboratories, Lauhoff Grain, Miles Laboratories, National Protein, Ralston Purina, A.E. Staley, Swift, Honeymead Products, Riceland Foods, Pfizer, and Nestlé."

Source: Grain Marketing Office, Trade Commissioner Service of I.T. & C. [Department of Industry, Trade and Commerce]. Address: Canada.

406. *Northern Regional Research Center: Notes from the Director*. 1975. LPC process tested. No. 1220. p. 2. Oct. 3.

• **Summary:** The Engineering and Development Lab's (ED's) lipid-protein concentrate process for beverages (U.S. Patent 3,809,771) is being tested by a second company. On September 23-25, Gus C. Mustakas (ED) "observed a successful pilot plant run at a major food service company in Minnesota. The company produces a complete family of nutritional products for supplemental or total feeding in hospital and institutional markets.

"On his trip Gus also visited Dawson Mills, a large-co-op soybean processor in Dawson, Minnesota. This company is following the lead of other co-ops (Far-Mar-Co, Land-O-Lakes) in diversifying into edible soy products. They have a large capacity (600-700 tons per day) for such products as soy flour, grits, white flakes, and textured soy flour. Gus suggested a new line product (NRRC research development) for Dawson—namely full-fat soy flours that can also be produced in their existing extruder installation. The Dawson group plans to exhibit their edible soy proteins in Mexico City this November in hopes of opening new markets in South America." Address: Peoria, Illinois.

407. National Soybean Processors Association. 1975. Year book and trading rules 1975-1976. Washington, DC. ii + 103 p.

• **Summary:** On the cover (but not the title page) is written: Effective October 1, 1975. Contents: The National Soybean Processors Association [Introduction and overview]. Constitution and by-laws. Officers and directors. Executive staff. Members. Standing committees. Food Protein Council.

Trading rules on soybean meal. Sales contract. Appendix to trading rules on soybean meal: Official methods of analysis (moisture, protein, crude fiber, oil {only method numbers listed}, sampling of soybean meal {automatic sampler, probe sampler}), official weighmaster application, semi-annual scale report, official referee chemists (meal). Trading rules on soybean oil. Sales contract. Definitions of grade and quality of export oils. Soybean lecithin specifications. Appendix to trading rules on soybean oil: Inspection, grading soybean oil for color (N.S.P.A. tentative method), methods of analysis (A.O.C.S. official methods): Soybean oil, crude; soybean oil, refined; soybean oil, refined and bleached; soybean oil for technical uses; soap stock, acidulated soap stock and tank bottoms (only method numbers listed), official weighmaster application, semi-annual scale report, official referee chemists (oil). Soybean oil export trading rules. Foreign trade definitions (for information purposes only).

The page titled National Soybean Processors Association (p. ii) states: "The NSPA is the professional association of America's soybean processors. Its members process and market more than 95 percent of all soybean crushed within the continental U.S. From nearly 85 processing centers, in every major soybean producing region of the nation, NSPA members service America's agricultural community.

"During the past crop year about 700,000,000 bushels of soybeans moved through processing plants of NSPA's 33 member firms. Approximately 60 percent of America's 1.2 billion-bushel soybean crop is bought and processed by NSPA members. Exporters account for another 32 percent of the crop, and the remainder [8%] is returned to farms for seed, feed, and residuals." Also discusses industry programs, soybean research, and international market development.

The section on officers, executive committee, and board of directors (p. 7-8) gives the name, company affiliation, and phone number of each person. Officers—President: Lowell K. Rasmussen, Honeymead Products Co. Vice President: John G. Reed, Jr., Continental Grain Co. Secretary: Stiles M. Harper, Southern Soya Corporation. Treasurer: T.J. Suelzer, Central Soya Co. Immediate past president: James R. Spicola, Cargill, Inc. Executive Committee: Donald B. Walker ('77), ADM. James R. Spicola, Cargill. Thomas J. Suelzer, Central Soya. John G. Reed, Jr., Continental. Martin Hinby ('76), Cook Industries.

Board of Directors (alphabetically by company; each member company has one representative on the board): Thomas H. Wolfe, Anderson, Clayton & Co. Donald B. Walker, Archer Daniels Midland Co. George H. Heinz, Buckeye Cellulose Corp. John Fallon, Bunge Corporation. James R. Spicola, Cargill, Inc. Thomas J. Suelzer, Central Soya Co., Inc. John G. Reed, Jr., Continental Grain Co., Martin Hilby, Cook Industries. Joe C. Givens, Dawson Mills. Alfred Jenkins, Delta Cotton Oil & Fertilizer Co. John A. Dotson, Far-Mar-Co., Inc. Kenneth E. Sullivan, Farmers

Grain Dealers Assn. of Iowa. Donald M. Chartier, Farmland Industries, Inc. Gaylord O. Coan, Gold Kist Inc. Lowell K. Rasmussen, Honeymead Products Co. David C. Thompson, Krause Milling Co. Kenneth J. McQueen, Land O'Lakes, Inc. Floyd W. Brown, Lauhoff Grain Co. Kermit F. Head, Missouri Farmers Assn.—Grain Div. James A. Smith, National Protein Corp. Robert E. Hicks, Owensboro Grain Co., Inc. Frank P. Perdue, Perdue Incorporated. John H. Payne, Planters Manufacturing Co. William T. Melvin, Planters Oil Mill, Inc. Theodore W. Bean, Quincy Soybean Co. E.J. Cordes, Ralston Purina Co., W.L. Knoll, Riceland Foods, Inc. J.D. Morton, Sherman Oil Mill. Stiles M. Harper, Southern Soya Corp. James W. Moore, A.E. Staley Mfg. Co. W.W. Moore, Swift Edible Oil Co. Preston C. Townsend, Townsend's Inc. Tyler Terrett, West Tennessee Soya Mill, Inc.

Executive office, Washington, DC: Executive Director, Sheldon J. Hauck. Director, Public Affairs: Jack DuVall. Administrative Asst.: Jean N. Sullivan. National Soybean Crop Improvement Council: Robert W. Judd, Managing Director. General counsel: Edward H. Hatton, Esq., Jenner & Block, Chicago, Illinois.

Members (listed alphabetically by company; within each company, first the name of the official Association representative {who is on the Board}, followed by the other personal members listed alphabetically by surname. For example, Archer Daniels Midland Co., the company with the most personal members, has 24. After the name of each personal member is given his address and phone number. In the listing below, the number of personal members is shown in parentheses after the name of each company, followed by city and state of the various locations): Anderson, Clayton & Co. (6); Phoenix, Arizona; Osceola, Arkansas; Jackson, Mississippi; Vicksburg, Mississippi; Houston, Texas. Archer Daniels Midland Co. (24); Decatur, Illinois; Galesburg, Illinois; Granite City, Illinois; Fredonia, Kansas; Mankato, Minnesota; Red Wing, Minnesota; St. Louis, Missouri; Fremont, Nebraska; Lincoln, Nebraska; Kershaw, South Carolina. Buckeye Cellulose Corp. (8); North Little Rock, Arkansas; Augusta, Georgia; Cincinnati, Ohio; Memphis, Tennessee. Bunge Corporation (5); St. Louis, Missouri; New York City, New York; Cargill, Inc. (15); Gainesville, Georgia; Cedar Rapids, Iowa; Des Moines, Iowa; Sioux City, Iowa; Washington, Iowa; Chicago, Illinois; Wichita, Kansas; Minneapolis, Minnesota; Fayetteville, North Carolina; Memphis, Tennessee; Chesapeake, Virginia. Central Soya Co., Inc. (11); Chicago, Illinois; Gibson City, Illinois; Decatur, Indiana; Fort Wayne, Indiana; Indianapolis, Indiana; Belmond, Iowa; Marion, Ohio; Bellevue, Ohio; Delphos, Ohio; Chattanooga, Tennessee. Continental Grain Co. (8); Guntersville, Alabama; Chicago, Illinois; Taylorville, Illinois; New York City, New York; Cameron, South Carolina. Cook Industries (12); Pine Bluff, Arkansas; Emporia, Kansas; Marks, Mississippi; Memphis, Tennessee. Dawson

Mills (3); Dawson, Minnesota. Delta Cotton Oil & Fertilizer Co. (1); Jackson, Mississippi. Far-Mar-Co., Inc. (1); St. Joseph, Missouri. Farmers Grain Dealers Assn. of Iowa (Cooperative), Soybean Processing Div. (1); Mason City, Iowa. Farmland Industries, Inc. (3); Van Buren, Arkansas; Sergeant Bluff, Iowa; Kansas City, Missouri. Gold Kist Inc. (3); Atlanta, Georgia. Honeymead Products Co. (3); Mankato, Minnesota. Krause Milling Co. (2); Milwaukee, Wisconsin. Land O'Lakes, Inc. (3); Fort Dodge, Iowa; Sheldon, Iowa. Lauhoff Grain Co. (1); Danville, Illinois. Missouri Farmers Assn.—Grain Div. (4); Mexico, Missouri. National Protein Corp. (2); Champaign, Illinois; Chicago, Illinois. Owensboro Grain Co., Inc. (1); Owensboro, Kentucky. Perdue Incorporated (2); Salisbury, Maryland. Planters Manufacturing Co. (2); Clarksdale, Mississippi. Planters Oil Mill, Inc. (1); Rocky Mount, North Carolina. Quincy Soybean Co. (4); Quincy, Illinois. Ralston Purina Co. (8); Bloomington, Illinois; Lafayette, Indiana; Iowa Falls, Iowa; Louisville, Kentucky; St. Louis, Missouri; Raleigh, North Carolina; Memphis, Tennessee. Riceland Foods, Inc. (8); Helena, Arkansas; Stuttgart, Arkansas. Sherman Oil Mill (1); Fort Worth, Texas. Southern Soya Corp. (1); Estill, South Carolina. A.E. Staley Manufacturing Co. (8); Decatur, Illinois. Swift Edible Oil Co., Div. of Swift & Co. (1); Chicago, Illinois; Townsend's Inc. (2); Millsboro, Delaware. West Tennessee Soya Mill, Inc. (1); Tiptonville, Tennessee.

Associate Members: Anderson Clayton Foods, Dallas, Texas. Best Foods Div. of CPC International Inc., Englewood Cliffs, New Jersey. Canadian Vegetable Oil Processing Co., Hamilton, Ontario, Canada. Capital City Products Co., Div. of Stokely-Van Camp, Inc., Columbus, Ohio. I.H. French & Co., Champaign, Illinois. General Mills, Inc., Minneapolis, Minnesota. Glidden-Durkee, Div. of SCM Corporation, Chicago, Illinois (Gerald J. Daleiden). Grain Processing Corp., Muscatine, Iowa (H.P. Woodstra). Hartsville Oil Mill, Hartsville, South Carolina (Richard A. Koppein). Humko Products, Memphis, Tennessee. Hunt-Wesson Foods, Inc., Fullerton, California. Kraft Foods Div. of Kraftco Corp., Chicago, Illinois. Lever Bros Co., New York City, New York. Maple Leaf Mills Ltd., Toronto, Ontario, Canada (W.G. Milliken). Procter & Gamble Co., Cincinnati, Ohio. Quaker Oats Co. (The), Chicago, Illinois. Schouten International, Inc., Minneapolis, Minnesota. Southern Cotton Oil Co., New Orleans, Louisiana. Southern Feed Ingredients Co., Memphis, Tennessee. Wilsey Foods, Los Angeles, California.

Standing committees: For each committee, the function of the committee, the names of all members (with the chairman designated), with the company and company address of each are given—Crop Improvement Council. Meal trading rules. Oil trading rules. Safety and insurance. Soybean Research Council. Technical. Traffic and transportation. Food Protein Council (Objective and rules adopted 3 March 1971,



amended 5 Nov. 1971). Address: 1800 M St., N.W., Washington, DC 20036. Phone: (202) 452-8040.

408. Henry, Wayne F. 1975. Valor nutritivo de la proteína texturizada [Nutritional value of texturized (soy) protein]. In: American Soybean Assoc., ed. 1975. *Memorias: Primera Conferencia Latinoamericana Sobre la Proteína de Soya*. Mexico City. 232 p. See p. 55-62. [18 ref. Spa]

• **Summary:** Contents: Introduction. Texturization. Analogs of centrifuged protein. Texturized soy flour. Texturized soy protein and nutrition. Centrifuges proteins. Tables 1-8. Address: Far-Mar Co., St. Joseph, Missouri.

409. Dawson Food Ingredients, Inc. 1975. Dawsoy: Proteína para el mundo del medio de los EE.UU [Dawsoy: Protein for the world from the Midwest of the USA (Brochure and Portfolio)]. Dawson, MN 56232. 16 p. Undated. 29 cm. [Spa]

• **Summary:** This is a glossy color brochure (16 unnumbered pages), with a portfolio flap attached to the rear cover. On the top half of the front cover is a photo of mature soybean seeds. Most left-hand pages contain a full-page color photo. The section titled "Capacity" (p. 6) states that the company has one of the largest agricultural firms in Minnesota. "In 1974 we will process 800,000,000 pounds (more than 350,000 metric tons) of soya." The company makes and/or sells four soy products: Textured soy flour, soy flour, soy grits, and white flakes (*hojuelas blancas*). Four separate sheets (printed in Oct. 1975), for each of these products, are inserted in the back.

Note 1. This is the earliest document seen (March 2008) that mentions "Dawson Food Ingredients."

Note 2. An English-language counterpart of this brochure also exists. Address: Dawson, Minnesota. Phone: 612/769-4386.

410. Dawson Mills. 1975. Annual report. Dawson, Minnesota. 16 p. 22 x 28 cm.

• **Summary:** "Highlights" (p. 1) for the fiscal year ended 31 Aug. 1975. Soybeans processed: 12,084,771 bushels. Total sales: \$81,574,590. New savings: 5,011,160. Total cash refund: \$2,658,168 (the largest in Dawson's history). Allocation per bushel: 46.2 cents.

The "Manager's report," by Joe Givens states: "Preparing for the production and marketing of edible soy products has required a large expenditure of time and capital. The building of our soy specialties plant and the installation of the processing machinery proceeded at a slower pace than was anticipated.

"Foreign contacts have been established to aid in the export of our 'Dawsoy' edible products. All of the facilities for producing edible soy products and the arrangements for selling these edible products have been financed by funds earned during the past several years, and no long term capital

borrowing has been required.

"During the year, over 22,000 tons of edible soy grits were produced for eventual use as food for people living all over the world. A significant portion of Dawson Mills' net savings resulted from the sale of this food product. We anticipate that the sale of 'Dawsoy' flour and textured flour will also contribute additional savings for many years."

Page 7, titled "dawsoy brand edible soy products," begins: "'Protein for the world from Midwest U.S.A.' is the registered trademark for edible products from Dawson Mills. This theme is most appropriate as we embark on a new venture for the utilization of soybeans to produce food ingredient products for human consumption. The Dawsoy product line includes:" White flakes, soy grits, soy flour, textured soy flour. The new facility also contains a pilot plant and a test kitchen.

Also contains sections on: Dawson soybean oil and meal products. Dawson Mills. Comparative balance sheet. Comparative statement of operations. Distribution of net savings. Patronage refunds (Minnesota, South Dakota, North Dakota). Soybeans processed (down from 1974). A decade of progress. Contains many photos—both color and black-and-white. Address: Dawson, Minnesota. Phone: 612/769-4386.

411. Dawson Food Ingredients, Inc. 1975. Dawsoy: Protein for the world from the Midwest U.S.A. (Brochure and Portfolio). Dawson, MN 56232. 14 p. Undated. 29 cm.

• **Summary:** This is a glossy color brochure (14 numbered pages), with a portfolio flap attached to the rear cover. On the top half of the front cover is a photo of mature soybean seeds. Most left-hand pages contain a full-page color photo. Contents: World (and population growth). World nutrition. World protein. Soy protein. Dawsoy: Economical, adaptable, functional, consistent, available. Dawsoy edible soy products: Textured soy flour, soy flour, soy grits, and white flakes. Flow chart. Dawson Mills produces high quality edible soy products for the food industry: Basic processor, experiences, capable ("In 1974 we processed 800,000,000 pounds (over 350,000 metric tons) of soybeans—the equivalent of 5,000 loaded rail cars..."), reliable, technical service, delivery, innovative. Dawsoy edible soy products can directly serve your needs! Bakery and confectionery, meat processing, school lunch program, supermarket chains, food processing, food service. Description of food photographs. Fourteen separate sheets are inserted in the portfolio section at the back: (1) Textured soy flour. (2-3) Soy flour. (4) Soy grits. (5-6) White flakes.

(7) A glossy white sheet with photos of four top officers: Joe Givens, President, Dawson Mills. Donald Crisp, V.P. Daniel Hooten, President, Dawson Food Ingredients. John Page, General Manager, Edible Division. The head office of Dawson Mills is in Dawson, Minnesota 56232. The marketing and sales office of Dawson Food Ingredients is at 7901

Flying Cloud Drive, Minneapolis, MN 55344.

(8) News from Dawson Mills: \* The new soy protein facility, on its 220-acre site, is nearing completion. The new plant will enable Dawson to offer in early 1979 a range of spray-dried isolates, frozen spun fibrils, and frozen meat analogs. \* "The formation of Dawson Food Ingredients, Inc., a new marketing and sales company which will handle all Dawson Mills food products to U.S. and overseas markets. Dawson Food Ingredients is a wholly-owned subsidiary of Dawson Mills and is located in Eden Prairie, Minnesota, a suburb of Minneapolis."

(9) Product inquiry and sample request. (10) Soy protein isolate: Typical analysis. (11) Frozen meat analogs: Typical analysis. (12) Spun soy protein fibrils: Typical analysis. (13) Soy grits. (14) One sheet with two aerial color photos: \* The soybean crushing / oil extraction plant, which makes flakes, flour, and grits. \* The new food ingredients plant (to be in production spring 1979).

Note: A Spanish-language counterpart of this brochure also exists. Address: Dawson, Minnesota. Phone: 612/769-4386.

412. Miner, Bert D. 1976. Introduction. *USDA Farmer Cooperative Service. FCS Research Report No. 33*. p. 1. Jan. Edible Soy Protein: Operational Aspects of Producing and Marketing. [60 ref]

• **Summary:** "Edible soy protein is still waiting for its big chance. We hear and read much about the awesome need for protein to feed the multitude of hungry people around the world. We also hear and read much about the alleged inefficiency of producing animal protein as opposed to producing vegetable protein, particularly soy protein." Yet while there is a need for soy proteins, a significant demand for commercial products has not yet developed. "This report is limited to setting forth some of the economic and operational aspects of producing and marketing edible soy protein." Address: Farmer Cooperative Service.

413. *USDA Farmer Cooperative Service. FCS Research Report. 1976. Appendix—Companies producing and distributing soy products. No. 33. p. 53-82. Jan. Edible Soy Protein: Operational Aspects of Producing and Marketing. [60 ref]*

• **Summary:** Part I. "Companies producing and/or distributing under private label brands of textured vegetable protein products that meet the requirements of FNS Notice 219." (Note: FNS is USDA's Food & Nutrition Service). Lists every known company making such products (as of Sept. 1974), with the company address and the full name of each product. The following companies and brands are listed; (D) = Distributors: Allen Foods (D) Lasco; Archer Daniels Midland Co. TVP; Biggers Bros. (D) Farmbest Promate; Cargill Inc. Texturatein; Central Soya Co. Inc. Promosoy, Centex; Continental Coffee Co. (D) Continental; Continental Organization of Distributor Enterprises, Inc. (D) Code

Fortified; Embassy Grocery Corp. (D) Lucky Boy Pro-Tenda; Far-Mar-Co, Inc. Ultra-Soy; Federated Foods, Inc. (D) Parade Promate; First Spice Mixing Co., Inc. (D) Textite; Frozen Food Forum, Inc. (D) Frosty Acres; Galanides, Inc. (D) Galanides; General Mills, Inc. Bontrae (Frozen Hydrated or Dehydrated); Griffith Laboratories Griffith's GL-219, Promate, GSVP, GSPC; B. Heller & Co. (D) Heller's; Hollymatic Corp. (D) Hollymatic; Institutional Wholesalers, Inc. (D) Saxony; Lauhoff Grain Co., Inc. Vita-Pro; Marshall Produce Co. (D) Marshall; Miles Laboratories Maxten, Temptein; Nabisco, Inc. VMR I or II; National Institutional Food Distributor Associates, Inc. (D) NIFDA Promate; National Protein Corp. Textrasoy; National School-Pak (D) Promate; Nugget Distributors, Inc. (D) Nugget Promate, Nugget Magi-Pro; Oppenheimer Casing Co. (D) Textured Oppenheimer Pro; Portland Wholesale Grocery Co. (D) Preferred Stock; Ralco Foods SPF-200; Ralston Purina Co. SUPRO; S.E. Rykoff & Co. (D) S.E.R.; John Sexton & Co. (D) Sexton Protein Plus; A.E. Staley Mfg. Co. Food Service Div. Nutra-Mate; A.E. Staley Mfg. Co. Mira-Tex; Swift Edible Oil Co. Swift's Texgran, SFP-TA, Burger-Aide I; Sysco Corp. (D) Sysco and Sysco Promate.

New additions to the list: Custom Food Products, Inc. (D) CFP; Miles Labs. Pro-Lean; Industrial Grain Products Ltd. Perplus; General Spice, Inc. Sotex.

Part II (p. 70-81). "Companies producing and/or distributing under private label acceptable textured vegetable protein product mixes." Alberto-Culver Co. Milani; Bernard Food Industries, Inc. Tex-Pro; Biggers Brothers Inc. Farmbest; Continental Organization of Distributor Enterprises CODE; Federated Foods, Inc. Red & White or Parade; Kraft Foods. Kraft School Lunch Chili Mix & Textured Vegetable Protein. Kraft School Lunch Sloppy Joe Mix & Textured Vegetable Protein. Footnote: The textured vegetable protein component of the Kraft mixes is Promate #500-SL or Promate #100-SL manufactured by Griffith Labs. Lawry's Foods, Inc. Stretch; Milwaukee Seasoning Laboratories, Inc. MSL TVP, Flavormate; National Institutional Food Distributor Associates, Inc. NIFDA; National School Pak; North American Laboratory Co., Inc. Magic Menu; Nugget Distributors, Inc. Nugget; Sysco; Williams Foods, Inc. Williams Expand; The Golden Dipt Co. Golden Dipt/DCA.

Note: The above product mixes are used in the Type A school lunch. Typical mixes are for chili mix, meat loaf or meatballs, patty mix, pizza sauce, sloppy joe, spaghetti sauce, or taco filling. The name of the manufacturer of the textured soy protein ingredient is given for each. Address: Farmer Cooperative Service.

414. *USDA Farmer Cooperative Service. FCS Research Report. 1976. Edible soy protein: Operational aspects of producing and marketing. No. 33. v + 82 p. Jan. Excerpted in Soybean Digest. Nov. 1976. p. 20a-j. [60 ref]*

• **Summary:** Contents: Highlights. Introduction. Kinds of

soy products. Product uses. Production estimates and market outlets. Soy processes, equipment, capital and processing costs. Current good manufacturing practice. Market growth. Market potential for soy protein products. Appendix—Companies producing and distributing soy products.

The 8 chapters by various authors are each cited separately. A lengthy appendix titled “Companies producing and distributing soy products,” lists every known company making such products (as of Sept. 1974), with the address and the full name of each of the company’s textured vegetable protein products that meet the requirements of FNS Notice 219. (Note: FNS is USDA’s Food & Nutrition Service). Distributors with their own brands and original manufacturers are clearly distinguished.

Note: Dawson Mills is not mentioned in either of these lists, however on p. 2 of the report is a full-page photo with the caption: “Food scientist, Kris Olson, prepares test samples in Dawson Mills test kitchen.” Pages 51-52 are also devoted to photos of Dawson Mills. The caption on p. 51 (2 photos) reads: “David Hammond, soy specialties superintendent, studies soy specialty plant model used for planning and construction of Dawson Mills plant, below.” The caption on p. 52 (6 photos) reads: “Owen Oelsen, bacteriologist, runs a test in the Dawson Mills laboratory, while chemist Nancy Boese performs protein testing. Owen Oelsen works with fiber analysis equipment. Chemists Steve Owen and Tim Maus are engaged in product development experiments. Pilot size extruder located in laboratory.” Address: USA.

415. Lamm, R. McFall, Jr. 1976. The production of vegetable oil and vegetable oil products in the United States. *Virginia Polytechnic Institute, Department of Agricultural Economics, Research Division Bulletin* No. 118. 41 p. July. [17 ref]

• **Summary:** Contents: List of tables. List of figures. Introduction. The nature of production in the vegetable oil industry: Production of crude soybean oil and meal, production of refined soybean oil, production of cooking oil, production of margarine, production of shortening, production of mayonnaise and salad dressing, a note on concentration and vertical integration in the vegetable oil industry. Summary. Literature consulted.

Consolidation in the soybean crushing industry (p. 8-9): The *Census of Manufacturers* reports periodically on the number of soybean processing plants. This number grew from 26 in 1937, to 47 in 1939, to 133 in 1947. But in the early 1950s the number of plants began to decrease, though individual plants were increasing in size. There were only 117 plants in 1958, dropping to 102 in 1962 and 1967, then to only 94 in 1972.

Shortening (p. 25-26): In the late 1800s a surplus of cottonseed oil developed in the USA as a result of expansion of the cotton industry. It was discovered that this oil could be blended with lard without significantly changing the

properties of the lard. The blended product, made mostly by meat packing companies, was called “compound” and was the forerunner of modern shortenings. With the introduction of the hydrogenation process in 1909, hydrogenated vegetable oil (mostly cottonseed oil) quickly replaced “compound” as the preferred type of blended shortening.

Table 2.61 (p. 28) gives statistics on per capita consumption of fats and oils products including cooking oil, margarine, shortening, mayonnaise and salad dressing, butter, and lard each decade from 1910 to 1970. Consumption in margarine increased from 1.6 lb in 1910 to 11.0 lb in 1970. Butter decreased from 18.3 lb in 1910 to 5.3 lb in 1970.

Concentration and vertical integration (p. 35-36): Many products in the vegetable oil industry are produced at processing facilities with several “plants within one plant.” The arrangement reduces transportation and management costs, but it requires that the firm be either vertically or horizontally integrated.

“In the soybean processing industry three of the five largest producers are integrated vertically in the oil products business. These three firms are Central Soya, Anderson-Clayton, and Archer-Daniels-Midland. Central Soya processes crude soybean oil, refines vegetable oil, and has a subsidiary which produces margarine and mayonnaise. Anderson-Clayton processes crude soybean oil, refines vegetable oil, and produces cooking oil, margarine, shortening, and salad dressings. Archer-Daniels-Midland processes crude soybean oil, refines vegetable oil, and produces cooking oil, margarine, and shortening. Riceland Foods, a farmer’s cooperative, although not one of the five largest soybean processors in the soybean processing industry, is probably the single most integrated vegetable oil firm in the country. This company produces soybeans, processes crude soybean oil, refines vegetable oil, and produces cooking oil and shortening.” Address: Blacksburg, Virginia.

416. Pogeler, Glenn H. 1976. Biographical sketch. 2 p. Aug. 1. Unpublished typescript. 28 cm.

• **Summary:** Page 2 states: “Before joining the Department of Agriculture in 1970, Mr. Pogeler acted as team leader to a group of seven Cooperative Experts in conducting a series of Cooperative Workshops held in Turkey, Iran, and East and West Pakistan.

“Mr. Pogeler’s career has includes 32 years of Cooperative management in the Grain and Soybean Processing business. During this time he has served as:

“Director—National Soybean Processors Assoc. and served one term as Chairman of the Board of Directors, Chicago, Illinois. President & Director—Soybean Council of America, Inc., Arlington, Virginia.

“Director—National Council of Farmer Cooperatives, Washington, DC. Director—First National Bank, Mason City, Iowa.

“Director—North Iowa Fair Assoc., Mason City, Iowa.



Chairman—Board of Directors, Vegetable Oil Export Corp., Washington, DC.

“Chairman—Agricultural Committee, Mason City Chamber of Commerce, Mason City, Iowa. Member—Mason City Airport Commission, Mason City, Iowa.

“Secretary—Treasurer, Soy-Cot Sales, Inc., Des Plaines, Illinois. Member—Chicago Board of Trade, Chicago, Illinois.

“Member—American Soybean Association, Hudson, Iowa. Member—Peace Lutheran Church, Alexandria, Virginia. Chairman. Chairman—The Interagency Commodity Estimates Committee in USDA for Soybeans, Flaxseed, Cottonseed, and Oils.”

417. Quass, Donald W. 1976. Soy protein products: Soy Flour and grits. In: Archer Daniels Midland Co., comp. 1976. Edible Soy Protein Seminar. Decatur, Illinois. 220 p. See p. 86-106. Held at Moscow, USSR and Warsaw, Poland. [17 ref]

• **Summary:** Contents: History and justification. General manufacturing processes. Differentiation of products. Compositional information. Functional properties. Applications. Conclusion. Seven tables. Address: Director of R&D, Dawson Mills, Dawson, Minnesota 56232.

418. Arnett, Maralea. 1976. The annals and scandals of Henderson County, Kentucky, 1775-1975. Corydon, Kentucky: Fremar Publishing Co. See p. 144, 148-50.

• **Summary:** A map of Kentucky on the title page shows that Henderson County, in northwestern Kentucky, has a long north side that borders the Ohio River, just south of Indiana. In Chapter 10, titled “Agriculture is the county’s no. 1 industry,” is a section (p. 144) on Benjamin Edward Niles, who served two terms as state representative and was the first Hendersonian to become president of the Kentucky Farm Bureau Federation. After 1914 he gave all of his time to agriculture. A strong advocate of cooperatives, he “originated and sponsored the Ohio Valley Soy Bean Co-operative Association, the first in the State.” However he died in 1941, the year the co-op began operations.

Another section (p. 148-50) titled “Ohio Valley Soybean Co-operative,” states: “Long before soybeans became America’s no. 1 cash crop, the farmers in Henderson County had formed the Ohio Valley Soy Bean Co-op to market their product. Again, Ben Niles was the leader, but a group of farmers went with the county agent to inspect various soybean plants in adjoining states and had to chew soybeans all day to determine water content. G.H. McMurty says his addiction to soybeans as a snack, in place of peanuts, dates from that day. On June 18, 1941, the grain elevator had been remodeled at a cost of \$60,000 and was formally opened as a co-op. G.W. Allen was made manager and the price jumped 20 cents per bushel and has continued to climb. When the Kentucky Soybean Association was organized in 1970, a Henderson man, Jim Esche, was elected president.

A full-page photo shows the outside of the Ohio Valley Soy Bean Co-operative. No date is given. Address: Librarian, Henderson County, Kentucky.

419. Dawson Mills. 1976. Annual report: 25th anniversary. Dawson, Minnesota. 20 p. 22 x 28 cm.

• **Summary:** An excellent historical document, with many photos. Contents: To our members: Fiscal 1976, History, by E.S. Boraas, chairman of the board, and Joe Givens, president and general manager. Dawsoy—“Protein for the world from Midwest U.S.A.” 25 year time capsule—photos and tables. A quarter century of progress (basic statistics). Bar graph of soybean processed by year (1952-1976). Patronage refunds—1976. Comparative balance sheet. Comparative statement of operations (for the year ended 31 Aug. 1976). Distribution of net savings.

History: 1956—The decision was made and the capital borrowed to increase the capacity of the plant machinery to allow processing of 80 tons of soybeans daily. This cut unit costs so that good returns were earned for the soybean patrons. 1959—A new solvent extractor and other equipment were installed which increased the daily through-put to 200 tons. This new equipment was designed in Dawson and developed with the cooperation of Crown Iron Works Co. in Minneapolis. 1964—The 1959 extraction system was replaced with new equipment that would process 600 tons of soybeans/day into oil and meal. 1971—Another extractor and related equipment were added which brought processing capacity to 1,300 tons of soybeans daily. 1972—Late that year Dawson Mills began to manufacture edible soy grits; since that time many thousands of tons have been made. “Most of these grits have been distributed by ‘Food for Peace’ programs and have been used to improve diets of needy people all over the world.” 1973—“Prices of grain, meat, and other food items skyrocketed to unprecedented heights. There was much publicity about worldwide food shortages and the importance of vegetable protein to improve the diets of all people. Because of the optimistic future painted, the decision was made to go further into the manufacture of soy foods... a Soy Specialties plant was built to manufacture defatted soy flakes, soy flour and textured soy flour.”

The page titled “Dawsoy” states: Our “brochure describing Dawsoy products was translated into four foreign languages and has been distributed widely in Latin America, the Far East, the Middle East, and Europe, as well as in the U.S.A. Our representative in Europe has made numerous contacts which have been fruitful and the sale of Dawsoy products in Europe is gaining momentum.

“In October, a member of the Research Department was involved in presenting a seminar in Moscow, Russia and one in Warsaw, Poland. Another member of the staff has just returned from two weeks of promotion work in Europe.

“Soy grits, which was Dawson Mills’ entry into the food market, continued to be the large volume sales product. To

date most of our soy grits have been used in the 'Food for Peace' program; however, there has been a shift to more domestic use of this product." Soy flour has made steady sales growth. "The textured soy products [textured soy flour], which were large sales items by other companies in 1972-1973, have been less in demand with the advent of lower meat prices. Dawson Mills has just begun to penetrate this market." The people associated with "Soy Specialties" are "dedicated to provide high quality soy products to the food industry and additional net savings for the member/owners of Dawson Mills." As of 1976 Dawson Mills: Has 169 full time employees. Has 158 member elevators. Processed 14,645,123 bushels of soybeans during the year, or (on average) 42,450 bushels/day. Had total sales of \$81,875,698 (62% from soybean meal and 38% from crude soybean oil) and net savings of \$2,503,435. Paid patronage refunds of 16.5 cents/bushel. Has total assets of \$22.777 million. Address: Dawson, Minnesota. Phone: 612/769-4386.

420. Abrahamsen, Martin Abraham. 1976. Cooperative business enterprise. New York, NY: McGraw-Hill. xix + 491 p. Illust. 25 cm. \*

• **Summary:** A valuable study that explains clearly how farmer cooperatives operate.

421. *Business Week*. 1977. The billion-dollar farm co-ops nobody knows: They have take over a third of the \$165 billion agribusiness market, with revenues doubling to \$57 billion. Feb. 7. p. 54-58, 63-64.

• **Summary:** This critical article, which focuses on Farmland Industries, Inc., was published just a few days before Far-Mar-Co members voted to approve a merger with Farmland. In the 6 years from 1970 to 1976, Farmland's sales tripled to \$1.9 billion under CEO Ernest Lindsey. A table (p. 54-55) shows the ten largest U.S. farm co-ops, in descending order of their 1975 sales (in million dollars; Source: Cooperative annual reports): 1. Farmland Industries \$1,529. 2. Associated Milk Producers \$1,478. 3. Agway \$1,329. 4. Grain Terminal Association \$1,261. 5. Land O'Lakes \$1,124. 6. Far-Mar-Co \$1,007. 7. Gold Kist \$828. 8. Illinois Grain \$806. 9. Indiana Farm Bureau Cooperative \$697. 10. Farmers Grain Dealers Association of Iowa \$652. In 1975 the top ten accounted for 20% of the total sales of all U.S. farm co-ops.

These rapidly growing co-ops, which are owned by farmer-members, were originally formed to market the crops of their farmer-members. But their second business has become buying supplies in bulk at reduced prices and reselling them to their members. Now they are starting to get into agricultural exports in a big way. These co-ops are not well known outside the Midwest. Land O'Lakes, for example, is the nation's largest maker of butter. The article refers to Farmland as a "giant" and the "most aggressive co-op" in the United States, but notes that the 7,500 other U.S.

farm coops are also growing at about the same stunning rate. The co-ops, "many linked in intricate, mutually supportive networks, are emerging as the most important force in U.S. agribusiness"—a \$165 billion market.

The writer adds that until recently, the growth of large cooperatives has been one "of the best kept secrets" in American business, and that these huge enterprises provide unfair competition to noncooperative businesses because of tax breaks (at the end of each year, they return all profits—ranging from about 2% to 20% of sales—to their farmer-owners, and do not have to pay federal income taxes on these returned profits; so co-op tax rates are only about one-third those of their industrial competitors) and exemption from antitrust laws (which, for example, limit mergers and acquisitions). The refunds and many benefits of co-ops have attracted farmers like a magnet; today about 83% of all farmers belong to at least one co-op. The writer pictures cooperatives as having "forced independent farm suppliers out of business in droves."

422. *J. of the American Oil Chemists' Soc.* 1977. Continuous solvent extraction... The early beginnings of a giant industry. 54(3):202A-204A. March.

• **Summary:** The origins of solvent extraction: On 13 Nov. 1855 a patent to extract fat from bones and wool using carbon bisulphide was issued in France to E. Deiss. On 3 Dec. 1856 additional patents were issued to the same inventor covering extraction of oil from oil-bearing seeds.

In the USA a batch solvent extraction plant at Southport Mills, New Orleans, Louisiana, ran in 1917-1919 on aviation-type gasoline and later on benzene to remove oil from cottonseed cake, copra, palm kernel, and other oleaginous material. The experiment ended when business conditions returned to normal in the USA after World War I.

The origins of continuous solvent extraction are integrally linked with soybeans, largely because soybeans contain less oil than most oilseeds. "The end of World War I left Germany with a shortage of fats and oils as well as animal feedstuffs. The Germans began to seek better ways to get the most out of their imported Manchurian soybeans. Two continuous solvent extractors using countercurrent principles were developed. The Bollman [Bollmann], or basket, extractor, was patented in Germany in 1919 and 1920; the Hildebrandt, or U-tube, extractor, was patented in 1934.

"Solvent extraction also was being tried in the United States. In Monticello, Illinois, the Piatt County Soybean Cooperative Company operated a batch plant in 1923-24; Eastern Cotton Oil Company operated a Bollman extractor from Germany, at Norfolk, Virginia, in 1924-25. Both ventures proved unprofitable."

"Presco Oil Co. in Norfolk, Virginia, ran a solvent extraction operation for several years in the 1920s. A relatively small quantity of soybeans was processed. "Most early efforts at solvent extraction failed at least partially

because of a lack of sufficient volume of soybeans.

"The best publicized effort in the United States was part of Henry Ford's soybean research plant at the Edison Institute (see accompanying article). Ford perceived farmers as his prime customers for his Model T automobile and decided if he wanted farmers for customers, he would have to find a new way for industry to become a customer for farmers.

"ADM and Glidden initiated large-scale solvent extraction of soybeans (in the United States) in 1934,' John Cowan recently wrote in an introduction for a forthcoming volume on soybean oil. 'By importing equipment from Germany for the manufacture of oil, meal, and phosphatides. The plants processed 100 tons a day.'

"The ADM and Glidden plants were both in Chicago and both utilized Hildebrandt, or U-tube, extractors, with a petroleum of the hexane-type as a solvent. The ADM plant went on stream in March 1934, A.E. MacGee says [in a 1947 article for *Oil Mill Gazetteer*], with the Glidden plant following about November 1934.

"On Oct. 7, 1935, the Glidden plant at 1845 N. Laramie Ave. reopened after being shut down for five weeks. At 11:40 that morning the plant was destroyed in an explosion that shattered windows as far as a mile away and rained bricks on nearby structures. Eleven persons died and 43 were injured... The explosion apparently was triggered by a solvent leak... Cowan says the plant was immediately rebuilt at double its original capacity.

"In those early 1930s while Ford was looking for industrial uses for soybeans and the first large-scale plants were rising in Chicago, Proctor & Gamble in Cincinnati had set Norman F. Kruse to work on soybean oil research. P&G was examining soybean oil for use in Crisco [shortening] and salad oils. In January 1933, P&G shifted a recent Purdue graduate, R.P. Hutchins, to the project as Kruse's assistant. Kruse and Hutchins became friends, a friendship that would endure corporate animosity more than a decade later when each was with a different firm.

"'Kruse was a wonderful man,' Hutchins recalls. 'He set about to teach me everything he knew. He was completely unselfish.' Kruse directed lab work with Hutchins, letting Hutchins write the reports so Kruse could spend more time working with the pilot plant crew.

"In September 1936, Kruse left P&G for Central Soya and Hutchins became head of P&G's soybean research efforts. Hutchins says Kruse left because he wanted to work on soybean oil extraction on a larger scale. If so, Kruse went to the right place. In 1936, the two-year-old Central Soya firm sent Kruse and Harry C. Offutt to Germany to study continuous extractors. Kruse and Offutt recommended that Central Soya buy a Bollman (basket) extractor." In Jan. 1937, during a trans-Atlantic phone call, Dale W. McMillen, Central Soya's founder, to buy the largest extractor available.

Years later, in 1966, Harold W. McMillen, Dale's son, told a dinner audience in Indiana that this decision came in the

midst of the Great Depression, when solvent extraction was a new process, "and the future of the soybean was still regarded with skepticism by many."

In Nov. 1937 the plant went on stream in a five-story structure beside a cluster of tall (110 feet) silos that increased Central Soya storage capacity by 1 million bushels. With a capacity of 275 tons/day of soybeans, the plant was the largest of its time in the USA.

In the fall of 1936 Honeymead Products Co. of Cedar Rapids, Iowa, opened a plant, based on the German process, with a capacity of 100 tons/day of soybeans.

"Kruse's former employer, Proctor & Gamble, had a subsidiary firm in Louisville [Kentucky] that produced cottonseed oil for P&G products, Hutchins says. Cotton acreage around Louisville was declining, soybean acreage was increasing. P&G decided to buy a Bollman extractor for a new plant in Louisville.

"In September 1939 with ground broken and foundations started in Louisville, and the extractor sitting on the Hamburg docks for imminent shipment to the United States, England declared war on Germany and a blockade of her ports. Hutchins recalls the German manufacturer said the extractor could be delivered via overland routes to Italy, still neutral at the time, for shipment to the United States. P&G, perhaps mindful that its English operations depended on government allocation of scarce raw materials, decided not to try to circumvent the English blockade. Instead, P&G turned to Piqua, Ohio where French Oil Mill's C.B. Upton recently had hired Harry Robinson as solvent plant superintendent. Robinson had been with Central Soya when the Decatur, Indiana, plant was built, but apparently he and Kruse had clashed. Robinson left and brought his know-how to French Oil.

"French Oil told P&G it could produce a virtual copy of the Hansa-Muhle V. Bollman unit stranded on the Hamburg docks. Allis-Chalmers preparation equipment was to be used, but the extractor was the first one to be built in the United States by French Oil. The extractor based on Central Soya's unit, went into operation during February 1941." Continued.

423. *J. of the American Oil Chemists' Soc.* 1977. Trichloroethylene. 54(3):205A. March.

• **Summary:** "One effort to produce a small, safe [solvent] extractor during the 1930s and 1940s led to an unexpected result—the death of cattle" that ate the meal. In the USA early work on the development of a solvent extractor that used trichloroethylene was done at Iowa State University. This solvent was selected because it is nonflammable at normal temperatures.

But many articles had been published in Europe, some before World War I, warning of the potential dangers of feeding to cattle trichloroethylene extracted soybean meal (TESOM). Yet in the late 1930s through about 1947, soybeans were extracted with trichloroethylene in quite a



few small plants in the USA with no apparent bloody noses or deaths, says John Cowan [NRRC, Peoria, Illinois].

L.K. Arnold of Iowa State Univ., now retired in Texas, says "Iowa State shipped quite a lot of meal to Cornell University [Ithaca, New York] where tests were run on two sets of cattle." Cornell reported the meal was non-toxic, and Arnold and co-workers assumed that evaluation was correct. But today Arnold thinks that toxicity didn't show up because "the amount they used in the feed mixture was too small."

"Whatever the reason, the danger went unperceived. Iowa State licensed Crown Iron Works in Minneapolis to sell the extractor Crown Iron had been in the extraction industry before, but with the end of World War II had begun to look for ways to diversify, according to Joe Givens, now manager of Dawson Mills at Dawson, Minnesota. He was to be manager of Crown Iron's pilot extractor plant.

"Iowa State has built a plant in Plainfield, Iowa. Crown Iron's first plant began to go up in Glencoe, Minnesota, in 1949 and was completed in 1950. Plants were to follow rapidly at Blooming Prairie, Minnesota; Granite Forks, South Dakota [sic, Grand Forks, North Dakota]; Townsend, Indiana; Vermont, Illinois; and Fremont, Nebraska.

"But in December of 1951, Givens recalls, the roof fell in. Cattle had begun to keel over and die within 35 days. The meal reacted in the ruminants' digestive tract in a unique and fatal manner. Swine and poultry fed the feed did well.

"By January of 1952, I would say all of the plants had closed down with the exception of Dawson Mills," Givens says." At Dawson, Givens removed the pressure toasting and "scrubbed the meal in process with live steam that either removed the trichlorethylene or the toxic material. The Dawson plant also labeled its product 'not for ruminants.'"

Trichloroethylene plants built by Crown Iron Works were "converted to hexane solvent and the firm stayed in the solvent extraction industry, building its first 200-ton extractor in 1959; it recently completed a 2,000 ton plant with two extractors and is finishing a 1,500 ton one-extractor plant for MFA [Missouri Farmers Assoc.] this year. It also markets a desolventizer toaster-dryer-cooler."

Dr. Cowan believes that "trichloroethylene probably reacted with SH groups in the meal to produce agents that caused the bloody nose and aplastic anemia." "The precise reaction between solvent and meal and cattle was never pinpointed."

424. Far-Mar-Co, Inc. 1977. Far-Mar-Co: The sources for all seasonings (Ad). *Food Engineering* 49:5. April.

• **Summary:** This full-page ad states: "Just as you came to know us as a leading source for textured vegetable protein with our incomparable Ultra Soy, we're confident you will recognize Far-Mar-Co as your source of all seasonings." Address: Far-Mar-Co, Inc., 960 North Halstead, Hutchinson, Kansas 67501.

425. Seligsohn, Mel. 1977. The co-ops are coming! The co-ops are coming!: A new era in farm co-ops presents food companies with both problems and new opportunities. *Food Engineering* 49:16-18, 20. April.

• **Summary:** In this article about the bigness of cooperatives, the writer found the size of the merger between Farmland Industries and Far-Mar-Co to be "stunning." Far-Mar-Co will become a subsidiary of Farmland, which is based in Kansas City, Missouri. Ernest T. Lindsey, president of Farmland for the last 10 years, is now CEO of the new conglomerate. Do co-ops have too much power? Food companies are very upset about the much lower tax rates applied to co-ops.

"Those accustomed to viewing co-ops as plodding, quaint relics of the era when farmers banded together for mutual protection to combat hard times of one sort or another," he continued, had an incorrect concept of modern cooperatives. The new co-op combination of Farmland and Far-Mar-Co will have sales of \$3 billion, making it America's 100th top sales performer on the Fortune 500 list.

There are some 4,500 farm co-ops in America. This decade has seen their total revenues more than double to \$57 billion, or more than one-third of the U.S. agribusiness total. Farm co-ops have expanded even faster than corporations in U.S. agribusiness. Their share of the farm products market increased from 20% in 1950 to 28% in 1970.

The largest co-op in America, Farmland has 500,000 members with sales of \$1.5 billion in 1975 and pre-tax income of \$196.9 million. Far-Mar Co., America's sixth largest co-op, is owned by 250,000 farmers and in 1975 had sales of \$1 billion. The largest grain marketing cooperative in the USA, it owns 600 grain elevators and expects to sell 330 million bushels of wheat this year, or 15% of the nation's total crop. Address: News Editor.

426. Hall, John B. 1977. Soy protein, wheat starch and vital wheat gluten in convenience foods. *Cereal Foods World* 22(4):144-46, 148. April. [3 ref]

• **Summary:** The following figures are for estimated 1977 volume and approximate list price per pounds for various soy protein foods: Soy flour and grits (55% protein on a dry weight basis), 540 million lb, \$0.15-0.15/lb. Soy protein concentrates (70% protein), 80 million lb, \$0.34-0.36/lb. Soy protein isolates (90% protein), 80 million lb, \$0.70-0.76/lb. Textured soy flour (55% protein) costs \$0.25/lb. Spun soy fiber (90% protein) costs \$0.90.

"Soy flour for human consumption was first made in the United States in 1926. The product was sold as 'health flour' and had a very limited market, as most people could not tolerate the bitter flavor." But over the years, product quality has steadily improved. Today the "edible soy protein industry has sales of an estimated \$180 million annually. Approximately 45% of this would be the sale of soy flour (including textured soy protein). Soy protein concentrate

would provide approximately 16% and soy protein isolate approximately 33%. The remaining 6% would be other further processed soy products.”

**Vital wheat gluten:** The projected annual growth of the market should exceed 8%. “Of the current (1977) estimated annual [U.S.] consumption of 110 million pounds, approximately 40% is currently imported with a 10% tariff. The growth of convenience foods will provide an increased market for vital wheat gluten.

The estimated edible utilization of vital wheat gluten in 1975 (according to a 1976 private study by Technomic Research Associates) was: Baked goods (rolls, specialty breads, crackers/breadsticks) 55 million lb, 69% of total use. Prepared cereals 12 million lb, 15% of total use. Pet foods 7 million lb, 8% of total use. Meat analogs 3 million lb, 4% of total use. Processed meats 1 million lb, 1% of total use. All other foods 2 million lb, 3% of total use. In these foods, the gluten serves as a binder and adds protein. A photo shows J.B. Hall, the author.

**Update:** 1995. Oct. 20. Talk with Giles Kinast in Personnel Dept. at PMS Foods. John Hall died several years ago. His wife, Doby or Dobie Hall, may still live in the area of Kansas City or Overland Park, Kansas. Address: Far-Mar-Co, Inc., 960 North Halstead, Hutchinson, Kansas 67501.

427. Olson, Gary. 1977. Automation keys new plant at Honeyamead. *Mankato Free Press (Minnesota)*. May 31. p. 15. Section 4.

• **Summary:** An aerial photo shows the Honeyamead Products Company’s huge new, automated soybean processing plant in West Mankato. The company’s old plant is in the background. Company President Lowell Rasmussen says the new plant can unload as many as 25 trucks per hour, compared with 8-10 before; they unload their soybeans into “dump pits” and leave empty 30 seconds later.

“Unloaded beans are lifted in 24,000 bushel-per-hours ‘legs,’ or conveyors, to the top of the massive 156-foot ‘headhouse,’ where they are either processed or temporarily channeled to eight storage bins with a 340,000 bushel capacity.” Address: Staff writer.

428. *Food Technology*. 1977. Dawson Mills buys General Mills’ technology. May. p. 216.

• **Summary:** Dawson Mills (Dawson, Minnesota) has purchased equipment and exclusive rights to soy protein isolate technology and spun isolate products from General Mills (Minneapolis, Minnesota). General Mills previously sold these products to institutions and food processors under the Bontrae trademark.

Dawson Mills is moving the newly-acquired equipment to its headquarters; it will be located near the present Dawson Mills’ processing plant. Construction of a new isolate processing facility began in April.

Dawson Mills’ Specialties Division plans major expan-

sions in the protein area both in the USA and overseas.

429. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Farmland Industries, Inc.

**Manufacturer’s Address:** St. Joseph, Missouri.

**Date of Introduction:** 1977. May.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Note: On 2 May 1977 Far-Mar-Co became part of Farmland Industries. So Farmland was now running the old Dannen Mills plant in St. Joseph, Missouri.

430. *Food Processing (Chicago)*. 1977. Spun isolates. June. p. 32.

• **Summary:** Dawson Mills of Dawson, Minnesota, is constructing a new 60,000 square foot food plant on a 200-acre site for making soy protein isolate, “spun isolate fiber, and spun analog products.” Estimated cost: \$9.5 million. Expected completion date: late 1978. Architect: Zejdlik, Harmala, Hysell, Delapp, Inc. Features sanitation in processing to meet USDA requirements.

431. **Product Name:** Untoasted Soy Flour, Toasted Soy Flakes, and Soy Grits (Bulk and Bagged).

**Manufacturer’s Name:** Honeyamead Products Co.

**Manufacturer’s Address:** P.O. Box 29, Mankato, MN 56001.

**Date of Introduction:** 1977. June.

**New Product–Documentation:** *Soybean Digest Blue Book*. 1977. p. 33.

432. Honeyamead Products Co. 1977. Honeyamead Products [Golden Glow Soybean Meal; Linseed meal and sunflower meal] (Ad). *Soybean Digest Blue Book*. p. 117. June.

• **Summary:** Golden Glow soybean meal comes in high-energy (47.5%) and regular (44%) protein. Available bulk or sacked. 100 lb burlap or 50 lb paper. Address: P.O. Box 29, Mankato, Minnesota.

433. Miner, Bert D.; Gallimore, William W. 1977. Soy protein use can increase 71% by 1985. *Farmer Cooperatives* 44(4):4-6. July. Also issued as Farmer Cooperatives Reprint 4, May 1977 (4 pages, unnumbered).

• **Summary:** Table 2, titled “Estimated industry production of soy protein products, 1976 and 1985” gives statistics divided into human food uses and industrial uses—in million pounds. For human food uses: Soy flour and grits is expected to increase from 395 in 1976 to 610 in 1985. Textured soy flour and grits from 79.0 to 152.5. Soy protein concentrates from 66.5 to 119.0. Textured soy protein concentrates from 6.6 to 17.8. Soy protein isolates from 47.2 to 94.5. Textured soy protein isolates from 2.4 to 9.4.

For industrial uses: Soy flour and grits is expected to

increase from 245 million lb in 1976 to 480 in 1985.

Textured soy flour and grits from 61.2 to 144.0. Soy protein concentrates from 17.5 to 38.5. Textured soy protein concentrates from 0.9 to 1.9. Soy protein isolates from 40.2 to 49.0. Textured soy protein isolates from 0 to 0. Address: 1. USDA FCS (Farmer Cooperative Service); 2. USDA ERS (Economic Research Service).

434. Menshaw, Ben. 1977. How does soy oil stack up against other oils. *Soybean Digest*. Aug. p. 16h.

• **Summary:** Soy oil has taken a taken a dramatic lead in use in the edible oils industry—for six main reasons: “(1) High level of unsaturation (54% linoleic acid and 8.3% linolenic acid).” (2) Liquid oil over a relatively wide temperature range (minimum 5-hour cold test). “(3) Can be hydrogenated under highly selective conditions for blending with semisolid or liquid oils. (4) Soy oil is slow in palmitic acid for utilization as a pourable, semisolid oil due to crystal structure. (5) It can be processed by removal of phosphatides, trace metals and soaps for a relatively stable oil. (6) It has tocopherols present as a natural antioxidant.” Address: Riceland Foods, Stuttgart, Arkansas.

435. Dawson Mills. 1977. Dawson Mills breaks ground for isolate facility (Leaflet). Dawson, MN 56232. 1 p. Undated. 28 cm.

• **Summary:** A large photo shows four men at a ground-breaking ceremony, three wearing hard-hats and one holding a shovel. They are: Charles Kretchman, President of Dawson Chamber of Commerce; Joe Givens, President of Dawson Mills; Dan Hasslen of Hasslen Construction Company; and Ephriam Boraas, Chairman of the Dawson Mills Board.

At the top of the sheet is Dawson Mills’ logo (a blue-green triangle in a circle) followed by “Quality soybean products.”

“On September 23, 1977, Dawson Mills formally broke ground for a \$10 million soy isolate facility. The 100,000 square feet building will be situated on a 220 acre site one mile east of Dawson.”

“The new facility will provide Dawson Mills with annual production capacity of approximately 9 million pounds of isolates, spun fiber, and frozen flavored meat analogs. Entry into the isolate and analog market will broaden Dawson’s present edible product line of soy white flakes, flours and grits.

“Completion of construction is scheduled for November, 1978 with production and market entry planned for early 1979.”

Note: In Oct. 1976 Dawson Mills was considering the purchase of General Mills’ soy protein isolate plant in Cedar Rapids, Iowa. In about May 1977 they purchased the plant and process for \$10 million, then moved it to the outskirts of Dawson, Minnesota. Address: Dawson, Minnesota.

436. *Mankato Free Press (Minnesota)*. 1977. New plant

benefits Honeymead, city. Oct. 31.

• **Summary:** A large aerial photo shows Honeymead Products Company’s new soybean processing plant in west Mankato. The new plant is located next to the former one. Construction began in 1974 and the new plant began operating in June 1976. The soybean processing capacity is 75,000 bushels/day.

437. *Mankato Free Press (Minnesota)*. 1977. Honeymead works to reduce noise. Oct. 6. p. 2. Business section.

• **Summary:** Honeymead Products Co. is working to reduce noise at its new soybean processing plant in west Mankato.

438. **Product Name:** Soybean Oil, and Soybean Oil Meal. **Manufacturer’s Name:** Gold Kist.

**Manufacturer’s Address:** Marks, Mississippi.

**Date of Introduction:** 1977.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** Dunn, John R. 1981. “Re: History of U.S. cooperative soybean processors.” Letter to William Shurtleff at Soyfoods Center. 3 p. Gold Kist operated a soybean crushing plant in Marks, Mississippi, from 1977 to 1981.

439. Honeymead Products Co. 1977. Plant statistics. Mankato, Minnesota. 3 p. Unpublished typescript.

• **Summary:** Gives statistics for three parts of the operation: 1. Plant statistics: Area (26 acres), bean processing capacity (26 million bu/year), oil refining capacity (657 million lb/year, equivalent to the oil from about 57 million bushels of soybeans).

2. Oil refinery statistics: Oil storage (hydrogenated, liquid, total), oil loading, refinery, hydrogenation plant, deodorizer capacities.

3. Bean processing plant statistics: Bean storage (exceeds 3 million bushels), rail unloading, soybean truck loading, bean drying and cleaning, meal loading, meal storage, bean processing, edible products plant (edible soy flakes and Honeysoy soy flour), hydrogen and nitrogen generators, boiler plant, meal sack warehouse (1,000 tons of sacked meal can be stored).

440. Dawson Mills. 1977. Annual report. Dawson, Minnesota. 10 p. 22 x 28 cm.

• **Summary:** In “Report: To our members” (p. 1-2), E.S. Boraas (chairman of the board of directors) and Joe Givens (president and general manager), note for the fiscal year ended 31 Aug. 1977, that records were set in bushels of soybeans processed, total sales (\$113 million), average price paid for soybeans (\$7.37/bushel), average price received for meal (\$203/ton). The dominating market factor during the year was the short soybean crop produced during the drought of 1976 in our trade area.” It was half the size of the 1977



crop now coming to market. This meant higher transportation costs and higher prices paid for the soybeans. Thus there was a net savings of minus \$1,171,626. "A large number of soybean processors showed similar losses. This is the first loss year your cooperative has had in the last 25 years of doing business." Because of this loss, no dividends were paid on common or preferred stock, and no ownership capital was retired.

Yet such a loss gives occasion to reflect: "Over \$31 million has been saved by operations as allocated to patrons over the last 25 years. \$14 million has been paid back to patrons in cash refunds. Dawson Mills is in strong financial condition."

"On January 19th a special meeting of the stockholders approved plans to manufacture isolated soybean protein. This project marks the beginning of a new phase in the development of your cooperative. Manufacture of products from isolated soy protein requires a higher level of technology than previous products manufactured. The new products will expand and diversify the soy specialty product line and should result in increased earnings for our patrons."

On page 3 is a full page color architectural drawing (aerial view) of a soy isolate plant (and immediate surroundings) for Dawson Mills by Zejdlik, Harmala, Delapp, Inc., architects of Minneapolis.

The next page, titled "Isolate report," states that the new facilities are under construction on a 220 acre site located one mile east of Dawson. The process building, warehouse and office will cover about 1½ acres and have a total floor space of 100,000 square feet. The \$10 million project, including water treatment facilities building and equipment installation is scheduled for completion in November, 1978. Soy protein isolate is made by further processing defatted soy flour or flakes. The new facility will also have specialized equipment capable of manufacturing meat analogs. It will spin the soy isolate into a fibrous material which has many characteristics similar to meat. "Color and flavor are added to produce a final product that is like ham, beef, chicken or fish. Although the current market for these products is limited, the potential for growth appears to be very good. The slogan 'Protein for the World from Midwest U.S.A.' is Dawson Mills' commitment to produce high quality soy products..." Photos show: (1) Three men at ground breaking. (2) The first floor of the huge building under construction. (3) Joe Givens. (4) Board of directors.

Also contains sections on: Soybeans processed (graph). Cooperative elevator patronage (including GTA elevators for the first time). Comparative balance sheet. Statement of operations.

Note: No mention is made of Dawsoy specialty products or of General Mills. Address: Dawson, Minnesota 56232. Phone: 612/769-4386.

441. Bramblett, James. 1978. Co-op elevator provides on-

farm convenience: These farmers grabbed a few more cents per bushel by buying an elevator and forming a small local co-op. *Soybean Digest*. Jan. p. 12.

• **Summary:** There is an alternative to on-farm storage of soybeans. 23 farmers from Crittenden County, Arkansas, each bought 5,000 shares at \$1 each to purchase an elevator with 500,000 bushels storage capacity and form the Critco Grain Coop. It would have cost 5-6 times as much if they had built it themselves. "The group hired a non-stockholder, John Eisler, to manager the operation." Eisler, who had previous elevator experience, hedges everything as soon as its brought in. Eisler says it costs them 7½ cents a bushel on average to unload soybeans, 4½ cents to load them out again, and 2 cents a month storage costs. The alternative is for local farmers to drive their soybeans to Memphis, Tennessee, and wait for up to 7 hours to unload. The members agree that "the greatest asset is having practically unlimited on-farm storage for only \$5,000."

About 58% of the storage business has come from stockholders; the other 42% has come from area farmers. Both are treated alike, except that at year's end, the stockholders divide any profits they've earned. During the first 3 years, the owners have earned an average of 3 cents per bushel on every bushel handled and stored at the facility. A photo shows the elevator.

442. Herron, Steve. 1978. Local elevator sells soybeans direct: Farmers get more for their beans at this Iowa co-op. *Soybean Digest*. Jan. p. 13.

• **Summary:** Last year Farmers Co-operative Elevator at Albert City, Iowa, sold 695,000 bushels direct to a Japanese grain buying firm. Not many regional co-ops export grain for dollars. "By making direct sales, the elevator saves brokers commissions." That means about 10 cents more per bushel for the farmer. Of all the grain handled by co-ops in Iowa, only 7% is exported. About 80% of the soybeans grown in the Albert City area have white hilums, making them good for human consumption. Manager Bruce Anderson hopes to contract a year in advance for a certain quantity and quality of soybeans. The Japanese are interested in large quantities of good quality edible, white hilum soybeans.

About 2½ years ago Anderson first made contact with a Japanese trading firm. He visits their New York office regularly. They come to Albert City once in the summer and once at harvest time to see how the soybeans are handled, stored, and separated. The process builds confidence. "The Japanese like to know who they're dealing with. They like to do business with people they feel they can trust."

443. *Food Processing (Chicago)*. 1978. Ground broken for isolate facility. Feb. p. 16.

• **Summary:** Dawson Mills (Dawson, Minnesota) has broken ground for a \$10 million soy protein isolate facility, with completion scheduled for Nov. 1978. The 100,000 square

foot building will be situated on a 220 acre site just east of Dawson. The new plant will have an annual production capacity of 9 million lbs of isolates, spun fiber, and frozen flavored meat analogs.

Note: The groundbreaking took place on 23 Sept. 1977.

444. Thurston, Stanley K. 1978. Improving cooperative marketing of Mississippi Delta soybeans. *USDA Economics, Statistics, and Cooperatives Service, Service Report No. 157*. 63 p. May. [10+ ref]

• **Summary:** Contents: Highlights. Background and problems. Soybean production: Production in the study area, projected 1985 production. Grain elevators and soybean processors: Number and capacity of elevators, river elevators, number and capacity of processors, export firms and port elevators. Cooperative elevator facilities. Cooperatives' grain movements. Transportation aspects: Rates, transportation costs relationships, prospect for railroad improvements, waterway users tax. Pricing and price relationships. Projected 1985 cooperative volume. Evaluation of market outlets: Domestic processors, export outlets, export demand, government export programs. Alternatives for a improved system.

"Highlights: 1. Soybean production for the 43-county study area for the 1976 crop was 91 million bushels—7% of the U.S. total. Mississippi accounted for 48% of study area soybean production; Louisiana, 42%; and Arkansas 10%. Projected 1985 soybean production for the study area is 105.5 million bushels, an increase of 16% over 1976."

"4. There are five major soybean plants that process soybeans from the study area. They have the ability to crush about 4,650 tons of soybeans daily." Address: U.S. Dep. of Agriculture, Economics, Statistics, and Cooperatives Service, Washington, DC.

445. *Mankato Free Press (Minnesota)*. 1978. Yugoslavs to visit Honeymead, study soybean oil. June 22. Business section.

• **Summary:** A team of six Yugoslavian oil processing technicians will visit Mankato Friday and Saturday. They will tour the Honeymead plant Friday morning and visit several area farms on Saturday as part of a 15-day tour of the USA sponsored by the Minnesota Soybean Growers Association and the American Soybean Association.

446. *Mankato Free Press (Minnesota)*. 1978. Yugoslavs impressed by Honeymead plant. June 24. Business section.

• **Summary:** Previously Yugoslav companies have imported crude soybean oil. They would like to be able to import soybeans and crush them in Yugoslavia to make soybean oil and meal. In Yugoslavia farmers treated almost as second-class citizens. But the six team members said that in the USA the farmers talked like professors. One processor was impressed with the cleanliness of the Honeymead plant.

447. *Food Processing (Chicago)*. 1978. Soy flakes, four & grits [Honeymead Products Co.]. June. p. 40.

• **Summary:** In Mankato, Minnesota, Honeymead Products Co. has finished construction of a 15,500 square foot process area, bag warehouse and bulk storage facility. EMI Corp. did the process and structural design. Structural design also by Conkey & Associates. A color photo shows the buildings.

448. LeMaire, W.H. 1978. Bacon analogs... Exciting possibilities. *Food Engineering* 50(6):ef-14, ef-15. June.

• **Summary:** Breakfast muffins, pancakes, and omelets represent three different—yet practical—applications for bacon analogs. Bacon replacers have an image problem—how to get food processors to think of them other than as a garnish for salads. Major suppliers, such as ADM, Far-Mar-Co, and Cargill either have or are close to introducing cheese, pepperoni, and ham as well as improved bacon analogs. It is known that Central Soya, since purchasing General Mills' steam texturization process for texturizing soy, is considering the flavored, textured analog market. General Mills and McCormicks are busy developing the retail market with national brands. Durkee's and other suppliers pursue regional markets with their brands. Most of these retail products are simply bought from the three major suppliers and re-packed. Altogether the market for bacon analogs is today a 10 million pound market, roughly divided between food service and retail at 4 million pounds each with over 1 million pounds in other processed foods. Address: Midwest editor.

449. Barr, G.W.; Martin, S.R.; Kakade, M.L.; Ryan, R.J.; Crane, F.M. 1978. Influence of modified protein in milk replacers on calf performance and health (Abstract). *J. of Dairy Science* 61:169. (Abst. #854). July.

• **Summary:** No significant differences in daily weight gain, milk replacer consumption, or inverse feed conversion were observed when modified soy protein was substituted for milk protein in seven 4-week trials of calf milk replacer. Address: Land O'Lakes, Inc., Minneapolis, Minnesota.

450. Mittleider, John F.; Anderson, D.E.; McDonald, C.E.; Fisher, N. 1978. An analysis of the economic feasibility of establishing wheat gluten processing plants in North Dakota. *North Dakota Agricultural Experiment Station, Bulletin No. 508*. iv + 58 p. Aug. Illust. No index. 28 cm. [18 ref]

• **Summary:** Contents: Summary and conclusions. Introduction: Justification, study objectives, scope of study. Description and function of vital wheat gluten in the food industry: Uses of starch and by-products. Gluten production and uses in the United States: Gluten processing in the United States, foreign competition, gluten consumption in the United States. Description of present and anticipated wheat gluten processes in the United States: Alfa-Laval/Raisio process,

Far-Mar-Co, Inc., process. Model wheat gluten processing plants: Description of model gluten processing facilities, gluten plant building requirements. Resource requirements of the model wheat gluten processing plants and their availability in North Dakota: Production and utilization of hard red spring wheat, water and sewage requirements, power and fuel requirements, labor requirements of the model gluten processing plants, transportation considerations, capital requirements of the gluten processing facilities. Transportation analysis of the gluten industry including the hypothetical North Dakota gluten plant: Objectives of the transportation analysis, the mathematical model, gluten production, transportation structure of the gluten industry, short-run analysis of marketing patterns, long-run analysis of marketing patterns, summary. Estimated costs and returns from the hypothetical gluten processing plants: Operating costs, fixed costs, revenue estimates, estimated return on investment. Economic impact of wheat gluten processing plants in North Dakota: Assumptions and results. Environmental impact: Water pollution, air pollution, solid waste, summary of environmental considerations. Appendix: Selected references. List of tables. List of appendix tables. List of figures.

This bulletin was published by North Dakota Agricultural Experiment Station, and North Dakota State University, under a grant from the U.S. Department of Commerce Economic Development Administration (Project No. 05-06-1694). Address: Fargo, North Dakota.

451. National Soybean Processors Association. 1978. Year book and trading rules 1978-1979. Washington, DC. ii + 106 p.

• **Summary:** On the cover (but not the title page) is written: Effective October 1, 1978. This is the 50th anniversary issue. Contents: The National Soybean Processors Association [Introduction and overview]. Constitution and by-laws. Officers and directors. Executive office. Members. Standing committees. Food Protein Council. Trading rules on soybean meal. Sales contract. Appendix to trading rules on soybean meal: Official methods of analysis (moisture, protein, crude fiber, oil {only method numbers listed}), sampling of soybean meal (automatic sampler, probe sampler), official weighmaster application, semi-annual scale report, official referee chemists (meal). Trading rules on soybean oil. Sales contract. Definitions of grade and quality of export oils. Soybean lecithin specifications. Appendix to trading rules on soybean oil: Inspection, grading soybean oil for color (N.S.P.A. tentative method), methods of analysis (A.O.C.S. official methods): Soybean oil, crude; soybean oil, refined; soybean oil, refined and bleached; soybean oil for technical uses; soap stock, acidulated soap stock and tank bottoms (only method numbers listed), official weighmaster application, semi-annual scale report, official referee chemists (oil). Soybean oil export trading rules. Foreign trade definitions

(for information purposes only).

The page titled National Soybean Processors Association (p. ii) states: "During the past crop year about 900,000,000 bushels of soybeans moved through processing plants of NSPA's 29 member firms. Approximately 55 percent of America's 1.7 billion-bushel soybean crop is bought and processed by NSPA members. Exporters account for another 41 percent of the crop, and the remainder [4%] is returned to farms for seed, feed, and residuals." Also discusses industry programs, soybean research, and international market development."

The section on officers, executive committee, and board of directors (p. 7-8) gives the name, company affiliation, and phone number of each person. Officers—Chairman: John G. Reed, Jr., Continental Grain Co. Vice Chairman: C. Lockwood Marine, Central Soya Co., Inc. President: Sheldon J. Hauck. Secretary: A.E. Idleman, A.E. Staley Manufacturing Co., Inc. Treasurer: Edward J. Cordes, Ralston Purina Co. Immediate past chairman: Lowell K. Rasmussen, Honeyamead Products Co.

Executive Committee: Gorge A. Heinz ('79), Buckeye Cellulose Corp. Donald H. Leavenworth ('79), Spicola, Cargill, Inc. C. Lockwood Marine, Central Soya Co. Inc. John G. Reed, Jr., Continental Grain Co. Gaylord O. Coan ('80), Gold Kist, Inc. Lowell K. Rasmussen, Honeyamead Products Co. William T. Melvin ('80). Planters Oil Mill, Inc. Theodore W. Bean ('79), Quincy Soybean Co. Edward J. Cordes, Ralston Purina Co. Richard E. Bell ('80), Riceland Foods, Inc. Austin E. Idleman, A.E. Staley Mfg. Co.

Board of Directors (alphabetically by company; each member company has one representative on the board): Thomas H. Wolfe, Anderson, Clayton & Co. Charles Bayless, Archer Daniels Midland Co. Keith Voight, Boone Valley Coop. Processing Assn. George H. Heinz, Buckeye Cellulose Corp. David C. Thompson, Bunge Corporation. Donald H. Leavenworth, Cargill, Inc. C. Lockwood Marine, Central Soya Co., Inc. John G. Reed, Jr., Continental Grain Co. Joe C. Givens, Dawson Mills. Alfred Jenkins, Delta Cotton Oil & Fertilizer Co. Kenneth E. Sullivan, Farmers Grain Dealers Assn. of Iowa. Donald M. Chartier, Farmland Industries, Inc. Gaylord O. Coan, Gold Kist Inc. Lowell K. Rasmussen, Honeyamead Products Co. Kenneth J. McQueen, Land O'Lakes, Inc. Floyd W. Brown, Lauhoff Grain Co. Kermit F. Head, Missouri Farmers Assn.—Grain Div. Robert E. Hicks, Owensboro Grain Co., Inc. Sewell L. Spedden, Perdue Incorporated. John H. Payne, Planters Manufacturing Co. William T. Melvin, Planters Oil Mill, Inc. Theodore W. Bean, Quincy Soybean Co. Edward J. Cordes, Ralston Purina Co. Richard E. Bell, Riceland Foods, Inc. J.D. Morton, Sherman Oil Mill. Stiles M. Harper, Southern Soya Corp. Austin E. Idleman, A.E. Staley Mfg. Co. Preston C. Townsend, Townsend's Inc. Tyler Terrett, West Tennessee Soya Mill, Inc.

Executive office, Washington, DC: Executive Director,



Sheldon J. Hauck. Director, Public Affairs: Jack DuVall. Director, Regulatory Affairs: William F. Sullivan. Administrative Asst.: Helen Miller. National Soybean Crop Improvement Council: Robert W. Judd, Managing Director.

Members (listed alphabetically by company; within each company, first the name of the official Association representative {who is on the Board}, followed by the other personal members listed alphabetically by surname. For example, Archer Daniels Midland Co., the company with the most personal members, has 26. After the name of each personal member is given with his address and phone number. In the listing below, the number of personal members is shown in parentheses after the name of each company, followed by city and state of the various locations): Anderson, Clayton & Co. (6); Phoenix, Arizona; Jackson, Mississippi; Houston, Texas. Archer Daniels Midland Co. (26); Decatur, Illinois; Galesburg, Illinois; Granite City, Illinois; Fredonia, Kansas; Mankato, Minnesota; Red Wing, Minnesota; Fremont, Nebraska; Lincoln, Nebraska; Kershaw, South Carolina. Boone Valley Coop. Processing Assn., Eagle Grove, Iowa. Buckeye Cellulose Corp. (8); North Little Rock, Arkansas; Augusta, Georgia; Cincinnati, Ohio; Memphis, Tennessee. Bunge Corporation (6); Cairo, Illinois; Logansport, Indiana; Emporia, Kansas; New York City, New York; Cargill, Inc. (18); Osceola, Arkansas; Gainesville, Georgia; Cedar Rapids, Iowa; Des Moines, Iowa; Sioux City, Iowa; Washington, Iowa; Chicago, Illinois; Wichita, Kansas; Minneapolis, Minnesota; Fayetteville, North Carolina; Sidney, Ohio; Memphis, Tennessee; Chesapeake, Virginia. Central Soya Co., Inc. (11); Gibson City, Illinois; Decatur, Indiana; Fort Wayne, Indiana; Indianapolis, Indiana; Belmond, Iowa; Marion, Ohio; Bellevue, Ohio; Delphos, Ohio; Chattanooga, Tennessee. Continental Grain Co. (6); Guntersville, Alabama; Chicago, Illinois; Taylorville, Illinois; New York City, New York; Cameron, South Carolina. Dawson Mills (3); Dawson, Minnesota. Delta Cotton Oil & Fertilizer Co. (1); Jackson, Mississippi. Farmers Grain Dealers Assn. of Iowa (Cooperative), Soybean Processing Div. (1); Mason City, Iowa. Farmland Industries, Inc. (5); Van Buren, Arkansas; Sergeant Bluff, Iowa; Hutchinson, Kansas; St. Joseph, Missouri. Gold Kist Inc. (3); Atlanta, Georgia. Honeyamead Products Co. (3); Mankato, Minnesota. Land O'Lakes, Inc. (2); Fort Dodge, Iowa; Sheldon, Iowa. Lauhoff Grain Co. (1); Danville, Illinois. Missouri Farmers Assn.-Grain Div. (5); Mexico, Missouri. Owensboro Grain Co., Inc. (2); Owensboro, Kentucky. Perdue Incorporated (2); Salisbury, Maryland. Planters Manufacturing Co. (2); Clarksdale, Mississippi. Planters Oil Mill, Inc. (2); Rocky Mount, North Carolina. Quincy Soybean Co. (4); Quincy, Illinois. Ralston Purina Co. (8); Bloomington, Illinois; Lafayette, Indiana; Iowa Falls, Iowa; Louisville, Kentucky; Kansas City, Missouri; St. Louis, Missouri; Raleigh, North Carolina; Memphis, Tennessee. Riceland Foods, Inc. (8); Helena, Arkansas; Stuttgart, Arkansas. Sherman Oil Mill (1); Fort

Worth, Texas. Southern Soya Corp. (1); Estill, South Carolina. A.E. Staley Manufacturing Co. (7); Decatur, Illinois. Townsend's Inc. (2); Millsboro, Delaware. West Tennessee Soya Mill, Inc. (1); Tiptonville, Tennessee.

Associate Members: ACLI Soya Co, White Plains, New York. Anderson Clayton Foods, Dallas, Texas. Balfour MacClaine International, Ltd., New York City, New York. Best Foods, a Unit of CPC International Inc., Englewood Cliffs, New Jersey. California Vegetable Oils, Inc., San Francisco. Canadian Vegetable Oil Processing Co., Hamilton, Ontario, Canada. Cobec Brazilian Trading and Warehousing Corp. of the U.S., New York City. Louis Dreyfus, Stamford, Connecticut. Durkee Foods, Div. of SCM Corporation, Chicago, Illinois (Gerald J. Daleiden). Gordon-Kutner Co., Dallas, Texas. Grain Processing Corp., Muscatine, Iowa (H.P. Woodstra). Hartsville Oil Mill, Hartsville, South Carolina (Richard A. Koppein). Humko Products, Memphis, Tennessee. Hunt-Wesson Foods, Inc., Fullerton, California. Lever Bros Co., New York City, New York. Maple Leaf Mills Ltd., Toronto, Ontario, Canada (W.G. Milliken). Marwood Company, San Francisco, California. Overseas Commodities Corp., Minneapolis, Minnesota. Pillsbury Co., Bloomington, Minnesota. Procter & Gamble Co., Cincinnati, Ohio. PVO International Inc., San Francisco, California. Quaker Oats Co. (The), Chicago, Illinois. Schouten International, Inc., Minneapolis, Minnesota. Sofico, Memphis, Tennessee. Spencer Kellogg, Div. of Textron, Inc., Buffalo, New York. Alfred C. Toepfer, Inc., New York City, New York (Dieter Rahlmann).

Standing committees: For each committee, the function of the committee, the names of all members (with the chairman designated), with the company and company address of each are given—Crop Improvement Council. Meal trading rules. Oil trading rules. Safety and insurance. Soybean Research Council. Technical. Address: 1800 M St., N.W., Washington, DC 20036. Phone: (202) 452-8040. Telex 89-7452.

452. Dawson Mills. 1978. Annual report. Dawson, Minnesota. 16 p. 22 x 28 cm.

• **Summary:** In "Report to the members" (p. 1-2), E.S. Boraas (chairman of the board of directors) and Joe Givens (president and general manager), start on an ominous note: "Fiscal 1978 [ending Aug. 31] was a year of building for a better future for Dawson Mills. Steps taken this past year, when completed, will develop your cooperative into a broadly based soy food processor." Address: Dawson, Minnesota 56232. Phone: 612/769-4386.

453. Shearson Hayden Stone Inc. 1978. Special survey: U.S. and Canadian soybean processing facilities. New York, NY. 8 p. Nov.

• **Summary:** The USA has a total soybean crushing capacity of 1,226 million bushels/year based on 330 available days. A ranking of the capacity of major U.S. soybean crushers is as

follows (as of 1 Nov. 1977):

Cargill 224 million bushels/year. 18.3% of industry total.

Archer Daniels Midland 178 million bushels/year. 14.5% of industry total.

Central Soya 94 million bushels/year. 7.7% of industry total.

A.E. Staley 93 million bushels/year. 7.6% of industry total.

Ralston Purina 92 million bushels/year. 7.5% of industry total.

All Co-ops 232 million bushels/year. 19.0% of industry total.

Other 312 million bushels/year. 25.4% of industry total.

The leading soybean crushing states (in million bushels per year capacity) are: Illinois 258, Iowa 176, Minnesota 83, Tennessee 73, Indiana 70, Arkansas 69, Missouri 68, Mississippi 59, Ohio 50.

The individual soybean crushing plants with the largest capacity are (\* = food grade plant): ADM\* (Decatur, Illinois) 150,000 bushels/day. Quincy Soya (Quincy, Illinois) 120,000 bushels/day. Cargill, Inc. (Memphis, Tennessee) 100,000 bushels/day. A.E. Staley (Des Moines, Iowa) 100,000 bushels/day.

Canadian soybean crushers capacity (total 148,000 bushels/day) are: Maple Leaf Mills (Windsor, Ontario) 60,000 bushels/day. Victory Mills (Toronto, Ontario) 42,000 bushels/day. Canadian Vegetable Oil Processing (CVOP, Hamilton, Ontario) 33,000 bushels/day. Maple Leaf Mills (Toronto, Ontario) 13,000 bushels/day. Total: 148,000 bushels/day. Note: Maple Leaf Mills is the largest Canadian soybean crusher, with a total capacity of 73,000 bu/day.

454. Fite, Gilbert C. 1978. A brief history of Far-Mar-Co (Document part). In: Fite, Gilbert C. 1978. *Beyond the Fence Rows: A History of Farmland Industries, Inc., 1929-78*. Columbia, Missouri and London, England: University of Missouri Press. xxviii + 404 p. See p. 362-64, 367-74. [18 ref]

• **Summary:** In the spring of 1968, after considerable discussion, four regional grain cooperatives agreed to consolidate their business into a single association. Starting June 1, it will be known as Far-Mar-Co, Inc. "The associations that formed Far-Mar-Co were the Equity Union Grain Exchange of Lincoln, Nebraska; the Farmers Cooperative Commission Company of Hutchinson, Kansas; the Cooperative Marketing Association of Kansas City; and the Westcentral Cooperative Grain Company of Omaha. James H. (Jimmie) Dean who had been general manger of the Farmers Cooperative Commission Company became executive vice-president and general manager. The headquarters office was located in Hutchinson.

"During the next few years Far-Mar-Co added member associations to its organization, began to manufacture a number of grain-based food products, such as soy flour, and

greatly expanded the amount of grain handled. In 1971, the company marketed 217.4 million bushels of grain, and by 1974 the total volume had jumped to 335.6 million bushels. About 57 per cent of this was wheat. Far-Mar-Co was also a member of the Farmers Export Company [FEC] that had an export terminal at Ama, Louisiana. Farmers Export had been formed in January, 1967, by eight regional grain cooperatives, four of which later formed Far-Mar-Co. This represented an effort by grain-marketing cooperatives to engage directly in the export business so that farmers would not have to rely exclusively on Cargill, the Continental Grain Company, Cook Industries and other major exporters.

"Farmland [Industries, Inc.] officials watched this development with interest. Here was an important marketing cooperative operating right in the heart of Farmland territory. The development of Far-Mar-Co was of even greater interest to some of Farmland's member cooperatives who had dreamed of the day when Farmland would add grain marketing to its activities. In the summer of 1971, three local associations urged Farmland's management to consider a merger with Far-Mar-Co" (p. 363).

Some consideration of a merger with Far-Mar-Co continued from 1972 to 1974, but in 1974 the growing size and power of farm cooperatives came under increasing attack, distracting attention from the merger. The criticisms focused on three main issues: Tax breaks, bigness, and exemption from most antitrust laws.

But discussions regarding the merger continued. Finally, on 3 June 1976 the boards of directors of both organizations met at Hutchinson, Kansas, and adopted identical resolutions "authorizing study and consideration of possible merger or consolidation of the two organizations. "The main reason to merge the two large cooperatives was to give farmers some meaningful control over the export market." At the time, an oligopoly of only five firms exported most of the nation's grain. Cooperatives were exporting only about 7% of the total (p. 367).

"A condition that favored merger was the fact that about 95% of Far-Mar-Co's 604 members were also affiliated with Farmland Industries, while 26% of Farmland member associations were members of Far-Mar-Co... A merger with Farmland would add financial strength to Far-Mar-Co's grain marketing activities" (p. 367-68).

On 29 Nov. 1976 the two board of directors approved the "plan and agreement of merger." Walter W. Peterson, a Nebraska farmer who had been president of Far-Mar-Co since 1968, became chairman of the new Far-Mar-Co board of directors which consisted of 12 members of the old board and 13 persons from Farmland's Board and management team. George Voth was named president of Farmland's new subsidiary; he had served on Farmland's Board of Directors from 1959 to 1968, and since 1972 had been executive vice-president and general manager of Far-Mar-Co. "The merger brought together the largest farm supply cooperative and the

biggest grain-marketing cooperative in the United States... Their combined sales volume in the fiscal year ending August 31, 1977, amounted to \$3,039 million dollars. This figure... ranked 78 among *Fortune's* largest 500 industrials, moving up from 123 in 1976 before the merger" (p. 369).

"Far-Mar-Co handled about 350 million bushels of grain, owned sixteen terminal elevators, controlled a part of the Farmers Export Company and the export terminal at Ama, Louisiana, owned or leased about 1,000 jumbo hopper railroad cars for grain transport, and manufactured some food products. In 1975-1976, the company had inaugurated a grain program known as the Producers Marketing System, or Promark. This was a wheat-pooling plan... Farmland's food-marketing subsidiary had sales of \$436,911,000, giving a total marketing volume of \$1,127,295,000. This was a little more than one-third of Farmland's total business."

Important (and critical) articles on the merger were published in *Business Week* (1976 Nov. 22, 1977 Feb. 7) and *Food Engineering* (April 1977).

The merger of the two largest cooperatives became legally effective on 2 May 1977. It "was hailed by cooperative enthusiasts as one of the most significant events in the history of farmer cooperatives. Farmers and ranchers finally had 'a fully integrated supply and marketing cooperative,' [president Ernest T.] Lindsey wrote in the 1977 *Annual Report*. Lindsey later said that in his ten years as president, nothing had caused as much excitement in the cooperative family as this merger.

"To strengthen its export activities, Far-Mar-Co purchased a large elevator at Fort Worth, Texas in June, 1977, and joined six other cooperatives and two interregional associations in the Farmers Export Company to purchase grain storage and shipping facilities in Galveston from Cook Industries, Inc." (p. 373). Address: Athens, Georgia.

455. Fite, Gilbert Courtland. 1978. *Beyond the fence rows: A history of Farmland Industries, Inc., 1929-1978*. Columbia, Missouri and London, England: University of Missouri Press. xxii + 404 p. Illust. Index. 24 cm. [18 ref]

• **Summary:** This is a revised and updated edition of the author's book *Farm to Factory: A History of the Consumers Cooperative Association*, published in 1965. It is also the best early history of Farmland. In 1929 Howard A. Cowden founded the Union Oil Company (Cooperative). On 31 Jan. 1931 the Board voted to dissolve the Missouri corporation and incorporate under the Kansas law on cooperatives (p. 64). On 4 Feb. 1935 the company was renamed the Consumers Cooperative Association (CCA) (p. 111). On 1 Sept. 1966 CCCA was renamed Farmland Industries, Inc. (p. 275-76).

The original company was designed to help farmers save money on petroleum and gasoline and related products. Cowden, a visionary and excellent manager, was the president from 1929 to 1961.

During the 1940s, CCA got into the increasingly popular business of mixed feeds. It developed a "six-point feed program and began acquiring facilities—starting in Nov. 1943 with the purchase of a feed mill at Enid, Oklahoma. In 1944, it built an alfalfa dehydration plant at Pond Creek, Oklahoma—not far from Enid. "At about the same time it began construction of a soybean mill near the refinery at Coffeyville." This mill began operation on 3 July 1945 (p. 189). By 1949 the Coffeyville mill was making large amounts of soybean meal for CCA's feed plants (p. 219). In 1953, when CCA needed to borrow money from the Wichita Bank for Cooperatives [Kansas], they were required to close the Coffeyville soybean plant temporarily—apparently because it was not profitable (p. 241).

For "A brief history of Far-Mar-Co," see a separate 1978 record. In the summer of 1971, three local associations urged Farmland's management to consider a merger with Far-Mar-Co. Some consideration of this merger continued from 1972 to 1974, but in 1974 the growing size and power of farm cooperatives came under increasing attack, distracting attention from the merger. The criticisms focused on three main issues: (1) They were given special tax breaks unavailable to their competitors—private companies; (2) They were becoming so big that the farmer members had lost control; they were run by managers who were no longer farmers and lacked responsiveness to the needs of their members. In this sense they were becoming no different from huge private agribusiness. (3) They were exempt from most antitrust laws. Important publications on this theme: 1974 April—"Who's Minding the Co-op? A Report on Farmer Control of Farmer Cooperatives," by Linda Kravitz, of the Agribusiness Accountability Project (Washington, DC). *New York Times*, April 8, p. 31. *Newsweek*, April 27. *Business Week*, June 8. *Farm Journal*, Oct. and Nov. 1974. *Forbes*, Oct. 15 (p. 57) titled "Speaking of Bigness: What kind of business is exempt from income tax and most antitrust laws and grossed \$44 billion last year? Read on."

On 29 Nov. 1976 the two board of directors approved the "plan and agreement of merger." The merger of the two largest cooperatives became legally effective on 2 May 1977.

Appendix II (p. 392-93) lists members of the "Farmland Industries, Inc. corporate family." (1) Consolidated subsidiaries (those whose business record is included in Farmland's annual report) include: Farmland Soy Processing, Inc. (Soybean processing). Far-Mar-Co, Inc. (Hutchinson, Kansas. Grain marketing). Farmland Foods, Inc. (Kansas City, Missouri. Beef and pork processing, food marketing). Farmland Insurance Agency (Kansas City, Missouri). Farmland Securities Company (Kansas City, Missouri. Broker-dealer). (2) Other Farmland affiliations include: Boone Valley Cooperative Processing Association (Eagle Grove, Iowa. Soybean, feed processing). Farmland Life Insurance Co.



Appendix III (p. 393-94) shows Farmland Industries Inc., and consolidated subsidiaries consolidated sales and savings (1929-1977). The three categories of sales are farm supplies (starting 1929), grain marketing (starting 1977), and food marketing (starting 1964). Total sales increased from \$310,000 in 1929, to \$6,211,000 in 1940, to \$62,428,000 in 1950, to \$168,000,000 in 1960, to \$629,803,000 in 1970, to \$3,039,611,000 [\$3.03 billion] in 1977. Appendix IV (p. 395-96) shows "patronage refunds" paid in cash each year from 1929 to 1977. The peak year was 1975 when \$90,482,000 in cash refunds were paid.

Among the 19 photos on unnumbered pages at the front of the book are: (1) Original headquarters in North Kansas City, Missouri, in 1929. Also expanded headquarters in 1933, 1935, 1944. (7) Farmland Industries' petroleum refinery at Coffeyville, Kansas. (12) Far-Mar-Co's grain terminal at Hutchinson, Kansas. (15) Howard A. Cowden, founder and president of Farmland Industries, Inc. 1929-1961. (16) Homer Young, Farmland's president 1961-1967. (17) Ernest T. Lindsey, Farmland's president 1967-. (18) D.E. Ewing, financial vice-president and treasurer, 1933-. (19) W. Gordon Leith, corporate vice-president and secretary, 1949-. Address: Athens, Georgia.

456. Koebernick, Barb. 1979. At Dawson Mills, soybeans are king: Farm focus. *Independent (Marshall, Minnesota)*. Jan. 24. p. 1B.

• **Summary:** Discusses diversification at Dawson Mills, based on the company's recent annual report and an interview with Joe Givens. The new soy isolate plant under construction represents a \$17 million investment. The isolated soy protein will be marketed in two forms: as spray-dried powder, and as "hair-like fibers called fibrils," which will be produced by a special patented spinning process (similar to spinning rayon thread), and will be used as an ingredient by food manufacturers. The isolate plant will have a 40-acre lagoon and a waste treatment plant large enough for a city of 150,000 people. There are only 4 other U.S. companies that start with soybeans and end up with isolate.

The market for edible soy products is expanding. Givens believes the outlook for Dawson Mills is very bright, because the company is in a growing business—the protein business.

In 1952 the cooperative came "dangerously close to failure, and the St. Paul Bank for Cooperatives was reluctant to loan more operating capital without additional local money."

There are 3 other soybean processing plants in Minnesota and one in Sioux City, Iowa. But about 25% of the processed soybeans grown in Minnesota go through Dawson Mills. The resulting soy products are sold worldwide. Dawson Mills buys all its soybeans from cooperative elevators. The plant's current storage capacity is 3 million bushels. Dawson ships about 250 tons of "soy oil" per day, or over six rail

tank cars full, most destined for the West Coast. After the oil has been extracted, the flakes are toasted to destroy the anti-digestive enzyme called "anti-trypsin" [trypsin inhibitor]. Most of the soybean meal is shipped in bulk by truck, but some is bagged.

Photos show: (1) Tri-County Co-op soybean plant and office in 1951. (2) Aerial view of the plant in 1961. (3) Forming the foundations of 10 slip-form concrete storage tanks in 1971. (4) The completed tanks located near the Dawson Mills water tower. (5) New offices built in 1962. (6) The concrete storage tanks at the half way completed position.

457. *Dawson Sentinel (Minnesota)*. 1979. Official ribbon cutting and opening of new isolate plant set for Sunday [sic, Saturday], March 31st. 94(33):1, 11. March 22.

• **Summary:** "Ribbon cutting and plaque unveiling ceremonies will be held on Saturday morning, Saturday, March 31, at the new processing plant complex site of Dawson Mills." Mrs. Al Quie, wife of Minnesota's governor, will be the guest of honor to participate in the ceremony.

"The new processing plant complex is situated 1½ miles east of Dawson and is located on 120 acres of virgin farm land." The total cost of the plant has been about \$18 million—a major investment by any standards. "Housed in a building of 100,000 square feet, the new processing plant will be capable of producing high purity protein products known as soy isolates. These will be placed on both national and world markets" in such products as baby foods, protein diets, and meat products.

"The Plant will also produce these proteins in various meat and fish textured forms—the latter products known as frozen spun analogues in allusion to the spinning process used in their manufacture.

"The new process building has been constructed to allow for considerable further expansion and diversification. Dawson Mills has its own airstrip running adjacent to the new plant site so as to allow fast access for both customers and personnel concerned with the operation of the Mills' enterprises."

The first commercial quantities of materials are expected to be available in May 1979. The addition of these facilities constitutes a significant increase in the amount of vertical integration achieved at Dawson Mills—from soybeans to unrefined oil, meal for feed, flour, flakes, grits, textured soy flour, isolates, spun fibrils and frozen meat analogues.

"Capsule history: Dawson Mills is a cooperative soybean processing company established 27 years ago. At the instigation of local farmers and businessmen, who sought better returns on soybeans grown in the area, Dawson Mills was formed to process the soybeans into unrefined soybean oil and feed meal. The original plant had a capacity of processing 25 tons of soybeans per day. From these small beginnings, Dawson Mills has grown into the largest

industrial operation in the Dawson area and currently has the capability of processing 1,300 tons of soybeans per day on the modern extraction plant. Much of the meal is sold in the state of Minnesota, directly or indirectly, to farmers. The company operates its own transport fleet of 40 trucks and rail cars.

"Dawson Mills turnover is about \$100 million per annum. Over \$28 million is invested in its facilities. The entire operation is highly automated and uses the services of about 260 employees."

About 4 years ago Dawson Mills became a supplier of ingredients to food processors; it also supplies ingredients to government aid programs to emerging Third World countries. This added facility, which has been in operation for 3 years, enables "Dawson Mills to produce soy flour, flakes, grits, and texturized soy flour to high quality standards and in large volumes.

"This facility is located on the original (city) site of Dawson Mills and is probably one of the most modern of its kind in the world."

Two large aerial photos (one close up) show "The new processing plant complex of Dawson Mills."

458. Quass, W. 1979. Use of spun soy protein in meat systems. *J. of the American Oil Chemists' Soc.* 56(3):341-43. March. [11 ref]

• **Summary:** Contents: Abstract. Introduction. Spun protein analogue process. Fibrils as an ingredient-extender: Turkey rolls (table II), beef loaf, deviled crab, economics (table III). Address: Dawson, Minnesota.

459. *Mankato Free Press (Minnesota)*. 1979. Bond sale is approved so Honeymead can buy [margarine] plant. April 25. Business section.

• **Summary:** Albert Lea (Pron. = Lee) is a city in southern Minnesota, the capital of Freeborn County. The Albert Lea City Council has given preliminary approval to the sale of \$9 million in industrial bonds so that Honeymead can buy the financially-strapped Miami Margarine Plant in Albert Lea. The plant, built in 1966, employs about 180 workers but is \$1 million behind in paying for soybean oil, and is also behind in repaying bank loans. Miami Margarine is a family-owned margarine company based in Cincinnati, Ohio, with plants in Albert Lea and Cincinnati. Honeymead runs three margarine plants in Missouri and Kansas.

460. Bunker, Arvin R. 1979. American farmers in the grain export business: A guide to buying direct. *USDA Economics, Statistics, and Cooperatives Service, Cooperative Information Report No. 22*. 40 p. April.

• **Summary:** Begins with an overview on farmers' cooperatives and what they offer. They receive no government subsidies. "Farmers' grain marketing cooperatives are situated in all major grain-producing areas of the United

States. In 1976, a total of 2,600 cooperatives had combined grain sales of \$10,600 million. Local area cooperatives receive about 40% of total U.S. off-farm sales of grain. Half of this amount is moved into domestic and export markets through farmers' regional or interregional cooperatives. At port locations, U.S. farmer cooperatives handle 20-25% of total U.S. grain and oilseed exports. U.S. regional grain cooperatives represent a massive farmer-owned system. There are two interregional exporting cooperatives (p. 5-8). One of these, Farmers Export Co. [FEC] (Overland Park, Kansas), exports soybeans. It began exporting grain in the fall of 1968. Its owners include Agri Industries, Inc., Far-Mar-Co, Inc., Farmers Union Grain Terminal Assoc., and Indiana Farm Bureau Cooperative Assoc. FEC has export facilities in Ama, Louisiana, Galveston, Texas, and Philadelphia, Pennsylvania. The "loadout capacity" and draft of each facility is given.

There are 13 regional exporting cooperatives in America. Those that export soybeans or soybean products include: American Grain Association (Lake Charles, Louisiana; founded 1965), Farmers Union Grain Terminal Assoc. (St. Paul, Minnesota; founded 1938), Gold Kist Inc. (Atlanta, Georgia; founded 1933), Indiana Farm Bureau Cooperative Assoc. (Indianapolis; founded 1926), and Riceland Foods (Stuttgart, Arkansas; founded 1920). A 2-page profile of each company is given, including address and contact persons, company history, activities, capacity, products exported, and location of export facilities.

Also in America there are 8 major interregional and regional cooperatives supplying grain for export. Those that deal with soybeans are Far-Mar-Co., Inc. (Hutchinson, Kansas; founded 1968), Agri Industries, Inc. (Des Moines, Iowa; founded 1904), Missouri Farmers Association, Grain Marketing Div. (Columbia, Missouri; founded 1964), and Ohio Farmers Grain Corporation (Fostoria, Ohio; founded 1938).

"Far-Mar-Co, Inc., the Nation's largest grain marketing cooperative, was formed in 1968 from 4 regional cooperatives and serves more than 600 local cooperatives in Kansas, Nebraska, and 7 surrounding states. Far-Mar-Co's origin dates from 1914 when one of its predecessors, the Farmers Union Jobbing Association, was formed. In 1977, Far-Mar-Co merged with Farmland Industries of Kansas City, Missouri, to become the grain marketing subsidiary of the Nation's largest regional supply cooperative.

"Far-Mar-Co operates 16 inland terminals in five States with a capacity of nearly 3.5 million metric tons (125 million bushels) of storage. Far-Mar-Co also operates a soy milling plant, three soybean processing plants, a food sales division, rail transportation equipment, barge loading facilities, a research division, data processing services for cooperatives, and other grain marketing activities. Far-Mar-Co maintains grain merchandising offices in eight midwestern cities plus a West Coast merchandising office in the Los Angeles area,

opened in 1977 to expand into the feed grain market on the western seaboard." Photos show many of the export facilities. The logos of most co-ops are also shown.

"Missouri Farmers Association, Grain Marketing Div., 201 South Seventh St., Columbia, MO 65201 (p. 40). The Grain Marketing Division of the Missouri Farmers Association was established in 1964 and markets corn, wheat, soybeans, and sorghum to farmers in Missouri and parts of Illinois. The division's grain marketing facilities include 90 country elevators, 3 Mississippi River terminal elevators, 2 inland subterminal elevators, and a soybean processing plant [at Mexico, Missouri]. MFA Grain Marketing Division is a part owner of and markets through the Kansas City Terminal Elevator, the St. Louis Grain Corporation, and Farmers Export Co. The cooperative is also part owner of Agri-Trans Corporation."

Note: This is the earliest document seen (March 2008) that mentions "Agri Industries Inc." in connection with soybeans. Address: Agricultural Economist.

461. *Mankato Free Press (Minnesota)*. 1979. Honeymead purchase of Albert Lea [margarine] plant completed. May 2. Business section.

• **Summary:** The Albert Lea plant will be managed by the Holsum Foods division of Honeymead based in Waukesha, Wisconsin. In 1977 Honeymead acquired Holsum, which makes salad dressings, peanut butter, jams, jellies, syrup, mayonnaise, mustard, and horseradish. Honeymead began supplying hydrogenated soybean oil to the Miami Margarine plant when it opened in 1966. The name of the Albert Lea plant will be changed to Holsum Foods, according to Lowell K. Rasmussen, vice president of GTA and manager of Honeymead.

462. Dawson Mills; Cooperative League of the USA (CLUSA). 1979. Historic cooperative meeting: Marking [the arrival in India of] the first shipment from the \$100-million grant of PL-480 vegetable oil for India oilseed growers' cooperatives. Friday, May 18, 1979 (Brochure). Washington, DC: Cooperative League of the USA (CLUSA). 16 p. 22 cm.

• **Summary:** On the cover is a cartoon of a town crier with the caption "Hear ye, hear ye. A co-op milestone." The meeting was held at Dawson Mills' Food Products Plant, Dawson, Minnesota. Program: Master of ceremonies—Glenn M. Anderson, President, CLUSA (Cooperative League of the USA). Welcome—Joe Givens, President, Dawson Mills. Introduction of special guests, by Glenn Anderson. Guest speaker—Robert L. Beasley, US member, ICA Agric. Subcommittee [and Farmland Industries]. CLUSA Oilseeds Committee Awards—Francis Lair, Executive Vice President, Universal Cooperatives, Inc. Guided bus tour of Dawson.

Honored guests: Katherleen Bitterman, Coordinator, Office of Food for Peace. CLUSA, a national confederation of U.S. cooperatives, is the "Common Ground" for cooperatives.

U.S. cooperatives of all types make up its membership.

"Dawson Mills is a cooperative soybean processing company located 150 miles due west of Minneapolis, St. Paul on Highway #212. The soybeans processed originate from 160 member cooperatives throughout midwest Minnesota and the eastern Dakotas."

The "India Cooperative Vegetable Oils Project... involves a grant of 117,000 tons of refined vegetable oil to CLUSA over three years by the U.S. Agency for International Development (AID). The oil, worth approximately \$100 million plus another \$10 million worth of transportation, will be used in India to help establish cooperatives owned by small scale oilseeds farmers." "The purpose is to establish an integrated system of oilseed production and marketing cooperatives owned by the farmers who grow the bulk of the oilseeds. Farmers in the project are expected to double their incomes. The project is expected to contribute to a major India effort to increase oilseed production and vegetable oils supplies as well as bring stable prices to consumers. 8,000 cooperatives with 347,000 members will be organized in 8 districts of India."

Award recipients are: Fritz Bloomberg of Riceland Foods. K.O. Pat Cagle, formerly of Gold Kist. Hugh B. Ellsworth, formerly of Soy-Cot Sales, Inc. Joe C. Givens of Dawson Mills (He "designed the 'Crown' vegetable oil extractor now used throughout the world... He has made three trips to India... Personnel from Indian cooperatives have studied Dawson Mills' operations"). Kenneth J. McQueen of Land O'Lakes. Dwight Miller of USDA's NRRC (Peoria, Illinois). Ralph Olsen of Boone Valley. Donald Sands of Gold Kist. Lloyd Smith of Soy-Cot Sales...

Note: The Cooperative League of the USA (CLUSA) was founded in 1916. Today (May 2005) it is more widely known as the National Cooperative Business Association (NCBA), with headquarters in Washington, DC. Address: 1. Dawson, Minnesota; 2. Suite 1100, 1828 L St., N.W., Washington, DC 20036. Phone: 612/769-4386.

463. Dawson Food Ingredients, Inc. 1979. Dfi: Dawson Food Ingredients, Inc. (Portfolio). Minneapolis, MN 55344. Nine inserts. Undated. 30 cm.

• **Summary:** On the cover of this glossy color portfolio are many 2-inch-diameter circles, all touching adjacent circles. Seventeen of these are filled with color photos of Dawson products. The rest are filled with a green triangle. Contents: Dawson Food Ingredients (p. 1). We're in the soy protein ingredient business from the ground up: Description of eight products, each in a circle—Dawsoy flour, Isoprime, S-prime, Anaprime, Dawsoy flakes, Dawsoy grits, T-prime, Fi-trate (Fitrates). (p. 2). Key to the names of the products on the front cover.

Nine inserts each give a typical analysis of the company's eight products, plus dawsoy flour 200/20.

Note: This is the earliest English-language document seen



(Dec. 2004) that uses the word “Anaprime” to refer to edible spun soy protein fibers. Address: 7901 Flying Cloud Dr., Minneapolis, Minnesota 55344. Phone: (612) 944-6696.

464. Bringe, A.N.; Barr, G.W. 1979. Effect of protein source of milk replacer on performance of dairy calves in cold housing. *J. of Dairy Science* 62(Supplement 1):100-01. (Abst. # P53). June.

• **Summary:** Forty Holstein calves were randomly assigned at birth to two 10% fat milk replacer treatments containing either all milk protein or 70% modified soy protein and 30% milk protein. The protein sources of the two milk replacers tested did not significantly affect average daily gain or health of the calves raised in hutches from December to May. Address: 1. Univ. of Wisconsin, Madison; 2. Land O’Lakes, Inc., Minneapolis, Minnesota.

465. *Soybean Digest*. 1979. No soybean slowdown in sight. May/June. p. SID-1, 3, 4, 6.

• **Summary:** This is largely a summary of a paper presented by Richard E. Bell, executive vice president of Riceland Foods at the recent World Soybean Research Conference in Raleigh, North Carolina (see Bell 1980).

466. American Soybean Association. 1979. We did-it in Atlanta! (T-shirt). St. Louis, Missouri.

• **Summary:** This beige T-shirt has a red ring around the neck and both sleeves, and a large black double circle on the front. Inside the circle are the words “Atlanta” in red, reddish brown, and tan. There is an image of the Atlanta skyline in the middle and a silhouette of soybeans growing in the middle. To the right is written: “ASA National Convention, August 12-15 1979, Atlanta, Georgia.” Below the circle is written the association’s name, and below that “Do it with Gold Kist” between two Gold Kist logos. Address: St. Louis, Missouri.

467. National Soybean Processors Association. 1979. 50th Anniversary Annual Meeting—National Soybean Processors Association: August 26-28, 1979, The Hyatt at Palmetto Dunes, Hilton Head Island, South Carolina. Washington, DC. 26 p. 23 cm.

• **Summary:** Contents: Letter of congratulations from President Jimmy Carter. Welcome to the 50th Anniversary Annual Meeting of the National Soybean Processors Association (NSPA). Historical perspective (incl. graph of million bushels of soybeans crushed from 1933 to 1978). NSPA anniversary year officers and staff. 50th anniversary year board of directors.

Chief elected officers of NSPA, 1929-1977 (p. 4-5; each is now listed as “Chairman, Executive Committee,” but in documents before the mid-1970s each actually used the title of “President”): Otto Eisenschiml 1929-30 (Note 1. The NSPA was not officially formed until 21 May 1930. It was

originally named the “National Soybean Oil Manufacturers Association,” but in 1936 was renamed the National Soybean Processors Association). Whitney H. Eastman 1931-35. I.C. Bradley 1935-36. E.K. Scheiter 1936-37. E.F. Johnson 1937-38. W.H. Eastman 1938-41. E.K. Scheiter 1941-45. D.G. Bunnell 1945-47. W.H. Eastman 1947-49. R.G. Golseth 1949-51. E.A. Cayce 1951-53. W.E. Huge 1953-55. Dwight L. Dannen 1955-57. M.D. (Pete) McVay 1957-59. Glenn H. Pogeler 1959-61. Donald B. Walker 1961-63. Scott E. Cramer 1963-65. Lowell W. Andreas 1965-67. Now the title in the book changes to “President”: Theodore W. Bean 1967-69. James W. Moore 1969-71. James W. Hogan 1971-73. James R. Spicola 1973-75. Lowell K. Rasmussen 1975-77.

Chief staff officers of NSPA, 1929-68: Edward J. Dies 1928-47 (Consultant, executive secretary, president, chairman. See Note below). Robert G. Houghtlin 1947-68. A portrait photo shows each of the above men from Dannen (1955) to Houghtlin (1968). Special invited guests (p. 6-7): U.S. friends of NSPA, international friends of NSPA, corporate officers of NSPA member firms (Agri-Industries, Archer Daniels Midland, Anderson Clayton Co., Buckeye Cellulose Corp., Cargill Inc., Central Soja Co., Continental Grain Co., Farmland Industries, Gold Kist Inc., Missouri Farmers Association, Perdue Incorporated, Planters Oil Mill Inc., Riceland Foods Inc., A.E. Staley Manufacturing Co.).

National Soybean Crop Improvement Council (NSCIC, p. 8-9): A portrait photo shows the managing director since 1961 Robert W. Judd, 26 advisory board members (Billy Caldwell, William Colville, Garnet Craddock, Roy Creech, Robert Gast, Dale Harpstead, Edgar Hartwig, Jack Hiatt, Maurice Horton, Robert Howell, Thomas Hutcheson, Jr., Hyde Jacobs, Herbert Johnson, Robert Leffel, William Martin, Arnold Matson, Charles McAnts, Wallace Moline, Bill Ott, John Pendleton, John Pesek, Marvin Phillips, Edward Runge, Paul Santelman, Berlie Schmidt, Lloyd Seatz, Warren Shaw, Keith J. Smith (ASA), Walter Thomas, and Coleman Ward). Plus 3 special 1979 guests (Athow, Bernard, Turnipseed). NSPA annual meetings, sites from 1968-82. 50th annual meeting program of events (Master of ceremonies will be Earl. L. Butz, Secretary of Agriculture). Eleven pages of ads.

Note 2. Concerning Edward J. Dies: These dates seem incorrect. All prior records show that this association was organized on 21 May 1930, not in 1928. In 1950, when Dies was elected honorary life member of the American Soybean Association, *Soybean Digest* wrote of his career: Edward Jerome Dies, formerly the president of the National Soybean Processors Association, “was a staff correspondent of the Associated Press and a magazine writer before launching his Chicago [Illinois] public relations bureau. In 1936, when the soybean crop was only 33 million bushels, his agency was engaged by the National Soybean Processors Association to correct certain adverse publicity. Soon he became president of the expanding trade group, and continued in office until

1945, when he resigned and went to live in Washington. He has retained a connection with the soy flour industry as director of the Soya Food Research Council." Address: 1800 M Street N.W., Washington, DC 20036.

468. Metelsky, John. 1979. Bean boom benefits town: There's no recession in Dawson. *Soybean Digest*. Sept. p. SID-8.

• **Summary:** Dawson, Minnesota, is a town virtually built around soybeans. Its leading industry is Dawson Mills, a soybean processing plant, which employs about 280 people (out of 1,800 in the town) and pays about 40% of the town's taxes. "An \$18 million food processing plant has recently been built. It produces soy protein isolates, used in baby food, protein diets and high protein meat and fish substitutes. The new plant also will produce soy flour, flakes, grits and texturized soy flour. 'The plant operates 24 hours a day, 7 days a week, and processes 1,300 tons of soybeans every-day,' says Joe Givens, Dawson Mills president.

"Gerry Michaelson, who farms near Dawson, is also aware of the plant's benefits. He has been a farmer for 27 years, and now grows 600 acres of soybeans.

"About 7% of soybeans processed in the plant are sold to the Food for Peace program in the form of high protein soy grits and soy flour. That's about 30,000 tons of product each year."

Photos show: (1) The outside of the Dawson Mills' plant. (2) A Dawson worker watching as soybeans are dumped from a hopper. (3) A man cupping soybeans in both hands.

469. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** AGRI Industries, Inc.

**Manufacturer's Address:** Manning, Iowa.

**Date of Introduction:** 1979. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** *AGRI Industries Graphic*. 1979. "Bean crush begins at Manning–Soybean processing starts October 13 at AGRI Industries' site: 22,000 bushels crushed per day." Vol. 12, No. 37. Oct. 24.

Dunn, John R. 1981. "Re: History of U.S. cooperative soybean processors." Letter to William Shurtleff at Soyfoods Center. 3 p. AGRI Industries started operated a soybean crushing plant in 1979.

470. *AGRI Industries Graphic*. 1979. Bean crush begins at Manning–Soybean processing starts October 13 at AGRI Industries' site: 22,000 bushels crushed per day. Vol. 12, No. 37. Oct. 24.

• **Summary:** "The Manning Soybean Processing Plant, AGRI Industries latest acquisition, has begun crushing soybeans. Ken Sullivan, AGRI's soybean processing manager at both Manning and Mason City, notified the Des Moines offices that crushing at Manning began on Saturday,

October 13."

"Soybeans are being shipped to Manning,—all by truck thus far—from more than 30 country elevators, some more than 80 miles away."

"Solvent process meal (44% protein) is now available at Manning, for delivery by both truck and rail. Hi-Pro Meal will be available by November 1, according to Plant Superintendent Ken Weets.

Manning's optimal capacity of 1,000 tons/day of soybean is expected to be reached in a year or two; additional equipment and a larger market for the soy products will be needed. "Construction is proceeding on the 702,000 bushel concrete elevator at the Manning site... Completion is scheduled for mid-1980."

471. *Feedstuffs*. 1979. Top 30 commercial feed manufacturers [in the USA] (based on capacity). Oct. 29. p. 9.

• **Summary:** 1. Ralston Purina Co. (7,000,000+ tons annual capacity; 61 mills in USA).

2. Allied Mills, Inc. (3,000,000+ tons; 23 mills).

3. Central Soya Co. (2,500,000 tons; 32 mills).

4. Agway, Inc. (2,000,000 tons; 22 mills).

5. Gold Kist, Inc. (2,000,000; 14 mills).

6. Farmland Industries, Inc. (1,550,000 tons; 20 mills).

7. Cargill, Inc. (1,000,000 tons; 33 mills).

16. ConAgra, Inc. (600,000 tons; 8 mills).

17. Land O'Lakes, Inc. (500,000 tons; 10 mills).

18. MFC, Inc. (500,000 tons; 7 mills).

Capacity in most cases is based on 2 shifts, 5 days a week.

472. *Feedstuffs*. 1979. The integrators: The 'in-house' feed manufacturers. Oct. 29. p. 184-88.

• **Summary:** The integrators—virtually 100% of the broiler industry and about 80% of the turkey and egg industries—are defined by control of the production, processing, and marketing functions. In each table, estimated feed usage is also given. One table shows America's top 20 broiler producers: The first number gives the company's rank and the second (in parentheses) the number of birds processed in millions in 1978: 1. Holly Farms (Federal Co. 260). 2. Gold Kist, Inc. (240). 8. Central Soya Co. (130). 9. ConAgra (129). 10. Wayne Poultry (Allied Mills. 114). 19 Cargill, Inc. (57).

Another table shows America's top 15 turkey operations. The second figure shows millions of pounds live weight processed: 1. Swift Dairy & Poultry Co. (325). 2. Armour & Co. (175-200). 3. Cargill, Inc. (150-175). 6. Land O'Lakes (100-110). 14. Central Soya (20-25).

A third table shows America's top 20 commercial cattle feeding companies. The second figure represents the total capacity in number of cattle: 1. Cargill, Inc. (Caprock Industries, 5 lots; 216,000 head; 982,800 tons of feed). 9. Continental Grain Co. (Allied Mills, 3 lots; 105,000 head). Cattle have an average 140-day finishing period in the

feedlot, and consume 25 lb. of feed per head per day. in the

A fourth table shows America's top 20 table egg layer operations. The second figure is number of layers in millions: 1. Cal-Maine Foods, Inc. (11.0). 4. Cargill, Inc. (3.5). 13. ConAgra, Inc. (1.6). 15. Central Soya (1.5). 16. Gold Kist Eggs (1.33). 17. MFC Services (1.33).

**473. Product Name:** Anaprime (Spun Soy Protein Fibrils).  
**Manufacturer's Name:** Dawson Food Ingredients.  
Subsidiary of Dawson Mills.

**Manufacturer's Address:** 7901 Flying Cloud Dr., Suite 230, Eden Prairie, MN 55344.

**Date of Introduction:** 1979. December.

**New Product–Documentation:** Ad in Soya Bluebook. 1979. p. 77. "Spun Fibrils." Dawson Mills Annual Report. 1979 (Dec.). "Your plant is currently producing spray dried isolate and spun isolate fibrils. The initial samples of our new range of Isoprime and frozen analogue products have been well received by the trade..." (p. 1). Leaflet & catalog titled "Anaprime." 1980. March. 4 p.

Leaflet titled Anaprime. 1980? undated. "Product description: Anaprime frozen meat analogs are made from S-prime, spun soy protein fibrils. With the addition of flavor, color, vitamins and minerals in a special blending and binding system, Anaprime simulates beef, chicken, ham and other foods having meat-like structure. The ability of Anaprime to retain full texture during retorting makes it the preferred product for use in many food systems which require severe heat-to-time stress." Physical characteristics–Particle size: Approximately ½ inch cubes. Bulk density: 31 lb per cubic foot. Color and flavor: Formulated to match the natural product. Shelf life at 0°F (frozen): 6 months. Chemical characteristics: Protein (on a dry weight basis): 57.0%. Water (as is basis): 65%. Fat: 9%.

Leaflet (color) titled "Step-up to Anaprime." 1980? undated. "The key difference between Anaprime and textured vegetable protein is spun soy protein fibrils." Isolated soy protein is spun, flavored, blended with seasonings, steam cooked, cut into cubes, and quick frozen to lock in the flavor and texture that makes it more "meat-like" than textured soy flour. Color photos shown the tows and Anaprime cubes.

Spot in Soyfoods. 1982. Winter. p. 56-57. "Spun soy protein meat alternative."

**474. Product Name:** Fi-Trate / Fitrates Soy Fiber Concentrate (from Isolated Soy Protein).

**Manufacturer's Name:** Dawson Food Ingredients. Div. of Dawson Mills.

**Manufacturer's Address:** 7901 Flying Cloud Dr., Suite 230, Eden Prairie, MN 55344.

**Date of Introduction:** 1979.

**New Product–Documentation:** Soya Bluebook. 1979. p. 77. But no brand name given. Hannigan. 1980. Food

Engineering. Jan. p. 44-45. "Soy Fiber Concentrate." Gives the brand as Fi-Trade. This is a white, very fine, free-flowing powder. It is water dispersible, bland in flavor, and has no odor. It is water-extracted from high grade soy flour and flash dried. A mixture of crude and dietary fiber, it is different from soy hulls.

**475. Product Name:** Soy Protein Isolate, Spun Soy Protein Fibers.

**Manufacturer's Name:** Dawson Food Ingredients. Div. of Dawson Mills.

**Manufacturer's Address:** 7901 Flying Cloud Dr., Suite 230, Eden Prairie, MN 55344.

**Date of Introduction:** 1979.

**New Product–Documentation:** *Soybean Digest Bluebook*. 1979. p. 77. Soya Bluebook. 1980. p. 54.

**476. Product Name:** Frozen Meat Analogs.

**Manufacturer's Name:** Dawson Food Ingredients.  
Subsidiary of Dawson Mills.

**Manufacturer's Address:** 7901 Flying Cloud Dr., Suite 230, Eden Prairie, MN 55344.

**Date of Introduction:** 1979.

**New Product–Documentation:** Soya Bluebook. 1979. p. 77. Talk with Joe Givens of Dawson Mills. 2005. May 25. These analogs were made at the isolate spinning factory outside of Dawson. The sales and marketing office was on Flying Cloud Dr. in Eden Prairie, a suburb of Minneapolis.

**477. Product Name:** Defatted Soy Flour, Flakes, and Grits.

**Manufacturer's Name:** Dawson Food Ingredients. Div. of Dawson Mills.

**Manufacturer's Address:** 7901 Flying Cloud Dr., Suite 230, Eden Prairie, MN 55344.

**Date of Introduction:** 1979.

**New Product–Documentation:** Soya Bluebook. 1979. p. 77; 1980. p. 51. No brand names given.

478. Dawson Mills. 1979. Annual report. Dawson, Minnesota. 12 p. 22 x 28 cm.

• **Summary:** For the business year ended 31 Aug. 1979. \* = with photo. Report to the members, by Joe Givens\*. Management staff\*. Directors' comments (with photo of each). Balance sheet. Statement of changes in financial position. Statement of operations. Ephraim Boraas: Director and past chairman (with photo). 1979 highlights. Graph of soybeans processed (15.339 million bushels in 1979). Cooperative patronage refund.

In his "Report to the members," Givens states: "The project to produce food ingredients based on isolate [sic, isolated] soy protein continues to hold much promise for the future of Dawson Mills. After 2½ years of work and the expenditure of nearly 20 million dollars, the plant started production and dried isolated protein in July. Your plant is



currently producing spray dried isolate and spun isolate fibrils. The initial samples of our new range of Isoprime and frozen analogue products have been well received by the trade and our team of specialist salesmen in Dawson Food Ingredients will be building sales as rapidly as possible. Meat analogues and spray dried dietary fiber concentrates are scheduled to be in production in early 1980."

Dawson Mills had a Net Margin (profit) of \$2,433,097 for the year. "These Net Margins are stated after expending \$1,800,000 in product development, isolate plant start-up and other related costs." During the last two fiscal years (1977 and 1978) the company suffered losses totaling \$1,415,373 [in large part due to expenses at the isolate plant]. Address: Dawson, Minnesota. Phone: (612) 769-4386.

479. *Food Product Development*. 1979. Soy, binder, flavor combination makes analog preferred by some over real diced meat. 13(8):42.

• **Summary:** Through careful blending of "spun soy fibrils, binding agents, and reacted meat flavors, Dawson Food Ingredients has developed highly acceptable meat analogs in beef, chicken, and ham varieties. Anaprime frozen meat cubes exhibit the flavor and muscle texture matching their natural counterparts." Selling for \$1.10 per pound in truckload quantities, they represent an economically attractive alternative to expensive meats. Four color photos show the products.

480. Pogeler, Glenn H. 1979? [Resumé]. 2 p. Undated. Unpublished typescript. 28 cm.

• **Summary:** Married. 6 feet 1 inch. 170 pounds. 64 years old. Experience: Clayton Brokerage Co., McLean, Virginia. Commodity Representative, 1977 to present. USDA, Washington, DC, 1970-76. A.I.D., Washington, DC. Consultant Feb.-June 1970. Soybean Council of America, Inc., Washington, DC. President, 1964-1969. North Iowa Soybean Cooperative, Mason City, Iowa. General manager, 1943-1964.

Other activities: Chairman and director, National Soybean Processors Assoc. Director, National Council of Farmer Cooperatives. Member, Chicago Board of Trade. Director, First National bank, Mason City, Iowa. Airport Commissioner, Mason City, Iowa. Address: 6420 Crosswoods Drive, Falls Church, Virginia 22044. Phone: (703) 256-3087.

481. Hannigan, Kevin J. 1980. Soy fiber concentrate: It's a mixture of crude and dietary fiber derived via extraction of protein and carbohydrates from defatted soybeans. And its uniquely functional. *Food Engineering*. Jan. p. 44-45.

• **Summary:** About Fi-trate from Dawson Mills. Address: Features editor.

482. *Food Product Development*. 1980. Soy fiber offers

functional, dietary plusses. Jan. p. 40.

• **Summary:** About Fitrade, a soy fiber concentrate from Dawson Food Ingredients. A table compares the composition of soy fiber, soy bran, wheat bran, citrus fiber, and powdered cellulose.

483. Reynolds, Bruce. 1980. Producers Export Company: The beginnings of cooperative grain exporting. *USDA Economics, Statistics, and Cooperatives Service, Farmer Cooperative Research Report No. 15*. 21 p. Jan.

• **Summary:** Producers Export Company (PEC), which existed from 1958 to 1969, was the first attempt by grain cooperatives to develop an export merchandising program. "This report explores the development of PEC and analyzes reasons for its termination in 1969. This history can help co-op managers and directors carry out future efforts to consolidate and unify cooperative grain exporting."

"American farmers began establishing local grain elevator co-ops during the late 19th century. A second state of development occurred during 1911-32, when many local elevator co-ops facing extinction sought to improve their earnings by establishing regional organizations for merchandising in the terminal markets. The regionals sought to overcome boycotts imposed by the terminal merchants on their gaining representation on some of the major boards of trade. They were successful in a few cases.

"The outbreak of global depression in 1929 brought the exporting of U.S. grains to a standstill that persisted for the most part until after World War II. Expansion of cooperative grain marketing, to a large extent, occurred during that period of unfavorable market conditions when U.S. grain export activity was dormant. The Great Depression ushered in a period of tight Government control over the grain market. In 1929 the Federal Farm Board established a nationwide cooperative organization, the Farmers National Grain Corporation (FNGC), for managing an orderly marketing system and for strengthening grain cooperatives. Although the FNGC was not a Government agency, it sold most of its grain to the Grain Stabilization Corporation. When the Federal Farm Board was terminated in 1933, the FNGC participated in the program of the Agricultural Adjustment Administration [AAA]... The FNGC was dissolved in 1938, and the regionals then had to develop their merchandising operations." A chronology of the career of Roy F. Hendrickson from 1924 to 1968 (p. 20-21) includes his work with USDA (1941) and with "The regionals that participated in the two stages (pre-1962 and 1962) of merging activity that led to the formation in 1968 of Far-Mar-Co, Inc. in Hutchinson, Kansas."

Stage 1 was: (1) Farmers Union Grain Terminal Elevator (Denver, Colorado). (2) Farmers Union Cooperative Elevator Federation (Omaha, Nebraska). (3) Farmers Union Jobbing Association (Kansas City, Missouri).

Stage 2 in 1962 was: (1) Farmers Union Cooperative

Marketing Association (Kansas City, Missouri). (2) Farmers Cooperative Commission Co. (Hutchinson, Kansas) (3) Equity Union Grain Co. (Lincoln, Nebraska). (4) Westcentral Cooperative Grain Co. (Omaha, Nebraska). The latter four cooperatives merged in 1968 to become Farmland Industries.

The following regionals founded FEC [Farmers Export Co., formed in Jan. 1967]: (1) American Grain and Related Industries (formerly Farmers Grain Dealers Association of Iowa; Des Moines, Iowa). (2) Far-Mar-Co. (Hutchinson, Kansas). (3) Farmers Union Grain Terminal Association (GTA; St. Paul, Minnesota). (4) Illinois Grain Corporation (Bloomington, Illinois). (5) Missouri Farmers Association (Columbia, Missouri). (6) MFC Services (AAL; Madison, Wisconsin).

“After 1968, FEC’s membership grew to 12. Much of FEC’s growth in membership was due to its expansion of port elevator operations to Galveston, Texas, in 1976, and to Philadelphia, Pennsylvania, in 1979.”

The 6 new members were: (7) Indiana Farm Bureau Cooperative Association, Inc. (Indianapolis, Indiana). (8) St. Louis Grain Corporation (St. Louis, Missouri). (9) Farm Bureau Services, Inc. (Lansing, Michigan). (10). Kansas City Terminal Elevator Company (Kansas City, Missouri). (11) Landmark, Inc. (Columbus, Ohio). (12) Ohio Farmers Grain Corporation (Fostoria, Ohio). Address: Agricultural Economist, USDA FCS.

**484. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Land O’Lakes.

**Manufacturer’s Address:** Dawson, Minnesota.

**Date of Introduction:** 1980. March.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Dunn, John R. 1981. “Re: History of U.S. cooperative soybean processors.” Letter to William Shurtleff at Soyfoods Center. 3 p. Land O’Lakes started operating soybean crushing plant in Dawson, Minnesota, in 1980.

Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 51-68, 153-172. This plant was previously owned by Land O’Lakes. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**485. Tallent, W.H.** 1980. Cooperative oilseed processors. *Northern Regional Research Center: Notes from the Director* No. 1410. p. 1. March 14.

• **Summary:** “Dwight Miller (DO) reported on NRRC research and development activities at the joint Soybean-Cottonseed- Sunflower- Peanuts- Rapeseed Conference in San Francisco on March 9-12. While the conference has been expanded during the past year to include other oilseeds, soybean and cottonseed oils dominated the interest of the approximately 180 attendees. Dawson Mills, Dawson,

Minnesota, recently installed a new factory to produce edible soy products [protein isolates]. It was announced at the conference that they have become part of the Land O’Lakes Organization.” Address: Center Director.

**486. Dawson Food Ingredients.** 1980. Anaprime: Meat analog products made from spun soy protein. Taste can’t tell... the only difference you’ll notice between Anaprime and meat is the low cost and convenience (Brochure). 7901 Flying Cloud Dr., Minneapolis, MN 55344. 4 p. Catalog. 28 cm.

• **Summary:** On the cover of this color glossy brochure are eight prepared dishes, each containing cubes of Anaprime. These meatlike products are made from spun soy protein fibers. They are available in three flavors, each in frozen diced pieces: beef, chicken, or ham.

Inserted into this brochure are three inserts: (1) Step-up to Anaprime: The key difference between Anaprime and textured vegetable protein is spun protein fibrils (color, one sided). (2) Comparison of approximate composition of Anaprime vegetable protein frozen products and their animal counterpart (per 100 grams edible portion): Ham (3 p.). Chicken (3 p.). Beef (3 p.). Address: Minneapolis, Minnesota.

**487. Dawson Sentinel (Minnesota).** 1980. Dawson Mills–Land O’Lakes merger officially announced. 95(31):1. March 6.

• **Summary:** The merger of Dawson Mills and Land O’Lakes took effect on 1 March 1980 after approval by the boards of directors of the two organizations. The merger was officially announced at the 59th Annual Meeting of Land O’Lakes last week. Ralph Hofstad, President of Land O’Lakes, said the “merger presents benefits to all those involved with the soybean processing business through the two cooperatives.”

Mr. Joe Givens, who has served as general manager or president of Dawson Mills for 28 years, is now vice president of the “Soy Group within Land O’Lakes. The new Soy Group consists of Dawson Mills and two soybean processing facilities in Iowa” (at Sheldon and Forth Dodge).

Dawson Mills was established in 1951 as a cooperative (under a different name) to obtain better returns on locally grown soybeans. Throughout the years, membership grew to over 160 cooperative elevators located in midwest Minnesota and the eastern Dakotas.

“Approximately 300 area residents are employed at the facilities in Dawson. Each year over 15 million bushels of soybeans are processed into oil, feed meal, food quality flour, grits, textured soy flour, isolated soybean protein, and a variety of high protein food products.”

Note: This is the earliest document seen (March 2008) concerning Land O’Lakes in connection with Dawson Mills. Land O’Lakes acquired Dawson Mills, which was in financial difficulty, largely due to losses in its soy isolate

business.

488. Torgerson, Susan. 1980. Mankato No. 2 in nation in soy processing: 40 years ago industry didn't amount to a hill of beans. *Land (The) (Southern Minnesota)* 4(10):1, 13, 38. April 24.

• **Summary:** "It wasn't a farmer, but a lawyer who introduced soybeans to this area. William Blethen, Mankato, as a young lawyer in 1938 was handling a case in Winona, and during the three-day hearing, he roomed with his Iowa client Riley Lewis.

"Lewis, a retired country extension agent, whiled away their spare time extolling the success of soybeans in his state and sent Blethen home with the beginnings of an idea that a soybean processing plant in Mankato might prosper."

Blethen's research showed that southern Minnesota was within the northern boundary of soybean country. He hosted three Mankato residents—a banker, a farmer, and a businessman—on a tour of a soybean processing plant [owned by Ralph Wells & Company] in Monmouth, Illinois.

Blethen recalled that he put the three men in his two-door Plymouth coach, paid all their expenses, and took them to Monmouth—even though he was making only \$150 a month at the time. He asked the three to please give him every reason why he *shouldn't* open a soybean processing plant in Mankato, but none of their criticisms seemed strong enough to sway him. In Mankato, Good Thunder, and Rochester (Minnesota; his former home) he sought out investors who were willing to put up a total of \$50,000. The core group of investors, who lived in Mankato and its environs, among them several bankers and associates of the telephone company, included the now deceased Judge S.B. Wilson, C.P. Barnard, and T.M. Coughlan.

They named the new company Mankato Soybean Products, Inc. [probably in 1939]. For \$7,500 they purchased the abandoned Minnesota Pipe and Tile Co. on the current Honeymead site. Their purchase included several warehouses, a building suitable for offices, a rail line, and a city block of property fronting the Blue Earth River. They installed one expeller, which worked like a big meat grinder to crush and press the oil from the soybeans.

But they still needed soybeans. In the spring of 1939, various farm meetings were scheduled in the area. Blethen and his former client, Lewis, who had been hired to manage the plant, made the rounds of the meetings, urging farmers to try this amazing crop. Though Blethen, a lawyer, knew nothing about farming, he was telling farmers how to plant and grow soybeans. The meetings attracted interest but few commitments. The farmers went home, thought it over, and talked to their neighbors. Richard L. Myers, an investor and then president of the First National Bank in Good Thunder, recruited tenants from his family's farm to experiment with soybeans.

The time was ripe for soybeans in southern Minnesota.

The main crop had been wheat until the early 1900s, when corn was introduced. By the 1930s corn was well established and farmers were looking for a crop—ideally a legume—to use in rotation with corn. This opened the door for soybeans.

During Mankato Soybean Co.'s first year of operation, soybeans were not available locally, so they had to be purchased elsewhere and shipped in by train. The company lost money its first year and investors had to come up with another \$50,000 to cover expenses. Note: We are not told when the company began processing soybeans. A conservative guess would be Sept. 1940, but it could have been as early as Sept. 1939.

In 1941, Lewis was succeeded as plant manager by Ed Ober, a Lake Crystal farmer. Fortunately Ober recruited Frank Bergemann as manager. Bergemann adapted the plant to also process flax, helping to make the company profitable by its third year—as more and more local soybeans began pouring into the plant.

In 1942 Washington Egg and Poultry Association [WAPA], a poultry cooperative [Lynden, Washington State], offered the investors double their money for the company; all of Blethen's pleading couldn't stand in their way. In 1946 [sic, 1947] the Andreas family bought the plant from WAPA. Address: Staff writer.

489. *Food Processing (Chicago)*. 1980. Soy fiber concentrate aids in producing foods that meet nutritional guidelines: Ingredient permits calorie and fat reduction and increase in fiber. April. p. 44-46. Foods of Tomorrow section.

• **Summary:** This soy fiber concentrate, named Fitrade, is now available in pilot-plant quantities. Commercial quantities are expected to be available in the fall of 1980. For more information contact Dawson Food Ingredients, Subsidiary of Dawson Mills, 7901 Flying Cloud Drive, Minneapolis, Minnesota.

Note: The main ingredient in Fitrade is the dietary fiber left over after making soy protein isolates. A table compares its composition with that of soy bran, wheat bran, citrus fiber, and Solka-floc.

490. *Mankato Free Press (Minnesota)*. 1980. Honeymead bond issue approved. April 9. Business section.

• **Summary:** A \$5 million industrial revenue (IR) Bond has been approved by the Mankato City Council. Honeymead will use the money to buy a new deodorizer-steam refiner and bleaching plant, which will be housed in a separate building.

491. Glazer, Howard. 1980. Beans become area's largest crop. *Daily Leader (Stuttgart, Arkansas)*. May. p. 2E. Stuttgart Centennial Edition.

• **Summary:** "From its late-1920s beginning as a 'second crop' planted to prevent land from being exhausted by rice, the soybean has developed into Arkansas' most prolific crop,



and Grand Prairie farmers and agribusiness leaders are just beginning to explore its vast potential.”

A history of the soybean is given. It first arrived in the USA in 1804, and in Arkansas in 1924. Today the USA is the world's largest soybean producing country, ahead of the soybean's homeland—China.

“Starts with ten bushels: Jacob Hartz Sr. and A.R. Thorell, partners in an International Harvester dealership in Stuttgart, brought the soybean to Arkansas in 1924 after seeing area farmers suffer from decreasing rice yield the previous few years.” Rice depletes the soil of nitrogen, but soybeans enrich the soil with nitrogen. According to Marion Hartz, son of Jacob Hartz Sr., his father and A.R. Thorell bought ten bushels of Laredo soybeans from a producer in Illinois. The Laredo variety was used chiefly for the production of hay. “Those first beans were given in amounts of one-half and one bushel to various farmers around the area for use on land which had been in rice for a number of years,” according to Marion. “Some of it was allowed to grow to maturity, some was cut for hay, and some was plowed under for use as a green manure crop. The following year, they saw definite yield increases in their rice.” Thereafter Hartz and Thorell became soybean evangelists. Jacob Hartz (who had only a 6th grade education) worked closely with Heartsill Banks—who worked at the rice station and had a college degree from the University of Arkansas. Both were good public speakers and easy to meet and talk with. They traveled 30-50 miles in all directions. “Dad would talk about the practical aspects while Mr. Banks would discuss the technical side. People called them the ‘Soybean Twins.’”

Hartz and Thorell, recognizing at an early date the potential of soybeans, custom-combined the crop for local farmers in return for a cash fee, and arranged space for storage bins in what is now the A.R. Thorell Supply Co. building on second and college streets. Shortly afterward, they bought a small cleaner. The beans were scooped off the trucks by hand.

By the early 1930s, Hartz-Thorell Supply Co. had become so involved in the soybean business that a new building was needed. In 1932 or 1933 the company rented a two-story building on the corner of First and College; it had a small elevator in back which could carry a small truck. The partners transferred their soybean growing operations to the new facility.

In 1935 the partners realized that even their two-year-old facility was no longer adequate for what had become the Seed Department of the Hartz-Thorell Supply Co., so a seed cleaning and processing plant was constructed on East Cleveland St., south of an existing rice mill and east of what is now Riceland Foods parboil plant. The contractor for this plant, which had a storage capacity of 50,000 bushels, was J.B. Barnett, who used material from dismantled sawmills in southwest Arkansas as his primary construction material. The plant was constructed as a grain-elevator type of

operation, with refinements for seed processing and a very large seed cleaning capacity for those days. It soon became widely known and, at 102 feet tall, was the tallest building in Stuttgart.

The soybean really started to take off during World War II. Now Hartz traveled and worked to educate southern cotton-seed crushers in western Tennessee and eastern Arkansas that the soybean was a good alternative. After a slow start, the new campaign met with success.

In 1942 Hartz and Thorell divided their history-making company, Thorell keeping the equipment business while Hartz took the seed division. Today both companies continue to prosper, with the Hartz Seed Co. now one of the leaders in American seed research.

Riceland Foods entered the soybean picture in the 1950s, building crushing facilities at Stuttgart and throughout eastern Arkansas, including plants at Helena and Jonesboro—which have helped bring an end to the reign of “King Cotton.”

A large photo shows tractors pulling combines across a soybean field in 1936 or 1937.

492. *Food Engineering*. 1980. Meat analog from “spun” protein: Soy protein is spun into fibers, then formed into analogs which have the look, taste and texture of meat. May. p. 32.

• **Summary:** “The basic technology that General Mills developed to produce spun soy protein is making a comeback. Dawson Mills, which purchased the technology and equipment from General Mills about 5 years ago, has just announced a new line of meat analogs under the tradename Anaprime.

“Basically, the technology is the same. ‘But we did improve upon the flavor of the analogs,’ reports Marty Loula, Marketing Manager for Dawson Food Ingredients (subsidiary for Dawson Mills). ‘In addition,’ says Loula, ‘we’ve added a roast beef analog, which wasn’t available before. And we’re in the final stages of developing a pepperoni analog.’ The basic analogs—beef, chicken and ham—are being produced by Dawson in its new facility in Minneapolis [Minnesota].”

493. Lockmiller, N.R. “Dick.” 1980. Dawson Mills has merged with Land O’Lakes (Interview). *SoyaScan Notes*. June 30. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** After paying \$10 million to General Mills for their soy isolate process, Dawson Mills spent an additional \$25 million on it. They haven’t sold much isolate yet, and financial problems have caused them to merge with Land O’Lakes.

On 17 July 1981 Dick Fullmer of Cargill told Dr. Walter Wolf that Dawson Mills has shut down their protein concentrate and isolate operation.

494. Dubois, Donald K. 1980. Soy products in bakery foods. *AIB Research Department, Technical Bulletin* 2(9):1-10. Sept. [12 ref]

• **Summary:** Contents: Introduction. Processing of soy products. Quality factors. Defatted soy flour. Enzyme active soy flour. Full fat, high fat and lecithinated soy flours. Soy grits. Soy protein concentrates. Soy protein isolates. Milk replacer blends. Soy bran. Nutrition. Products. Summary.

AIB stands for the American Institute of Baking. "Soy products, because of their unique functional and nutritional properties, have become major ingredients in many food systems. The use of soy protein as an ingredient, extender, or analog has spread to every category of food, and consumption of edible soy protein in the United States has grown from less than one hundred million pounds per year in the early 1960's to over one billion pounds per year in 1978."

Ten tables give the nutritional composition plus NSI (Nitrogen Solubility Index) and PDI (Protein Dispersibility Index) of different soy products, and the manufacturer of each, as follows: Table IV-15 defatted soy flours: A.E. Staley: Bland 50, I-200, and F-200. ADM Company: Baker's Nutrisoy, Nutrisoy, and Toasted Nutrisoy. Central Soya Co.: Soyafluff 200W. Cargill, Inc.: 70 PDI Soy Flour and 20 PDI Soy Flour. Dawson Food Ingredients: Dawsoy Flour 100/70, Dawsoy Flour 200/20, Dawsoy Flour 200/70, and Dawsoy Flour 200/88. Farmland Industries: 200L and 200E.

Table V-2 enzyme active soy flours: ADM Company: Nutrisoy 7-B. Cargill, Inc.: 90 PDI Soy Flour.

Table VI-1 full fat soy flour made by Ingredients Systems, Inc.

Table VII-1 low fat soy flour made by Food Ingredients.

Table VIII-4 refatted soy flours made by ADM: 15% High Fat, Bakers Nutrisoy, Toasted Nutrisoy T-6, and Nutrisoy 220T.

Table IX-8 lecithinated soy flours: ADM Company: Soylec C6, Soylec C15, and Soylec T15. Central Soya: Soyaloze 105W and Soyarich 115W. Cargill, Inc.: 3% Relcithinated soy flour, 6% Relcithinated soy flour, and 15% Relcithinated soy flour.

Table X-13 brands of soy grits: ADM Company: Defatted Soy Grits 8-20, Defatted Soy Grits 20-40, Defatted Soy Grits 40-80, and Defatted Soy Grits 80-0. A.E. Staley: Bland 50-Medium Grits and Bland 50-Coarse Grits. Lauhoff: Soy Grits 5/16, Soy Grits 8/30, and Soy Grits 20/0. Dawson Food Ind. [sic, Ingredients]: Dawson Grits 10, Dawson Grits 20, Dawson Grits 40, and Dawson Grits 60.

Table XI-3 "soy protein concentrates": Griffith Labs: Promax 70. ADM Company: Ardex 700F and Ardex 700G. A.R. Staley: Sta-Pro.

Table XII-16 "soy isolates" (incl. pH, particle size, and special properties of each): Ralston Purina: Edipro A, Supro HD 90, Protein 220, Supro 350, Supro 610, Supro 620, Supro 630, Supro 660, and Supro 710. Dawson Food Ind.:

Isoprime 900, Isoprime 900GL, Isoprime 900G, and Isoprime 900L. Grain Processing Corp.: Pro-Fam S-955 and Pro-Fam S-970.

Table XIII-1 type of soy bran: Nutrisoy Fiber, made by ADM. Address: American Inst. of Baking, Manhattan, Kansas.

495. Boyer, Robert A. 1980. Work with Henry Ford and soybeans. II (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 30. 2 p. transcript.

• **Summary:** It seems very possible that soyfoods were being sold in the Ford stores in 1923—though Boyer has no firsthand knowledge of this. Dr. Edsel Ruddiman started his research on food uses of soybeans in the late 1920s, about 2 years before Boyer started his work with soybeans. Ford converted an old residence into a lab for Ruddiman, his boyhood pal.

Boyer attended the Henry Ford Trade School, located at the Rouge Plant, from 1927 to 1929. It was a work-study program and he spent one month in each of the major departments at the plant. Then he went to the Edison Institute of Technology Lab. It was both a school and a research lab. Boyer was part of the first class of students. The idea was to learn by doing. It was a "school for inventors." Over the door was a sign that read "Place for Damn Fool Experiments." Consultants were sometimes brought in to help with research projects and answer questions. "In 1930 we started building the soybean laboratory." Boyer knew John Harvey Kellogg, but he does not think Henry Ford knew him.

Boyer uses some meat analogs in his daily diet but he is disappointed in the quality so they are not a regular part of his diet. Manufacturers have to make compromises in equipment and to keep costs down. He can make a much better flavor and texture in the laboratory, but it takes time and hand work. One major problem is that all isolates are made from defatted soybean meal which already has a strong beany flavor. There is no way to control the off-flavors that far back in the process. Boyer prefers the meat analogs made by Worthington to those made by Loma Linda. Boyer uses both tofu and Bacon Bits quite a bit in his daily meals.

Concerning the plastic car: The importance of soy decreased as the researchers got farther into the project since they could not make soy 100% waterproof no matter how much resin they mixed with it. So in the 1941 car body, soy was only a very minor component—but the popular notion that it was a major component persisted; that was a distortion. Soy was, however, a major component in non-structural car parts. The real importance of the soybean was as a renewable resource. When the "plastic car" made its debut in 1941, an all-soy luncheon was served.

When Ford struck the trunk of his car with an axe, he used the back/blunt side of the axe, and it was covered with a plastic guard to help cushion the blow. Once Walter Chrysler

hit the body with an ax and fractured it slightly. Boyer drove the plastic car. The whole white body of the car was plastic, but it contained little soy.

The idea of using spun soybean fibers in food occurred to Boyer while he was working for Ford in about 1942. He left Ford in 1943 and applied for his first spinning patent in 1949. It was allowed in 1951. He abandoned this first application since everyone realized it was a much broader patent. So the 1954 patent application was the best and most important one that everyone worked under. "No one can use a man-made fiber in a food without violating that claim."

The industry that makes spun soy protein fibers for food use reached a plateau starting in early 1979. He is now aware that there are 2 companies in Europe very actively spinning soy fibers and advertising their products. Two are Dutch and one is in Belgium. The patents are now public property. Dawson Mills bought General Mills' soy protein fiber spinning equipment. In an article in the *Journal of Textural Studies* Boyer explained why the spinning part of the program has now grown as much as expected. "This is still a product whose time has not yet arrived. It was mushroom when meat prices become 10-20% high than soy. The danger is that some of the techniques we've developed in the past 2-3 years for improving texture and flavor might get lost if they are not actively pursued. Worthington is in a state of change and Bayer may try to sell it. All the work is secret." Boyer may someday write a book about it, but his eyes are very bad now.

Boyer felt Ford was a great man, great to work with and for. He knew how to judge men and he always picked the right men for the job. Ford would drive the 4-5 miles up from the Rouge Plant and be in Boyer's office by about 8:00 every morning for years and years. He was always very generous money and essentially gave Boyer a blank check to pursue any research project he wanted. But he could be pretty tough with some guys, especially if they did not produce results. Ford was a real thinker, always trying to find the basic reasons behind what was going on.

Worthington bought the patent rights for the health food industry. Loma Linda started spinning soy protein fibers after Boyer's patents expired. He did not know that Loma Linda made soy meat analogs; he thought they used only gluten.

Note: This is the earliest English-language document seen (Dec. 2004) that uses the term "spinning soy protein fibers." Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

496. *Cereal Foods World*. 1980. Ingredients: Soy protein isolates. 24:81.

• **Summary:** Isoprime 900 and 900G from Dawson Food Ingredients are soy protein isolates that are light cream in color and bland. Isoprime 900 is a water-dispersible powder that displays low resistance flow. 900G, also a powder, forms

firm gels under proper conditions. Anaprime frozen analogs are made from spun soy protein fibrils. Fi-trate soy fiber concentrate is a white, free flowing, water dispersible, bland, low calorie food ingredient. For details contact: Dawson Food Ingredients, Dept. CFW, 7901 Flying Cloud Dr., Minneapolis, Minnesota 55334. Phone: 612/944-6696.

497. **Product Name:** Defatted Soy Flour, and Grits [Full Toast, Light Toast, or Untoasted; Mesh Flour, Coarse, Medium, or Fine Grits].

**Manufacturer's Name:** Farmland Industries Inc., St. Joseph Div.

**Manufacturer's Address:** P.O. Box 427, St. Joseph. MO 64502.

**Date of Introduction:** 1980.

**New Product-Documentation:** Soya Bluebook. 1980. p. 51.

498. Dawson Food Ingredients. 1980. Maybe its time to rethink your protein position (Ad). *Soya Bluebook*. p. 52. See also ad in 1979 Soya Bluebook, p. 77.

• **Summary:** "DFI provides a full line of soy-based food ingredients: Meat Analogs, Spun Protein Fibrils, Isolated Soy Protein, Soy Fiber Concentrate, Textured Soy Flour, Defatted Flour, Grits and Flakes." Address: 7901 Flying Cloud Dr., Minneapolis, Minnesota 55344.

499. Mogush, John J. 1980. Soybean processing industry—U.S. and foreign. In: F.T. Corbin, ed. 1980. World Soybean Research Conference II: Proceedings. Boulder, Colorado: Westview Press. xv + 897 p. See p. 889-96. [1 ref]

• **Summary:** Contents: World oilseed production. Location of soybean processing facilities. Size and number of soybean processing plants. Technology. Integration. Transportation. Government regulation. Future directions in the industry. References. Address: Domestic Soybean Crushing Div., Cargill, Inc., Minneapolis, Minnesota 55402.

500. Dannheiser, Frieda J.; Hazelwood, Donald L. eds. 1980. The history of Henderson County, Kentucky [1888-1978]. Henderson County, Kentucky: Henderson County Genealogical and Historical Society. 847 p. + 48 p. index. See p. 265-67, 277, 846. Index. Illust. 27 cm.

• **Summary:** In Chapter 10, titled "Agriculture," the section on "Agricultural Coops" notes: "The earliest recorded cooperative of farmers in Henderson County was the Agricultural Wheel, active in the 1880s and 1890s." Farmers met and made estimates of their needs for a year and then selected a buyer to go south and buy in quantity for the group. In 1912 the first County Agent arrived in Henderson; he organized a Crop Improvement Association which was a forerunner of the Farm Bureau.

Contains a brief history of the Ohio Valley Soybean Co-op, very similar to that in a 1976 publication from



Henderson Co.

Photos show: (1) Aerial view of the "Ohio Valley Soybean Coop-Henderson" (p. 846). (2) "Southern States Cooperative." "Planting soybeans-Aubrey Cale Hazelwood & Joe Hagan." Address: 1. Editor-in-Chief; 2. Co-editor. Both: Members, Henderson County Genealogical and Historical Society, Henderson, Kentucky.

501. Food Protein Council. ed. 1980. Government seminar. May 21, 1980: Abstracts and remarks. Washington, DC. 43 p. 28 cm. [65 ref]

• **Summary:** Contents: Introductory remarks, by B. Marlo Dirks (Procter & Gamble Co.). Rationale of soy products, by Russell Cooper (Ralston Purina Co.). Technical and nutritional aspects of soy protein, by Endre Sipos (Central Soya Co.). Current regulatory issues involving vegetable protein products, by Eugene I. Lambert (Covington and Burling, FPC Counsel). Educational effort by FPC, by Helen Horton (Miles Laboratories, Inc.). Food Protein Council member firms: ADM, Cargill, Central Soya, Dawson Food Ingredients, General Foods Corp., General Mills, Inc., Grain Processing Corp., Honeymead Products, Kraft, Inc., Miles Laboratories, Inc., Nabisco, Inc., Procter & Gamble Co., Ralston Purina Co., A.E. Staley Mfg. Co. Address: 1800 M St., Northwest, Washington, DC 20036.

502. Bell, Richard E. 1980. Soybeans in world trade. In: F.T. Corbin, ed. 1980. World Soybean Research Conference II: Proceedings. Boulder, Colorado: Westview Press. xv + 897 p. See p. 763-66.

• **Summary:** Soybean trade is growing very rapidly. In 1977-78 the volume of world trade in soybeans and soybean products totaled 35.6 million tonnes (metric tons); this was up 66% for 5 years earlier. Last year the value of world trade in soybeans and products was more than \$8.5 billion.

In 1977-78 world utilization / consumption of soybeans was a record 77 million tons; 85% of these soybeans were crushed for oil and meal. Only in East Asia are soybeans used on a large scale for human food.

In recent years, the growth in world soybean consumption is the result of two trends: (1) Rapid expansion in world demand for high protein feed, especially in North America, Europe, the Soviet Union, and parts of East Asia; and (2) Growth in world demand for edible vegetable oil, especially in developing countries. North American and Western Europe have shown the largest growth in soybean consumption, followed by the Soviet Union and Eastern Europe.

In Brazil, soybean production has increased 13 fold during the past 10 years, and nearly 80% of the increase was exported as beans, meal or oil, with most of these exports headed for Western and Eastern Europe.

As a result of rising world demand, prices received by farmers have risen about 45% in the last 5 years, in real currencies—adjusted for inflation. The higher prices have, of

course, further encouraged expansion of soybean acreage. In the U.S. soybeans have passed both corn and wheat to become the top cash crop.

In Brazil, government policies have actively encouraged soybean production while also protecting the country's soybean crushing industry through a combination of tax incentives, export subsidies, and export controls on raw soybeans. Argentina has also increased its soybean production in recent years, but not nearly as much as Brazil.

Government policies have also encouraged greater consumption of soybeans in Western Europe, especially in the European Community (EC)—and in the Soviet Union and Eastern Europe, by trying to raise living standards by increasing meat consumption.

In Japan, international policies limiting offshore fishing have encouraged more livestock production and consequently the demand for soybean meal used as a feed.

Twenty years ago the European Community made a commitment during a world-wide trade negotiation not to impose any import duty / charge on soybeans imported into EC countries. "This concession is the most important one ever granted an agricultural product in international trade negotiations and is in large part responsible for the large growth in soybean consumption in Western Europe in recent years."

Japan plans to make a similar concession in the world trade negotiations soon to be concluded in Geneva, Switzerland. At that time, the world's two largest soybean importers will be committed by treaties to the duty-free entry of soybeans.

An extremely important development in the world soybean market was the emergence in 1978-79 of the Soviet Union as a net importer (estimated at 70,000 metric tons) of edible oils and fats for the first time in history. There is no indication that this trend will be reversed. Address: Executive Vice President, Riceland Foods, Stuttgart, Arkansas 72160.

503. Woerfel, J.B. 1981. Processing and utilization of by-products from soy oil processing [soapstock, lecithin, deodorizer distillate]. *J. of the American Oil Chemists' Soc.* 58(3):188-91. March. [10 ref]

• **Summary:** Contents: Soapstock. Lecithin. Deodorizer distillate. Deodorizer distillate recovery system. Address: Gold Kist, Marks, Missouri.

504. Barr, G. 1981. Soybean meal in calf milk replacers. *J. of the American Oil Chemists' Soc.* 58(3):313-20. March. [58 ref]

• **Summary:** A major review of the literature on this subject. Address: Land O'Lakes, Fort Dodge, Iowa.

505. Hagg, D.D. 1981. Labeling and compliance assurance of soya protein foods. *J. of the American Oil Chemists' Soc.*

58(3):473-74. March.

• **Summary:** “The National School Lunch Act of 1946 empowered the Secretary of Agriculture to set nutritional standards.” Discusses the compositional requirements of textured vegetable protein, hydration of soya protein, flavor characteristics of the extended beef product. The only soy product approved for use as a ground beef extender to date is soy protein concentrate. Address: Dawson Food Ingredients, Minneapolis, Minnesota.

506. Worthy, Ford S. 1981. The 500: The *Fortune* directory of the largest industrial corporations. *Fortune* 103(9):322-47. May 4.

• **Summary:** Companies are ranked by sales. Soy-related companies include: Ralston Purina (St. Louis, Missouri) is No. 72 with \$4,886 million in sales. Land O’Lakes (Minneapolis, Minnesota) is No. 109 with \$3,304 million. Archer-Daniels-Midland (Decatur, Illinois) is No. 139 with \$2,802 million. Central Soya (Fort Wayne, Indiana) is No. 207 with \$1,744 million. And A.E. Staley Mfg Co. (Decatur, Illinois) is No. 218 with \$1,656 million in sales.

Note: Cargill is not listed because it is privately owned. In 1981 Cargill’s sales were about \$12,000 million a year. Exxon was No. 1 on the Fortune 500 with \$103,142 million in sales. Mobil was No. 2 and General Motors was No. 3.

507. *Dawson Sentinel (Minnesota)*. 1981. Closing of soy isolate plant heavy blow to community: Eighty-four Land O’Lakes employees affected by closing of plant last Friday. 96(40):1. May 7.

• **Summary:** On 1 May 1981, Friday, Ralph Hofstad, president of Land O’Lakes Inc., officially announced the closing of the soy isolate plant located near Dawson. Made at an open meeting in the Dawson City Building, the announcement was “received in the Dawson community with heaviness of heart.” Following personal remarks of empathy and regret, he read a printed news release which began: “Operation of Land O’Lakes, Inc. soy food processing plant east of Dawson has been suspended for an indefinite period, beginning May 1, 1981.” The facility of 100,000 square feet was built by Dawson Mills in the late 1970s to make “soy isolate and soy analog food products.” The closure was necessary because the volume of sales anticipated originally has not developed. “Land O’Lakes plans to continue to sell soy isolate and [meat] analog food products. Note: This is the earliest English-language document seen (Dec. 2007) that uses the term “soy analog” (or “soy analogs”) to refer to soy-based meat analogs.

“Extensive efforts are being made to help the 84 affected employees find jobs elsewhere within the regional cooperative or with other employers, Hofstad said. The primary soy processing and Flour Mill activities of the Land O’Lakes Soy Group at Dawson will not be affected.”

Note: Two months later (July 1981), the isolate plant

building was sold to AMPI (Associated Milk Producers Inc., a cooperative formed in 1969) for cheese manufacturing. As of 2002 AMPI was still operating the plant, which employed 155 people and specialized in cheese processing and drying, milk receiving, and aseptic packaging. AMPI’s mission is: “To maximize the return on milk marketed and equity invested, while: 1. Keeping ownership in the hands of current members. 2. Building a viable market for future members. 3. Representing midwest dairy producers in the development of dairy policy.”

508. *Dawson Sentinel (Minnesota)*. 1981. AMPI announced purchase of Land O’Lakes isolate plant. 96(52):1. July 30.

• **Summary:** Land O’Lakes, Inc. of Arden Hills, Minnesota, and the Associated Milk Producers, Inc. (AMPI) of New Ulm, both former cooperatives, announced jointly the sale of Land O’Lakes’ soy isolate plant to AMPI. Ralph Hofstad, President of Land O’Lakes, and Don Gregg, Manager of the North Central Region of AMPI, said that sale of the facility to AMPI will enable it to be put to constructive use for farmers and offer additional employment in the Dawson area.

AMPI plants at Clarkfield and Paynesville will become part of the new AMPI facility near Dawson. Dawson is considering issuing Industrial Revenue Bonds, which will enable AMPI to secure financing at lower interest rates.

Note: AMPI was formed in 1969 as a cooperative. As of 2002 AMPI was still operating the Dawson plant, which employed 155 people and specialized in cheese processing and drying, milk receiving, and aseptic packaging. AMPI’s mission is: “To maximize the return on milk marketed and equity invested, while: 1. Keeping ownership in the hands of current members. 2. Building a viable market for future members. 3. Representing midwest dairy producers in the development of dairy policy.”

509. Dutton, Herbert J. 1981. History of cooperative soybean oil mills in the United States (Interview). Conducted by William Shurtleff of Soyfoods Center, Aug. 1. 2 p. transcript.

• **Summary:** Dr. Dutton, who started to work for the NRRC in 1945, guesses that the number of soybean oil mills peaked in the early 1950s. Another trend complicated this; farmer cooperatives / co-ops set up their own mills so that the farmers could have a source of soybean meal [during World War II]; they sold the unrefined oil on the open market. In 1945 the government started sponsoring their meetings once a year—and it still does.

One thing that hurt the co-ops in the early days, and drove some out of business, was the use of trichloroethylene as a solvent; it was soon found to be toxic because of amino acids it contained. Leonard L. McKinney described the toxic factor in about 1957. NRRC is required to discard most of its file after a certain number of years, so much of the original

correspondence has probably been lost.

Yet trichloroethylene was very inexpensive and reduced the cost of starting a soybean oil mill. Its use was discontinued in about 1945-50. Address: Cable, Wisconsin. Phone: 715-798-2330.

510. *Dawson Sentinel (Minnesota)*. 1981. City manager explains public hearing purposes: Issuance of \$4,500,000 in General Revenue Bonds and \$1,250,000 grant to be discussed. 97(2):1. Aug. 13.

• **Summary:** In recent weeks, both Land O'Lakes and American Milk Producers, Inc. (AMPI) have stated that there is an agreement concerning the purchase of the now-closed soy isolate plant by AMPI [Associated Milk Products, Inc.]. Through its bond consultants, Allison-Williams, a banking-investment firm, AMPI has approached the Dawson City Council to request the city's assistance in obtaining funding for the purchase.

The first method by which the city may help is in allowing, under its authority, the issuance of Industrial Revenue Bonds. The city does not incur the liabilities normally associated with municipal bonds.

Second, the city is preparing to ask the federal Department of Housing and Urban Development for a \$1.25 million Urban Development Action Grant. John J. Frohrip, Dawson City Manager, hopes as many people as possible will attend the public hearing on Aug. 18.

511. Hooten, Dan. 1981. Dawson Mills' protein analog plant. Protein prices. Isolate markets. Functional properties desired by industry (Interview). *SoyaScan Notes*. Aug. 17. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** Dawson Mills invested \$11 million in their protein analog plant. It was intended to have a capacity of 9.5 million lb/year but was actually capable of producing only about 400,000 lb/month or 4.8 million lb/year.

Soy protein prices (per lb): Flours and grits: \$0.14. Concentrates: \$0.31-33. Isolates: \$1.02—from Ralston Purina and Grain Processing Corp. \$0.90—from ADM. Note that ADM is working off inventory that they have accumulated since start-up. A number of Central Soya's former isolate customers have gone to other suppliers.

Isolate markets: (1) Health foods. (2) Infant formulas—Some doctors go to soy formulas directly to avoid potential allergy problems with cow's milk. (3) Milk products. (4) Meat emulsions—In Europe fat, water and isolate are emulsified and then frozen. This emulsion is later mixed with meat in the preparation of products that are "stuffed into casings or cans."

Japan is still a net importer (2-3 million lb/yr) of isolates.

Functional properties desired by industry: (1) Film forming ability—with strength. (2) Casein-like properties (the imitation cheese market is now about 150 million lb—uses 40 million lb of casein). Casein sells for \$1.35-\$1.40/lb.

Address: Dawson Food Ingredients.

512. Miller, Dwight L. 1981. A chapter in the history of soy fiber meat analogs. *Northern Regional Research Center: Notes from the Director* No. 1473. p. 3. Aug. 21.

• **Summary:** "The concept of spinning soy protein isolates into fibers and then converting them into meat analogs has been around since at least 1954 when Robert A. Boyer first patented the idea. Subsequently, several companies licensed the process, and in the 1960's General Mills introduced a series of meat analogs made by the spinning operation. After opening a plant in 1970, General Mills closed down operations in 1976. The equipment and process were sold to Dawson Mills" and Dawson built a new plant (just east of Dawson, Minnesota) "to produce soy isolates plus meat analogs from spun isolate. Early this week, Daniel E. Hooten (President, Dawson Food Ingredients) was here for an update on our soy protein research and to discuss functional properties of various soy protein fractions with Walter J. Wolf and A.C. Eldridge (OC [Oilseed Crops Lab]). We learned that Dawson's parent company, Land O'Lakes, Inc. has recently sold the soy isolate and protein spinning plant to American [sic, Associated] Milk Products, Inc. [AMPI in Texas], a Houston-based milk cooperative. They apparently plan to use the plant to process milk products. Dawson's withdrawal leaves Miles Laboratories [Worthington Foods] as the only company that currently manufactures meat analogs from spun soy protein fibers." Address: Acting Center Director.

513. Strayer, George M. 1981. Cooperative soybean processing in America (Interview). Conducted by William Shurtleff of Soyfoods Center, Sept. 15. 1 p. transcript.

• **Summary:** The "co-ops" first started crushing soybeans during World War II, and by the end of the war there were about 40-50 crushing plants in operation. Soybean crushing plants were set up by already established cooperative grain elevators. There were about ten in Iowa, in places like Dyke, Sac City, and Manley. Originally, most of the plants were small expeller plants, then they evolved to small solvent plants, then to larger solvent plants. Now they are comparable to the large commercial soybean crushing plants.

The next stage was when some of the plants joined to form sales organizations to represent them. There were two major sales organizations; one was Soy-Cot Sales (located in the Chicago Board of Trade Building). The Iowa Farmers Grain Dealers Association was an organization of local cooperative elevators that went into processing; they bought plants, gradually expanding to larger plants. They were principally interested in the soybean meal since most of the co-op elevators were feed mixers. They sold the unrefined oil to refiners.

The Farmers' Export Corporation, which started after World War II, was made up of 10 or 12 of these Midwest



regional cooperatives. They handled grain, but also exported soybeans, soybean meal and soy oil. Soy-Cot Sales Corp. also started at about the same time to do export sales. For more details and historical information, contact John Dunn at the Agricultural Cooperative Service of the USDA. Also try Maurice Van Norstrand (Phone: 515-223-3700 or 515-223-3801) at the Illinois Agricultural Association, and Dick Rypkema at Agri Industries in Des Moines. Address: Hudson, Iowa.

514. Rypkema, Dick. 1981. AGRI Industries, Inc. and other soy-related cooperatives (Interview). Conducted by William Shurtleff of Soyfoods Center, Sept. 15. 1 p. transcript.

• **Summary:** The formal name of AGRI Industries, Inc. is American Grain and Related Industries, Inc. Headquartered in Des Moines, Iowa, it is the successor of the old Iowa Farmers Grain Dealers Assoc. A regional cooperative, it is owned by about 340 members, which are cooperative elevators, which are in turn owned by farmers. They have two processing plants. Other regional cooperatives with soybean crushing plants include: Farmland Industries (3 plants), Land O'Lakes (3 plants), MFA (Missouri Farmers Assoc.), Honeymead Products {Mankato, Minnesota}, and Gold Kist {Atlanta, Georgia}.

There are now a total of about 15 cooperative soybean crushing plants. The co-op share of the soybean crushing market has been steady for the past 3-4 years; before that it was increasing. Output is still expanding, but so is that of non-co-op crushers. For more details and historical information, contact Stan Thurston (Phone: 202-447-8939) or John Dunn (202-447-8253) at the Agricultural Cooperative Service of the USDA. One section of this Service deals specifically with cooperative processors; see the Cooperative Marketing and Purchasing Division. Also contact NSPA (National Soybean Processors Association)—since most regional co-op processors are members of NSPA. Address: Agri Industries, Des Moines, Iowa.

515. Dunn, John R. 1981. U.S. cooperative soybean processors (Interview). Conducted by William Shurtleff of Soyfoods Center, Sept. 15. 1 p. typescript. [1 ref]

• **Summary:** It is now generally agreed that ADM has passed Cargill as America's leading soybean crusher—but both companies have about the same crushing capacity. According to his best information, America's top 12 soybean crushers are (as of Oct. 1979): 1. ADM. 2. Cargill. 3. A.E. Staley. 4. Central Soya. 5. Bunge. 6. Ralston Purina. 7. Gold Kist. 8. Farmland Industries. 9. Continental Grain. 10. Riceland Foods. 11. Quincy Soybean. 12. Land O'Lakes. Other leading cooperative crushers, in descending order of size, are Honeymead Products, Agri Industries, Boone Valley Processing & Marketing Assoc., and Missouri Farmers Association. All of these companies use solvent extractors.

The top 4 firms own and operate 54.5% of the processing

capacity. The next 4 control 20.6%, for an 8-firm total of 75.1%. The next 4 control 11.2%, for a 12 firm total of 86.3%. Bunge, which is based in Argentina, has moved up on the list through some recent acquisitions, including a plant in Mississippi in July from Gold Kist.

Concerning cooperatives, each regional co-op is taken as a unit. They operate completely independently of each other. So it is not accurate to think of the co-ops as a whole—although they do have some areas of cooperation with one another, e.g. export sales efforts and domestic processed product sales. They operate independently on procurement and processing. The total amount of soybeans crushed by the cooperatives is probably less than that crushed by ADM or Cargill. Address: USDA Agricultural Cooperative Service (ACS), Washington, DC 20250. Phone: 202-475-4929.

516. Shurtleff, William; Aoyagi, Akiko. 1981. History of cooperative soybean processors. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 4 p. Sept. Unpublished typescript.

• **Summary:** A comprehensive history of the subject. Contents: Introduction: Started 1940, Shearson Hayden 1977 report, 19 plants and 20.7% of industrial capacity in 1980. Background and 1940's: brief history of farmers' co-ops, first co-op soybean mill in Kentucky (1940), number of mills by 1945, reason for starting mills, types and capacities of mills, organization (4 types), Iowa co-op example, buy from farmers, sell meal back, sell oil outside. 1950's and 1960's: expansion of number and solvent types, Soy-Cot Sales established 1963, Farmers' Export Corporation. 1970's and 1980's: Growth in capacity and number of mills, Intrade, power of farm crops in 1980's, rank of co-ops in top 20 processors, co-ops owning multiple plants, brand name co-op products, link with USDA Agricultural Cooperative Service. Address: Lafayette, California. Phone: 415-283-2991.

517. Boyer, Robert A. 1981. Development of meatlike products based on spun soy protein fibers. Part II (Interview). *SoyaScan Notes*. Oct. 11. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Now somewhat desperate, Boyer decided to try a meat company anyway. He went to Swift & Co. in Chicago, Illinois, in 1950 and they immediately liked these ideas and bought exclusive rights to the patent from 1950-1954 (in 1955 they converted to nonexclusive). In 1950, the war scarcity psychology still prevailed. American consumers and food producers had watched in astonishment during the war as meats became so scarce and expensive that only a few could afford them. Thus it was easy to sell the notion that even after the war, as world population continued to rise, plant proteins would play an increasingly important role in diets throughout the world. Boyer worked with Swift for five years, but in considerable secrecy. Swift told him that if their Livestock Relations Department found out that Swift was

doing research on meat analogs, “all hell would break loose.” Eventually Swift made and test marketed new soy protein products. However in 1952-53 livestock producers in America were in such bad shape economically that they marched on Washington, DC, demanding a better price for their products. Swift, fearing the possibility that the media might get word of their new project and come out with headlines reading “Swift Making Synthetic Meats from Soy Protein,” decided to shut down the project. None of the products was ever marketed commercially.

In 1951-52 Unilever bought a license from Boyer for spun protein isolate production throughout the rest of the world. Boyer went to England and worked with Unilever in their peanut protein isolate plant and research labs near Liverpool. Here, for the first time, his process was used in the making of sausages containing fibers of peanut protein isolate.

In 1956 Boyer returned to America and went immediately to Worthington, who had now been thinking about taking a license on Boyer’s spinning patent for seven years. The first food-grade soy protein isolates were just becoming available, so the company bought the patent rights for the health food industry and asked Boyer to work with them as a consultant. Worthington eventually did more with Boyer’s discovery than any company in America.

After Worthington purchased Boyer’s license (for the health food trade), other large food companies followed suit: Ralston Purina, General Mills, and Nabisco. General Foods developed their own related process. In 1962 Boyer joined the research staff of Ralston Purina as a Protein Scientist; he worked there until his retirement in 1971, at which time he became a Protein Consultant for Miles/Worthington.

After General Mills took a license on Boyer’s product, they built a commercial-sized fiber spinning plant at Cedar Rapids, Iowa, and developed their Bontrae line which featured Bac-O’s, a spun fiber analog resembling cooked bacon bits and launched in 1965. The venture was impressive in scope and the product was a real sensation, the biggest thing that had happened to Boyer’s idea to date. (The product is now made with extruded soy flour.) The whole venture had a profound effect on the thinking of other large food producing companies concerning soy protein foods. Boyer was now spending 50% of his time with Worthington and 25% each with General Mills and Ralston.

Boyer’s years of research eventually began to pay off in terms of handsome royalties from his patents, of which he now had more than thirty, some shared with Ford. These lasted until the patent expired in 1971. Now any company can use the protein spinning process without having to buy a license or pay fees. In 1981 the main American companies using spun protein fibers in foods were Worthington Foods, Dawson Mills in Minnesota (which bought General Mills’ equipment), Loma Linda Foods in California, and Ralston Purina. In Europe there are two companies in the Netherlands, one in Denmark (Nutana), and one in Belgium using

food-grade spun protein fibers. In Japan, Nisshin Oil Mills Ltd. built the first plant to spin edible soy protein fibers in 1968. In 1976 Fuji Purina Protein Ltd., a subsidiary of Fuji Oil Co. and Ralston Purina, introduced Fujipur SP-90 spun soy protein fibers.

Most manufacturers of meat analogs in the U.S. agree that the general market has been disappointing, but that the idea is simply ahead of its time, which will inevitably come as meat prices continue their rapid rise. The vegetarian or “motivated” market (and especially the Seventh-day Adventist sector) showed a steady increase each year. No sales figures are available on the total market size.

When asked in 1980 how he liked the newest generation of meat analogs, Boyer replied that he found the quality disappointing, since the producers have to make compromises in equipment and processing to keep costs down. A researcher can get much better textures and flavors in his lab working by hand. Another problem is the subtle beany flavors that result from isolates and from typical defatted soy meal rather than specially defatted soy meal that can be made to contain almost no beany flavor. Boyer eats store-bought meat analogs (including bacon bits) from time to time but not as a regular part of his diet. He prefers Worthington products to Loma Linda. He likes meat, too, and also uses tofu quite a bit.

How about the future? Harkening back to the years of his work with Ford, Boyer said in 1981, “We’re at the Model T stage right now with analogs. I’m impatient to get to the Lincoln Continental stage.” He feels that the products still have a very bright future, and that when the price of meats rises to 10 or 20% above those of the analogs, sales will start a period of steady growth. Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

518. Taylor, Owen. 1981. Super seed: Coming down the backstretch. Genetic engineering still faces several hurdles. *Soybean Digest*. Sept/Oct. p. 16a-b.

• **Summary:** The idea of crossing a soybean with a cocklebur (so the resulting plant could thrive in all kinds of weather and choke out anything in its path) may have sounded like science fiction several years ago—but not today. Now such a goal seems reachable—though it may still be a number of years away. “Scientists pin their hopes on a relatively new and often controversial process: Genetic engineering. Recent creation of the ‘sun-bean’ focused new attention on this technique.” Researchers Jack Kemp and Timothy Hall at the University of Wisconsin transferred a gene from a French green bean into a sunflower cell. This could result in sunflower seeds that benefit from the green bean’s superior quality protein. “But you won’t be growing sun-beans for a long time—of ever. So far, all the researchers have is callous plant tissue—not a new plant capable of reproducing.”

“Gene splicing” might also cut years off the time required to develop new soybean varieties. While work in other crops

shows promise, soybean researchers “still need their first major breakthrough.” Until they can figure out how to make a soybean cell regenerate into a full plant, nothing else is possible. So far, this has been done with more than 15 other types of plants, but not yet with soybeans. If and when this becomes possible, soybean genes for nitrogen fixation could, conceivably, be transferred into grains such as wheat or corn.

Genetic engineering has its critics, who charge (for example) that manipulating genes in microorganisms might create new strains of dangerous diseases.

Drew Ivers, a soybean geneticist for Land O’Lakes Ag Services, notes that the potential exists for major breakthroughs. “It’s very realistic—very exciting. The possibilities are almost endless—but it just can’t happen in 2, 5 or even ten years.”

Note: This is the earliest document seen (Feb. 2000) on genetic engineering of soybeans (or biotechnology).

519. National Soybean Processors Association. 1981. Yearbook and trading rules 1981-1982. Washington, DC: National Soybean Processors Association. ii + 106 + A1-12. 23 cm. Spiral bound.

• **Summary:** On the cover (but not the title page) is written: Effective October 1, 1981. Issued annually to all members of the association. Contents: Constitution and by-laws. Officers and directors. Executive office. Members. Associate members. Standing committees. Trading rules on soybean meal (first adopted 18 Oct. 1933). Sales contract. Appendix to trading rules on soybean meal: Official methods of analysis (moisture, protein, crude fiber, oil {only method numbers listed}), sampling of soybean meal {at origin} (automatic mechanic sampler, pneumatic probe sampler, probe sampler), sampling of soybean meal (at barge loading transfer facilities), official weighmaster application, semi-annual scale report, manufacturers’ certification—Installation of automatic sampler (at barge loading transfer facility), semi-automatic sampler certification (at barge loading transfer facility), official referee chemists (meal). Soybean meal export trading rules: Minimum blending procedures for export meal blended at ports, sampling of soybean meal (at vessel loading facilities), manufacturers certification—Installation of automatic sampler (at vessel loading facility), semi-automatic sampler certification (at vessel loading facility). Trading rules on soybean oil (first adopted 21 May 1930). Sales contract. Definitions of grade and quality of export oils. Soybean lecithin specifications. Appendix to trading rules on soybean oil: Inspection, grading soybean oil for color (NSPA tentative method), methods of analysis (A.O.C.S. official methods): Soybean oil, crude; soybean oil, refined; soybean oil, refined and bleached; soybean oil for technical uses; soap stock, acidulated soap stock and tank bottoms (only method numbers listed), official weighmaster application, semi-annual scale report, official referee chemists (oil). Soybean oil export trading rules. Uniform

soybean oil export contract. Foreign trade definitions.

The page titled National Soybean Processors Association (p. ii) states: “During the past crop year about 1,000,000,000 bushels of soybeans moved through processing plants of NSPA’s 24 member firms. Approximately 50 percent of America’s 1.8 billion-bushel soybean crop was bought and processed by NSPA members. Exporters account for another 36 percent of the crop, and the remainder [14%] is returned to farms for seed, feed, and residuals.” Also discusses industry programs, soybean research, and international market development.”

The section on officers, executive committee, and board of directors (p. 7-8) gives the name, company affiliation, and phone number of each person. Officers—Chairman: Gaylord O Coan, Gold Kist, Inc. Vice Chairman: Edward J. Cordes, Ralston Purina Co., President: Sheldon J. Hauck. Secretary: Donald H. Levinworth, Cargill, Inc. Treasurer: Lowell K. Rasmussen, Honeyamead Products Co. Immediate past chairman: C. Lockwood Marine, Central Soya Co., Inc.

Executive committee: Richard G. Rypkema (’83), Agri Industries. Charles Bayless (’83), Archer Daniels Midland Co. David C. Thompson (’82), Bunge Corporation. Harold H. Leavenworth, Cargill, Inc. C. Lockwood Marine, Central Soya Co., Inc. Gaylord O. Coan, Gold Kist, Inc. Lowell K. Rasmussen, Honeyamead Products Co. Kermit F. Head (’82), Missouri Farmers Assn.—Grain Div. Sewell L. Spedden (’82), Perdue, Incorporated. Edward J. Cordes, Ralston Purina Co.

Board of directors (alphabetically by company; each member company has one representative on the board): Richard G. Rypkema, Agri Industries. Thomas H. Wolfe, Anderson, Clayton & Co. Charles Bayless, Archer Daniels Midland Co. Keith Voigt, Boone Valley Coop. Proc. Assn. David C. Thompson, Bunge Corporation. Harold H. Leavenworth, Cargill, Inc. C. Lockwood Marine, Central Soya Co., Inc. Ronald L. Anderson, Continental Grain Co. Donald M. Chartier, Farmland Industries, Inc. Gaylord O. Coan, Gold Kist, Inc. Lowell K. Rasmussen, Honeyamead Products Co. Kenneth J. McQueen, Land O’Lakes, Inc. Kermit F. Head, Missouri Farmers Assn.—Grain Div. Robert E. Hicks, Owensboro Grain Co., Inc. Sewell L. Spedden, Perdue, Incorporated. Wilton L. Adcock, Planters Oil Mill, Inc. Thomas L. Shade, Quincy Soybean Co. Edward J. Cordes, Ralston Purina Co. William P. Hudson, Riceland Foods, Inc. J.D. Morton, Sherman Oil Mill. Styles M. Harper, Southern Soya Corp. Kenneth A. Robinson, A.E. Staley Mfg. Corp. Preston C. Townsend, Townsends, Inc. Tyler Terrett, West Tennessee Soya Mill, Inc.

Executive office, Washington, DC: Executive Director, Sheldon J. Hauck. Director, Public Affairs: Murray C. Keene. Director, Regulatory Affairs: Rhond R. Roth. Administrative Asst.: Alicia B. Rickman. National Soybean Crop Improvement Council: Robert W. Judd, Managing Director. General counsel: Elroy H. Wolff, Sidley & Austin. Special counsel: Julian B. Heron, Jr., Heron, Haggart, Ford,



Burchette & Ruckert.

Members (listed alphabetically by company; within each company, first the name of the official Association representative {who is on the Board}, followed by the other personal members listed alphabetically by surname. For example, Archer Daniels Midland Co., the company with the most personal members, has 23. After the name of each personal member is given with his address and phone number. In the listing below, the number of personal members is shown in parentheses after the name of each company, followed by city and state of the various locations): Agri Industries—Soybean processing division (2); Des Moines, Iowa.

Anderson, Clayton & Co. (4); Phoenix, Arizona, Jackson, Mississippi, Houston, Texas. Archer Daniels Midland Co. (23); Archer Daniels Midland Co. (26); Little Rock, Arkansas; Augusta, Georgia; Decatur, Illinois; Galesburg, Illinois; Granite City, Illinois; Fredonia, Kansas; Mankato, Minnesota; Red Wing, Minnesota; Kansas City, Missouri; Clarksdale, Mississippi; Fremont, Nebraska; Lincoln, Nebraska; Kershaw, South Carolina; Memphis, Tennessee. Boone Valley Coop. Processing Assn. (3); Eagle Grove, Iowa. Bunge Corporation (9); Cairo, Illinois; Danville, Illinois; Logansport, Indiana; Emporia, Kansas; Marks, Mississippi; New York City, New York. Cargill, Inc. (20); Osceola, Arkansas; Gainesville, Georgia; Cedar Rapids, Iowa; Des Moines, Iowa; Sioux City, Iowa; Washington, Iowa; Chicago, Illinois; Wichita, Kansas; Burnsville, Minnesota; Minneapolis, Minnesota; Fayetteville, North Carolina; Sidney, Ohio; Memphis, Tennessee; Chesapeake, Virginia. Central Soya Co., Inc. (11); Gibson City, Illinois; Decatur, Indiana; Fort Wayne, Indiana; Indianapolis, Indiana; Belmond, Iowa; Bellevue, Ohio; Marion, Ohio; Delphos, Ohio; Chattanooga, Tennessee. Continental Grain Co. (11); Guntersville, Alabama; Chicago, Illinois; Taylorville, Illinois; New York City, New York; Cameron, South Carolina. Farmland Industries / Far Mar Co (4); Van Buren, Arkansas; Sergeant Bluff, Iowa; Hutchinson, Kansas; St. Joseph, Missouri. Gold Kist Inc. (6); Decatur, Alabama; Atlanta, Georgia; Valdosta, Georgia. Honeymead Products Co. (3); Mankato, Minnesota. Land O'Lakes, Inc. (5); Fort Dodge, Iowa; Sheldon, Iowa; Dawson, Minnesota; Minneapolis, Minnesota. Missouri Farmers Assn.—Grain Div. (6); Mexico, Missouri. Owensboro Grain Co., Inc. (2); Owensboro, Kentucky. Perdue Incorporated (2); Salisbury, Maryland. Planters Oil Mill, Inc. (2); Rocky Mount, North Carolina. Quincy Soybean Co. (4); Quincy, Illinois. Ralston Purina Co. (8); Bloomington, Illinois; Lafayette, Indiana; Iowa Falls, Iowa; Louisville, Kentucky; Kansas City, Missouri; St. Louis, Missouri; Raleigh, North Carolina; Memphis, Tennessee. Riceland Foods, Inc. (9); Helena, Arkansas; Stuttgart, Arkansas. Sherman Oil Mill (1); Fort Worth, Texas. Southern Soya Corp. (1); Estill, South Carolina. A.E. Staley Manufacturing Co. (7); Decatur, Illinois. Townsend's Inc. (2); Millsboro, Delaware. West

Tennessee Soya Mill, Inc. (1); Tiptonville, Tennessee.

Associate Members: ACLI Soya Co, White Plains, New York. Anderson Clayton Foods, Dallas, Texas. Balfour MacClaine International, Ltd., New York City, New York. Best Foods, a Unit of CPC International Inc., Englewood Cliffs, New Jersey. Canadian Vegetable Oil Processing—Div. of Canada Packers Inc., Hamilton, Ontario, Canada. Cobec Brazilian Trading & Warehousing Corp. of the U.S., New York City. Delta Cotton Oil & Fertilizer Co., Jackson, Mississippi. Durkee Foods, Div. of SCM Corporation, Chicago, Illinois (Millark M. Evak). Hunt-Wesson Foods, Inc., Fullerton, California. Kraft, Inc.; Glenview, Illinois; Memphis, Tennessee. Lever Bros Co., New York City, New York. Louis Dreyfus, Stamford, Connecticut. Maple Leaf Monarch Co., Toronto, Ontario, Canada (W.G. Milliken). Marwood Company, San Francisco, California. Overseas Commodities Corp., Minneapolis, Minnesota. Pillsbury Co., Minneapolis, Minnesota. Procter & Gamble Co., Cincinnati, Ohio. Schouten International, Inc., Minneapolis, Minnesota. Spencer Kellogg, Div. of Textron, Inc., Buffalo, New York. Alfred C. Toepfer, Inc., New York City, New York (Dierk Overheu).

Standing committees: For each committee, the function of the committee, the names of all members (with the chairman designated), with the company and company address of each are given—Export development committee, Crop Improvement Council. Meal trading rules. Oil trading rules. Safety, health, and loss prevention. Technical. Address: 1800 M. St., N.W., Washington, DC 20036. Phone: 202/452-8040.

520. Dunn, John R. 1981. Re: History of U.S. cooperative soybean processors. Letter to William Shurtleff at Soyfoods Center, Nov. 17—in response to inquiry. 3 p. Typed, with signature. [2 ref]

• **Summary:** There are three basic organizational types for soybean plant cooperatives: (1) mills owned independently by single local cooperative associations, (2) mills owned by federated regional cooperatives which are, in turn, owned by local cooperatives, and (3) mills owned by centralized regional cooperatives, which are directly owned by farmer members. In reality, combinations of these three types are possible."

"Typically, the meal from cooperative soybean plants is sold either to cooperative feed mills (intra or inter-association sales) to non-cooperative feed mills, or to exporters. Very little meal is sold directly back to farmer owners.

"Most coop mills are not operated in direct conjunction with local cooperative grain elevators, as you indicate in the text. This may have been the case in the 1940's perhaps, but since that time, mills have become more independently located, procuring soybeans from farmers, from several local elevators by truck, or from distant production regions by train.

"I believe that ADM is now the largest processor—slightly

ahead of Cargill. I don't have good figures to back that, however, rather a growing consensus among industry experts.

"Since our study, Gold Kist has sold its plants in Marks, Mississippi, and Decatur, Alabama, to Bunge, dropping Gold Kist to a 15 rank and raising Bunge to 3rd. The net effect on total cooperative share of processing capacity was to lower it to about 17 percent.

"Finally, while ACS has worked closely with the cooperative processors over the years, it would probably be an overstatement to say that we have worked with them more than any other government agency—I just don't know on that one. The credit for cooperatives' success in soybeans accrues to cooperatives themselves, and what assistance we have provided pales by their accomplishment.

"The following table shows various cooperative soybean processors, where they have or have had mills, and when each mill started or was operated. (1) Gold Kist: Decatur, Alabama 1974-1981; Marks, Mississippi 1977-1981; Valdosta, Georgia 1968-present. (2) Farmland Industries: Van Buren, Arkansas 1960 (sic, Oct. 1959); Sergeant Bluff, Iowa 1974 (sic, Aug. 1975); St. Joseph, Missouri 1963 (Far-Mar-Co merger). (3) Riceland Foods: Helena, Arkansas 1965; Stuttgart, Arkansas 1958. (4) Land O'Lakes: Sheldon, Iowa 1970; Dawson, Minnesota 1980; Ft. Dodge, Iowa 1971. (5) Honeymead Products: Mankato, Minnesota 1960. (6) Agri Industries: Mason City, Iowa 1943; Manning, Iowa 1979 [Formerly North Iowa Cooperative Processing Assoc., managed by Glenn Pogeler from 1943-1964]. (7) Boone Valley Processing Association: Eagle Grove, Iowa 1943. (8) Missouri Farmers Association: Mexico, Missouri 1946."

On other subjects: Intrade was formed in 1968. Farmers Export Co. [FEC] started in 1968. SoyCot started exporting soybean products in 1979. Address: USDA Agricultural Cooperative Service (ACS), Washington, DC 20250. Phone: 202-475-4929.

**521. Product Name:** Dawsoy Soy Flour, Flakes, Grits, and Soy Protein Isolates.

**Manufacturer's Name:** Dawson Food Ingredients, Inc.

**Manufacturer's Address:** 7901 Flying Cloud Dr., Suite 230, Eden Prairie, MN 55344.

**Date of Introduction:** 1981.

**New Product-Documentation:** Soya Bluebook. 1981. p. 61.

522. Hubbard in retrospect. 1981. Hubbard, Iowa: Hubbard Centennial, Inc., Taylor Pub. Co. 284 p. Illust. 32 cm. \*

• **Summary:** In the section titled "1943" (p. 17) we read: "The foundation of the soybean plant in Hubbard was poured this week. The plant is in coordination with Farmers Elevator and will cost \$40,000, having a capacity of 500,000 bushels." Note: No specific date is given.

Under the heading "1948" (p. 17): "Boone Valley Coop-

erative Processing Association have purchased the Hubbard Soybean plant from Farmers Co-op Elevator. Ed Olson is the manager."

523. Cowell, Sandra; Meier, Diane. eds. 1981. Hubbard in retrospect: Hubbard centennial 1881-1981. Hubbard, Iowa: Hubbard Centennial, Inc. See p. 17.

• **Summary:** "1943—... The foundation of the soybean plant in Hubbard was poured this week [no date given]. The plant is in coordination with Farmers Elevator and will cost \$40,000, having a capacity of 500,000 bushels."

1944. Carl Kulow was elected president of the Hubbard Co-op Elevator board. Note: There is no entry for the soybean plant starting operation.

"1948—The Boone Valley Cooperative Association have purchased the Hubbard Soybean plant from Farmers Co-op Elevator. Ed Olson is manager." Address: Hubbard, Iowa.

524. Crabbe, Carolyn; McCutcheon, Connie. eds. 1981. Eagle Grove, Iowa 1881-1981 centennial. Eagle Grove, Iowa: Eagle Grove Centennial Committee. vi + 218 p. See p. 21. Illust. No index. 28 cm.

• **Summary:** In the chapter on "Agriculture and agribusiness" (p. 21) is a half-page detailed chronology of "Boone Valley Cooperative Processing Association." "1943 April 12—First meeting at City Hall in Eagle Grove; adopted name of Boone Valley Cooperative Processing Association; 13 cooperatives, membership \$1,000.00, Preferred shares \$50.

"April 20—Second meeting with M.K. Frey, first temporary chairman, and 15 elevators represented.

"June 17—Ed Olson appointed chairman; Purchased Northwestern Railroad Building for \$1,500.00.

"July 16—Ed Elson resigned as chairman to become manager at \$350.00 per month.

"1944 March 4 [March 24?]-Plant started operation.

"1945—Decision to enter feed business; financed by 26 member cooperatives purchasing \$1,000 share of stock, Preferred Shares of \$45,000 sold, and loan from Omaha Bank for Cooperatives.

"1947 Aug. 23—Fire which almost completely destroyed processing plant.

"1948 Jan. 1—Purchased Hubbard Soybean Mill.

"1951 May—Hubbard plant closed down. Membership in Boone Valley increased to 56.

"1952 Oct.—Ground broken for new construction and new solvent plant was in production 13 months later, November 10, 1953.

"1954 April—Additional equipment installed to double capacity of feed department. Oct.—C.W. Bartley hired as manager of Feed Department.

"1955—Addition built on the office.

"1958—Quality Egg Program started; Joe Mittler, manager.

"1959 May 30—Ed Olson died. June 16. Keith M. Voigt

employed as new manager at \$1,000.00 per month. Aug.—Joe Mittler resigned as Egg Plant Manager; Harold Alleman named new manager.

“1962 June 28—Open House & Barbecue at Egg Division.

“1967 April 1—Egg Division transferred to Farmbest Eggs; Farmland [sic, Farmbest] went out of the egg business in 1971. May 16—Open House & Barbecue for new office.

“1968—New 1,500 ton soybean process plant constructed.

“1969 Dec. 17—Explosion in soy and feed plants.

“1970—Feeder Pig Program started. June 1—Reconstruction work started [after explosion].

“1971—New soybean storage facilities; Golden Eagle Swine Show—1st; remodel feed plant.

“1972—New feed console installed; new automatic bagger; new lunchroom in soy division; new 1,000 ton bulk soymeal storage and loading system.

“1973 April—Started new addition to office. Dec. 9—Bean dryer destroyed by fire. Leased railroad cars.

“1974—New bulk ingredient system. Boone Valley hit \$100 million in sales.

“1975—New boiler system.

“1976 Oct. 11—Groundbreaking for new \$4.5 million dollar feed mill.

“1978 June 20-21—Grand Opening of new feed mill. Sept.—Additional 1,200 ton soymeal storage.

“1979—Completed second bean dump; remodel Deluxe Dryer System; standby fuel system (two 30,000 gallon L.P. [liquid propane] tanks). Bought I.P.S. Plant to generate steam for power for plant expansion planned in 1980-81; coal will be burned, also refuse from soybean plant (seed, stems, weeds). Membership 175.

“1980—35 million dollar expansion started, to be finished October 1, 1981; about 80% of what is processed at the plant is meal for hogs, but minerals for feed, cattle, sheep, horses, cats and dog are also processed; about 20% of the output is soybean oil which goes for food processing.”

A large photo on the top half of the page shows an aerial view of the Boone Valley soybean processing plant in about 1981. Address: Eagle Grove, Iowa.

525. Honeymead Products Co. 1981? The history of Honeymead (Leaflet). Mankato, Minnesota. 2 p. Undated.

• **Summary:** Here are a few dates that are important to the growth and development of Honeymead.

“1937—A group of Mankato, Minnesota, businessmen buy an old tile plant and convert it to crush soybeans. Note: The company is named Mankato Soybean Products until 1947.

“World War II [1942]—Western Farmers [Washington Egg and Poultry Association], a Seattle, Washington, based Farmer Cooperative buys Honeymead to insure a steady supply of soy protein for their livestock feed.

“1947—The Mankato plant is purchased by Dwayne and Lowell Andreas and given its present name—Honeymead.

“1949—Solvent extraction is introduced.

“1957—Honeymead begins refining soybean oil.

“1960—Honeymead is purchased by the Grain Terminal Association [GTA], a grain marketing cooperative based in St. Paul [Minnesota]. We process 50,000 bushels of soybeans daily.

“1961—GTA purchases Minnesota Linseed Oil Company, at Fridley, Minnesota, a flax-crushing operation.

“1963 [sic, April 1964]—Honeymead begins producing hydrogenated or ‘hardened’ soybean oil, the basis for margarine or shortening. We’re processing 240,000 lbs. or tank cars of hydrogenated oil per day.

“1964—Honeymead makes its first 40 tankcar shipment of ‘hardened’ oil to New Orleans [Louisiana].

“1965—Waste water control is instituted at our Mankato facility.

“1967—Minnesota Linseed begins to develop a new oilseed market—sunflowers. First contracts cover 10,000 acres.

“1974—Honeymead and Minnesota Linseed merge. Honeymead enters the consumer foods market with the purchase of Kent Products, a margarine manufacturer based in Kansas City, Missouri. Construction is started on a new processing plant in Mankato.

“1975—Honeymead purchases its second margarine plant, Carthage Creamery, Carthage, Missouri, and places it under Kent Products management.

“1976—Construction of our new soybean processing and edible flour plant is completed. Mankato now processes 80,000 bushels of soybeans each day.

“1977—Honeymead strengthens its position in the consumer foods market with the acquisition of Holsum foods, an established food processing company.

“1979—Honeymead consolidates three plants: (1) Carthage Creamery, (2) Kent Margarine, and (3) Holsum Foods, Kansas City, into one operation, by completing construction of a new margarine plant in Olathe, Kansas.

“1979—With the purchase of Miami Margarine in Albert Lea, Minnesota, Honeymead continues to expand its lines of margarine and shortening.

“1979—Holsum Foods, with its headquarters in Waukesha, Wisconsin, is given management responsibility for all existing food processing and margarine operations.

“1979—Construction of a new extraction plant begins at Honeymead’s Fridley sunflower and flaxseed plant.

“1980—Honeymead completes construction of its new extraction plant at Fridley. We are now able to process 54,000 bushels of flaxseed or an equivalent amount of sunflower seeds each day.”

Note: The source of this document is unknown. Address: P.O. Box 29, Mankato, Minnesota 56001.

526. Boismenu, Clyde. 1982. Textured soy protein products in America today (Interview). *SoyaScan Notes*. Jan. 26. Conducted by William Shurtleff of Soyfoods Center.



• **Summary:** The biggest present outlet for TVP (more precisely textured soy flour or TSF) is in the pet food industry, and some is used in the U.S. school lunch program. Occasionally a foreign country, such as Poland or the USSR, will buy some to extend meats.

The Briggs Amendment is a California state amendment of about 1975; it regulates the labeling of meat products containing soy. If you add soy to hamburger you must label it "imitation hamburger," and even restaurants and institutions must state the names on the menu or, if there is no menu, in a sign on the wall, if the extender is bread crumbs. But the health inspectors overlook a lot of violations, as in small restaurants. Companies are not even allowed to use fanciful names such as "Superburger." Because of all this, customers in California have stopped using soy in droves and brought sales to a crashing halt. Clyde thinks there may be a similar law in New York; he does not know how many other states have such restrictive laws.

Nationwide, imitation cheese must have the word "imitation" as the largest word on the box; it looks absurd.

A company that wants to make TSF must buy a number of large extruders. Each one makes 3,000 to 5,000 lb/hour, and most companies own 3 to 5. Every one of the major manufacturers for TSF or textured soy protein products is losing money. Prices are terribly low and the industry is operated at an estimated 10% of capacity in 1981.

ADM's TVP is the most dense, but it gets too soft on cooking. Textured concentrates are too hard, and are like gristle or rubber in the finished product; they have less flavor but cause less flatulence. Textured isolates are too expensive, costing more than the meat they are intended to replace. All companies are desperate for a breakthrough.

ADM has never spent much money on developing imitation beef, ham, or chicken. Yet it the company has developed meatless entrees to increase profit margins. Uncle Archie's line of meatless entrees included Pepper Steak (the first one developed), Chicken Almadine, Sweet and Sour Pork, and Hearty Stew. ADM wanted to move from TVP extender to meatless entrees about 2 years ago. Like everybody, they rushed to GNC (General Nutrition Corp.), which reformulated the pepper steak by removing the mushrooms. It didn't sell well before or after the reformulation, so ADM tried to market it themselves under the Uncle Archie's brand. From the start, they appealed to the Safeway mentality, using lots of artificial ingredients. The product now tastes good but it looks like they will flop anyway.

Worthington and Loma Linda are also having big, indeed disastrous, problems. All the TSP (textured soy protein) products are dying on the vine. Central Soya can't sell textured concentrates. Loma Linda plans to try to duplicate the success of Sanitarium Food Co. [Australia] with breakfast cereals. Some health food stores have carried Loma Linda products, but natural food stores object to all the additives. And now even some Seventh-day Adventists are

starting to be critical for the same reason. None of the natural- or health food stores will carry Clyde's TVP because it contains so much artificial stuff.

Nabisco is no longer in the business, and Central Soya has discontinued the line of material they bought from General Mills. Cargill and Lauhoff are now in quite a precarious position. Cargill makes a good line of soy flours, but they also have a line of textured protein products that they have never been able to position correctly; they are operating at about 10% of capacity. Cargill got in early then in 1976 spent several million dollars more upgrading their plant so it is one of the nicest in the industry. A man with the inside scoop on Cargill is ADM's manager in the western region, Bill Potter, phone 213-833-1389. He was Cargill's sales manager and now lives in Los Angeles.

The three people and companies that hold all the process patents and pooled them were Nabisco, Swift & Co. and ADM; that jump-started this industry. All three had a slightly different process, so they cross licensed to get the TVP process going. Lynn Adolphson of ADM is the best man in the USA to ask about his; he really knows the industry.

General Mills was one company that really went into TSP in a big way. They had a line of flavored products that has never been duplicated since—all the TVP items that were used as meat extenders, including the Bontrae line which were very fancy products. They introduced spun isolates in a really big way in both the bacon bits type products and their whole line of frozen meat analogs. One day they shut down the whole operation without any warning. They sold the frozen line to Dawson Mills, and sold the Bontrae process to Central Soya, both of whom have shut down these products in the last 18 months or so. Dawson Mills got completely out of the ISP business, but may still have a weak line of textured products. People keep hoping the market will materialize, but it never happens, so eventually they have to get out to cut their losses.

Three companies went out in the first washout: General Mills, Swift & Co., and finally the Marschall Division of Miles Laboratories. A division of National Can called National Protein Products or something like that made a compressed soy grit very similar to that made by Nabisco.

We're now heading for a second washout. Lauhoff is weak but has a little niche in the pet food industry. With the market collapsing and export sales bleak, everyone is going hook and tong after the pet food industry. Lauhoff was just bought by Bunge. Worthington is probably in a pretty precarious position. They have huge capacity with a market of 2-10% of capacity.

Lauhoff and Cargill will probably be the next ones out. Dawson Mills is sort of dragging along at the rear, a little weak. Clyde is not sure if they still sell textured products. They banked an awful lot on textured soy concentrate. They still have a few fairly large customers—such as SAGA Food Services. All three companies need big volume to run their

machines economically.

ADM is definitely in the strongest, premier position among the makers of new soy protein products. ADM has strength across the board—not just in pet foods. They are the only company with a truly complete line of products and a decent line of flavored products. ADM is way out in front with the edible soy products because of better texture and flavor. Cargill, Dawson Mills, and Central Soya have sort of a nondescript product—not outstanding and not positioned well. They are losing money.

Central Soya is having problems with its textured soy protein concentrate. Staley is a dogged competitor. They have concentrated on a few items which they sell inexpensively; they do a good job with those, but they have no flavored products. Farmland (Far-Mar-Co) is also a dogged competitor. They have a line of flavored TSF that has never gone any where.

Each strong manufacturer has at least one pet food account from which they draw their financial life. All the companies are losing money on their pet food TSF but they have to have it to keep their overhead spread thin enough to make money on anything else. So the competition in the edible soy products industry is brutal.

What killed them all was Wenger. In the early days the pet food makers were happy to get TSF at 60 cents/pound, which was much cheaper than beef. But soybean meal was 6 cents/pound. So pet food makers started to buy a lot—dozens of carloads. Then Wenger shows up and says, “Why not buy an extruder, buy soybean meal for 6 cents/pound, and make your own TSF?” This forced TSF processors to drastically lower rates to cost of meal plus a fixed processing charge. That still allowed the processors to work off a lot of scrap. Some bought Wenger extruders. That was the end of profits in the pet food industry.

Dwayne Andreas took an early liking to TVP. Dwayne is a very homey person, a Quaker [sic, Mennonite] in the true sense. He developed and made a flaked breakfast cereal out of TVP; it contained 100% of the RDA for everything and you just poured milk on it—not a hot cereal. Or it could be used as a tuna extender. But in about 1972 the cereal makers rejected it; they thought it was too concentrated. That was one of the first times ADM got burned—a sort of TVP tragicomedy. Bob Sullenberger is another key man and good source of information. Address: Basic Foods Co., 1211 E. Olympic Blvd. #204, Los Angeles, California 90021. Phone: 213-623-6686.

527. Lauser, Greg C. 1982. History of Cargill’s involvement in the soybean processing industry. Minneapolis, Minnesota. 5 p. March 15. Unpublished manuscript.

• **Summary:** Soybean processing: 1942—Cargill entered the soybean processing business with the acquisition of expeller plants in Springfield, Illinois (sold in 1950), and Cedar Rapids (east), Iowa. Note: These two plants were purchased

from Ike Sinaiko and Joe Sinaiko respectively, but probably in 1943.

1943—Cargill acquired Plymouth Processing Company’s plant and grain elevator at Ft. Dodge, Iowa (sold in 1971 [to Land O’Lakes]).

1945—The company acquired from Honeymead solvent extraction plants in Spencer and Cedar Rapids (west), Iowa. The solvent-extraction process is used in modern plants today.

1946—Cargill acquired the Washington, Iowa, soybean crushing plant and began crushing flax seed at a plant it built at Port Cargill in Savage, Minnesota. The same year, the company acquired from the Falk Corporation a flax processing plant in Minneapolis. Since 1967, that plant also has been crushing sunflower seeds.

1947—The company opened a soybean crushing plant at Savage, Minnesota.

1950—Cargill built its first plant specifically designed to crush soybeans in Chicago to serve domestic oil and meal markets. In 1956, a refinery was built adjacent to the crushing plant that produces industrial refined non-edible oil used in paints and other protective coatings and in vinyl products. Cargill also acquired a flax crushing plant in Philadelphia that was closed as a crushing plant in 1953.

1957—Cargill opened a soybean processing plant in Memphis, Tennessee. A second plant was added adjacent to the first in 1970.

1959—Cargill expanded the scope of its soybean crushing activities to the Southeast by opening a facility in Norfolk, Virginia, and acquired a plant in Sioux City, Iowa, from Sioux Industries.

1960—The Wichita, Kansas soybean crushing plant was acquired from the Soy Rich Company.

1961—The company acquired the Des Moines, Iowa soybean crushing plant from Spencer-Kellogg Co. In 1967, Cargill opened its first domestic salad oil refinery adjacent to this crushing plant.

1965—Cargill began crushing soybeans overseas at its new plant in Tarragona, Spain. The company opened a second crushing plant in 1968 in Amsterdam, the Netherlands. A third seed crushing plant [named Soja-France, with Dominique de Clerq as chairman of the board and general manager] was opened at St. Nazaire, France, in 1970. A crushing plant at Reus, Spain, also was added in 1970 and Australian cottonseed crushing operations were acquired in 1972.

1967—The company opened the Gainesville, Georgia, soybean processing plant. A refinery, Cargill’s first to produce hydrogenated or “hardened” oil for the Southeastern food manufacturing industry, was built adjacent in 1979.

1970—Cargill built the Fayetteville, North Carolina, crushing plant and a refinery was added in 1976.

[1971—Soybean crushing plant at Fort Dodge, Iowa, sold to Land O’Lakes.]

1973—Soybean processing complex began operations at

Ponta Grossa, Brazil.

1975—Acquired plant in Osceola, Arkansas.

1976—Soybean plant was built at Barcelona, Spain.

1977—Soybean plant constructed and operations began at Brest, France.

1978—The company opened a soybean processing plant in Sidney, Ohio, to serve domestic meal and oil markets. This facility was the company's first soybean processing plant designed to burn coal as its source of power.

1980—Construction began on vegetable oil refinery adjacent to Wichita soybean crushing plant and operations started in late 1981. A crushing plant also was acquired in Antwerp, Belgium.

1981—Company acquired a soybean crushing and vegetable oil refinery complex in Hartsville, South Carolina.

1982—Cargill acquired a soybean crushing plant in Monte Alto, Brazil.

**Summary.** Soybean Crushing: The company now operates soybean processing plants in the United States, the Netherlands, Belgium, France, Spain, Brazil. The plants range in capacity from 20,000 to nearly 120,000 bushels a day. In the U.S., the company operates 15 plants in Iowa, Illinois, Minnesota, Kansas, Virginia, North Carolina, South Carolina, Tennessee, Georgia, Arkansas and Ohio. It operates 6 U.S. refineries located in Gainesville, Georgia; Fayetteville, North Carolina; Des Moines, Iowa; Hartsville, South Carolina; Chicago, Illinois and Wichita, Kansas. Address: Public relations, Cargill, P.O. Box 5625, Minneapolis, Minnesota 55440.

528. Soy-Cot Sales, Inc. 1982. Schedule of events, men and women. October 27-29. Peabody Hotel, Memphis, Tennessee. 20 p. Unpublished typescript. 28 cm.

• **Summary:** Contents: 1. Schedule of events. 2. Annual stockholders' meeting—Agenda, Oct. 28, 8:30–11:15 AM. 3. Annual stockholders' meeting—Agenda, Oct. 29, 8:30–11:30 AM. 4. 1981-82. Soy-Cot Sales, Inc. Officers, executive committee, board of directors [all from agricultural cooperatives]. 5-7. Formative history of Soy-Cot Sales, Inc. 1961-62 (by Glenn Pogeler, acting secretary). 8. Board of directors meeting, March 13, 1962, Little Rock, Arkansas (by Glenn Pogeler, Secy-Treasurer). 9-10. Minutes of meeting of Soy-Cot Sales, Inc., Memphis, Tennessee, May 17, 1962 (by Glenn Pogeler, Secy-Treasurer). 11. Balance sheets, 31 Aug. 1982 and 1981. 12. Statements of income and surplus, 31 Aug. 1982 and 1981 (Surplus of \$308,615 in 1982 and \$229,261 in 1981). 13. Statements of changes in financial position for the years ended 31 Aug. 1982 and 1981. 14. Schedule of operating expenses for the years ended 31 Aug. 1982 and 1981. 15. Remaining equity allocations outstanding, 1980, 1981, 1982. Recap of earnings, 1963-1982 (total earnings \$2,728,763). 16. Trend statement. 17. World production of oilseeds—protein meals—fats / oils (Sept. 1982, FAS). 18. Supply-demand for soybeans 1962/63 vs. 1982/83,

for soybean oil, and soybean meal. Board of trade price ranges. 19. U.S. cotton production, yield, and cottonseed production 1962 vs. 1982. By state and total (Note: Total U.S. production of cotton has decreased by 23.6% since 1962; cottonseed production has decreased by 25.9%). 20. U.S. soybean production and yield 1962 vs. 1982. By state and total. (Soybean production has 3.43 fold from 669 million bushels to 2,300 million bushels).

529. **Product Name:** Textured Soy Flour Meat Extenders. **Manufacturer's Name:** Land O'Lakes Industrial Sales. **Manufacturer's Address:** P.O. Box 1087, Eau Claire, WI 54701.

**Date of Introduction:** 1982.

**New Product—Documentation:** Soya Bluebook. 1982. p. 60, 64.

530. **Product Name:** Soy Flour, Flakes, and Grits.

**Manufacturer's Name:** Farmland Agriservices, Inc. Manufactured Products Div.

**Manufacturer's Address:** 960 N. Halstead, P.O. Box 1667, Hutchinson, KS 67501.

**Date of Introduction:** 1982.

**New Product—Documentation:** Soya Bluebook. 1982. p. 64. Formerly Far-Mar-Co. Note: Far-Mar-Co merged with Farmland before Aug. 1979.

531. DeGregorio, R.M.; Barr, G.W.; Stahel, N.; Crane, F.M. 1982. Modified soy protein as a protein source in calf milk replacer (Abstract). *J. of Dairy Science* 65:123 (Abst. #P91).

• **Summary:** Three different isonitrogenous milk replacers (all with the same protein content) were used to feed 226 Holstein bull calves: 1. All milk, 2. heated soy flour (66% milk protein replacement), and 3. modified soy protein (66% milk protein replacement). The use of modified soy protein or all milk gave better calf weight gains and gain / feed ratios than when heated soy flour was used. Consumption of milk replacement was greatest when modified soy protein was used. Address: Land O'Lakes, Minneapolis, Minnesota.

532. **Product Name:** Soy Flour, and Grits.

**Manufacturer's Name:** Land O'Lakes Industrial Sales.

**Manufacturer's Address:** P.O. Box 1087, Eau Claire, WI 54701.

**Date of Introduction:** 1982.

**New Product—Documentation:** Soya Bluebook. 1982. p. 64.

533. Dunn, John R.; Reynolds, B.J.; Eversull, E.E.; Skinner, R.A.; Thurston, S.K. 1982. Cooperative involvement and opportunities in oilseeds (Continued, Part II). *ACS Research Report* No. 13. v + 47 p. 28 cm. [28 ref]

• **Summary:** Continued: "Highlights and recommendations" (p. ii-iii): "Soybeans are the dominant oilseed crop represent-



ing 85.4% of total U.S. oilseed production in 1979. Cottonseed accounted for 7.3%; sunflowerseed 4.4%; peanuts 2.4%, and flaxseed 0.5%.

"The primary soybean producing regions were the Corn Belt with 54.9% of total production, Delta States with 15.1%, and Lake States with 8.7%" [see map, p. 3].

"Cooperatives operated 38 oilseed processing plants, 19 of them soybean plants, 17 cottonseed plants, 1 peanut plant, and 1 sunflowerseed / flaxseed plant.

"Total cooperative soybean crushing capacity was 280 million bushels in 1979-80, representing a 20.7% share of U.S. crushing capacity and an 8.2% share of world crushing capacity. Cooperative soybean crushing capacity increased by 75% during the 1970s... Average plant capacity remained larger for cooperative than for noncooperative plants throughout the 1971-1979 period, though the difference decreased considerably."

"The Corn Belt had the largest share of U.S. total crushing capacity with 54.1%, followed by Appalachia with 12.7% and Delta States with 11.2%."

"The four largest soybean processing firms in terms of crushing capacity operated 54.5% of total U.S. capacity. The top eight firms operated 75.1%, and the top 20 firms operated 96.4%. Eight of the top 20 soybean processing firms are cooperatives."

"Local cooperatives handled about 40% of farm soybean sales over the 1970s. Regional cooperatives handled between 19 and 28%, the bulk of which moved from local cooperative elevators.

"Cooperatives delivered 32% of export soybeans to port locations and accounted for between 10 and 15% of direct soybean exports."

"This report focuses on the opportunities for U.S. cooperatives to improve their position in the oilseeds complex as they face increasing vertical integration and restructuring by large, competing noncooperative firms." The report makes five basic recommendations. In the section on "Oilseed Crushing" under "Soybeans" we read (p. 8): "In 1979, 86.5% of U.S. oilseed crushing capacity was for soybeans. Cooperatives operated 19 soybean processing plants for crop year 1979. Sixteen of these plants were solvent extraction and the remaining three were screw press plants.

"The 19 soybean processing plants were owned by 11 cooperative associations. Three cooperatives—Goldkist, Farmland Industries, and Land O'Lakes—operated three plants. Two cooperatives, Agri Industries and Riceland Foods, operated two plants. Within this group of multiple-plant cooperatives were two associations that operated plants to crush other domestic oilseeds: Goldkist—peanuts, and GTA Honeymead—sunflowerseed and flaxseed.

"Cooperative share of soybean crushing capacity showed an upward trend during the 1970's (table 6) with cooperatives gaining 1.5 to 2.5 percent over the decade.

"Total crushing capacity for the 19 cooperative soybean

plants was 280 million bushels in 1979. This represented a 20.7 percent share of total U.S. crushing capacity and an 8.2 percent share of global crushing capacity. Capacity for the 16 solvent extraction plants was 278.1 million bushels.

"Since 1971, cooperative soybean crushing capacity has increased 75 percent. This compares to a 45 percent increase in noncooperative capacity and a 50 percent increase industry-wide. The increase in cooperative crushing capacity is due primarily to acquisition of new plants, though capacities increased at several cooperative plants.

"The number of soybean crushing plants has decreased from 123 in 1971 to 94 in 1979."

Table 6 (p. 9) shows "Soybean crushing capacity—total cooperative and noncooperative. Cooperative share of crushing capacity, 1971-1979 crop years. Total U.S. annual soybean crushing capacity rose from 900 million bushels in 1971 to 1,350 million in 1979. During this period, annual cooperative soybean crushing capacity increased from 160.2 to 280.0 million bushels, while noncooperative soybean crushing capacity increased from 739.8 to 1,070.0. Thus, the cooperative share of total U.S. soybean crushing capacity rose from 17.8% in 1971 to 20.7% in 1979.

Table 7 (p. 9) shows the changing number of soybean crushing mills and their annual crushing capacity, 1971-79 marketing years. The total number such mills decreased from 123 in 1971 to 94 in 1979. During this period, the number of co-op soybean mills increased from 15 to 19, whereas the number of nonco-op soybean mills decreased from 18 to 75. The average annual soybean crushing capacity increased from 7.3 million bushels in 1971 to 14.4 million bushels in 1979. During this period, the annual co-op capacity rose from 10.7 to 14.7, while the nonco-op capacity rose from 6.8 to 14.3. Thus, co-op mills tended to be larger during this period.

The names of various regional cooperative soybean processors are listed on p. 37. These include Far-Mar-Co, Gold Kist, Riceland Foods, and Soy-Cot Sales, Inc. Address: USDA Agricultural Cooperative Service (ACS). Phone: 202-475-4929.

534. Dunn, John R.; Reynolds, B.J.; Eversull, E.E.; Skinner, R.A.; Thurston, S.K. 1982. Cooperative involvement and opportunities in oilseeds. *ACS Research Report* No. 13. v + 47 p. 28 cm. [28 ref]

• **Summary:** A very important and original report showing the relationship between all aspects of soybeans and other oilseed crops in the USA, and between cooperative and noncooperative soybean processors. Contents: Highlights and recommendations. Oilseed crop production: Soybeans, cottonseed, peanuts, flaxseed, sunflowerseed. Overview of cooperative oilseed system: Cooperative oilseed flows, cooperative organizational approaches, vertical integration by individual cooperatives, horizontal coordination by groups of cooperatives, vertical coordination by groups of

cooperatives. Oilseed crushing: Soybeans, cottonseed, sunflowerseed / flaxseed, peanuts, potential new locations for cooperative crushing, parts inventory for processing cooperatives. Processing plant output: Soybean plant output, cottonseed mill output. Processing plant costs: Soybean plant costs, cottonseed plant costs, economies of scale. Raw product marketing. Oilseed pricing mechanisms. Transportation of oilseeds and oilseed products: Cooperative control of transportation modes, transportation by cooperative soybean processors. Refining, product manufacturing, and marketing: Demand for vegetable oil products, vegetable oil refining, increasing cooperative refining activity, marketing of vegetable oil products, manufacturing and marketing meal products, cooperative brand name oilseed products, retail product quality assurance association. The export markets for U.S. oilseeds: Global demand for oilseeds, global oilseed processing, world oilseed trade flows. Cooperative involvement in oilseed exporting: cooperative export flows, level of cooperative involvement, considerations for expansion of cooperative exporting, advantages and risks for cooperatives in oilseed exporting, the need for unified cooperative export efforts. Challenges for oilseed cooperatives: Rail transportation, energy, growth, competitive pressures and the need for coordination. Selected oilseeds references. Appendix tables.

Tables related to soy: (1) Regional shares of U.S. regional soybean production; Averages for 1959-69, 1970-79, 1976-79. (6) Soybean crushing capacity; total cooperative and noncooperative. Cooperative share of crushing capacity, 1971-1979 crop years. (7) Number of soybean crushing mills, U.S. total, co-op, and non-coop. Average mill capacity; U.S., co-op and non-co-op, 1971-1979 crop years. (8) Soybean crushed, U.S. total, cooperative crush, nonco-op crush, cooperative share of total crush, 1971-1979 crop years. (9) Utilization of soybean crushing capacity; U.S. overall average, noncooperative average, 1971-1979 crop years.

(10) Soybean crushing capacity shares and cooperative shares of crushing capacity, by region, 1979. (11) Soybean crushing capacity and proportion of soybean production which may be crushed within each region, 1979. (12) Structural characteristics of the domestic soybean processing industry in terms of plant numbers and capacities, 1979. (16) Production of soybean oil and oil products by cooperatives, 1971-1979 crop years (Million pounds and percentage; Crude oil, degummed oil, lecithin and by-products, refined oil, hydrogenated oil). (17) Soybean meal production by cooperatives, 1971-1979 marketing years (Thousand tons and percentage; Total, high protein meal, low protein meal, mill feed production).

(20) Processing costs for cooperative soybean processing plants, 1971-1979, alternative years. (24) Soybean receiving methods by cooperative plants, 1971-1979 crop years (by rail, cooperative owned truck, other truck). (25) Soybean meal shipment methods by cooperative plants, 1971-1979

(by rail, co-op truck, other truck, barge). (26) Soybean oil shipment methods by cooperative plants, 1971-1979 (by rail, truck, barge). (27) U.S. utilization of soybean oil, by products, by crop years, 1964-1979 (million lb): Shortening, salad and cooking oil, margarine, other edible, total food, total non-food, total domestic disappearance.

(30) Total and per capita consumption of fats and oils, food and industrial products, USA, 1963-1979 (million lb and per capita) (butter, lard, margarine, shortening, edible oils, all [oleaginous] food products, all industrial products, all products). (31) Margarine: Fats and oils used in manufacture, United States, 1965-1979 (incl. soybean, cottonseed, peanut, corn, coconut, safflower, other vegetable, lard, beef tallow). (32) Shortening: Fats and oils used in manufacture, United States, 1965-1979 (incl. soybean, cottonseed, peanut, etc.). (34) Selected oilseeds, vegetable oils, and oilseed cakes and meals: value of U.S. exports, annual 1973-1979. (35) Major U.S. oilseed and products exports, 1973-1979 (Soybeans, sunflowerseed, cottonseed, peanut). (36) Global soybean annual crushing capacities of major markets, 1979 (Soybean importing countries: Belgium & Luxembourg, Denmark, France, Italy, Netherlands, UK, West Germany, Spain, Poland, Yugoslavia, Soviet Union, Japan, Korea {Rep. of = South}, China {PRC}, Taiwan, Mexico, subtotal 42%. Soybean exporting countries: USA, Brazil, Argentina, subtotal 58%). (37) U.S. soybean exports by region or country of destination, 1973-1979.

(40) Volumes of soybeans handled by regional and interregional cooperatives and regional cooperative share of total farm soybean sales, 1972-1979 marketing years. (41) Soybean shipments to cooperative and noncooperative port elevators, 1973-1979. (42) Soybean shipments to ports by port area, by regional cooperatives, 1973-1979 (Atlantic, Gulf, Great Lakes, Pacific, total). (43) Percent of regional cooperatives' soybean sales shipped to port areas 1972-1979. (44) Cooperative port elevator capacities and share of total capacity, by port area, 1980.

Figures: (1) Bar graph: Oilseed production by commodity for selected years, 1959, 1969, 1979. (2) Map of oilseed production areas, USA, 1979. (3) Cooperative export channels for raw oilseeds. (4) Cooperative channels for oilseed products. (5) Cooperative coordination paths (Complete integration, vertical integration, single activity, intercooperative coordination). (6) Bar graph: Oilseed crush shares by commodity for selected years (1959, 1969, 1979). (7) Bar graph: Oilseed production percentage crushed domestically by commodity for selected years. (8) Map: Cooperative oilseed processing plants, 1979. (9) Soybean products. (10) Flow chart: Vegetable oil refining process. (11) Map: Edible fats and oils refining plants, with maximum capacity by region, 1975. Continued. Address: USDA Agricultural Cooperative Service (ACS). Phone: 202-475-4929.

535. Johnson, Dale. 1983. Statistics on soy protein production. Full-fat soy flour. Dawson Mills and Loma Linda. Central Soya (Interview). *SoyaScan Notes*. May 23. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** Estimates of soy protein production: Textured soy proteins (flours or concentrates) 150-200 million lb/year. Isolates 120-150 million lb/yr, including: Ralston Purina (doing very well), ADM (having lots of problems), and Grain Processing Corp. ("sold out"). Much of the isolate made in the USA is being exported for use in meat products in Europe and Africa. About 10-20 million lb/year of the non-exported isolate is used to make infant formulas in the USA by Mead Johnson, Ross Laboratories, and Syntex (Borden operation). A large amount of textured soy flour is still going into pet foods. Prices (dollars/lb): Soy flours \$0.13. Soy protein concentrates \$0.40-0.60 (lower priced are for calf starters). Soy protein isolates \$1.10 to \$1.35.

Full-fat soy flour: There is no significant production in the USA; in the past, production was several hundred tons/month. Some is imported from Germany (Lucas Meyer).

Dawson Mills: As of June 1, they will discontinue production of soy flour and grits, and textured soy flour. Loma Linda (California) purchased one of their two isolate spinning lines and was trying to have AMPI [American Milk Products, Inc.] run it for them [in Minnesota] using isolate purchased from elsewhere. Dale is not sure of the status of this project. Dan Hooten, formerly with Dawson Mills, is now apparently involved in sales of dairy products at Land O'Lakes (now located in Eau Claire, Wisconsin).

Central Soya is no longer using their steam texturization process. Address: Food Ingredients (Minnesota), Inc., 2121 Toledo Ave. North, Golden Valley, Minnesota 55422.

536. *SoyaScan Notes*. 1983. Honeymead's production of defatted soy flours and flakes (Overview). May 24. Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** According to Ed Senska, Honeymead makes no soy grits. Production of defatted flours and flakes (in million pounds) is as follows: 1978-558. 1979-736. 1980-572. 1981-616. This flour sells for \$0.130 to \$0.131/lb.

Update: 19 Aug. 1986. Honeymead is still making defatted flour and flakes; the company makes no textured soy products. The selling price is still \$0.13/lb. Some of these products go into milk replacers. They sell a very, very small amount to the plywood industry for use in glues.

537. Hooten, Dan. 1983. Dawson Mills closing down their flour and grit operations. Estimate of soy protein isolate production capacities (Interview). *SoyaScan Notes*. May 24. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** Dawson Mills [as of June 1] will discontinue production of soy flour, soy grits, and textured soy flour, because the products are not selling well; the factory is located too far from the markets. They formerly shipped soy

flour to the West Coast for PL-480 programs, but that market has dried up.

His estimate of total U.S. isolate production capacity (not including Kraft) is 104 to 110 million lb/year, as follows: ADM 20-25. GPC 14-15. Ralston Purina 70 as follows: Memphis, Tennessee 20; Pryor, Oklahoma 30; Louisville, Kentucky 20.

Wayne Pruitt of Griffith Laboratories (5 April 1983) does not know whether Land O'Lakes will continue production of their calf starter material (intermediate in properties between a flour and a concentrate). Address: Industrial Sales, Land O'Lakes, Eau Claire, Wisconsin.

538. Hooten, Dan. 1983. Estimate of soy protein isolate capacities in the USA (Interview). *SoyaScan Notes*. May 24. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** He estimates the total capacity to be 100-110 million lb/year, with individual company capacities as follows (in million pounds per year): Ralston Purina 70 at three plants (Pryor, Oklahoma 30; Memphis, Tennessee 20; Louisville, Kentucky 20). ADM 20-25. Grain Processing Corp. 14-15. Address: Industrial Sales, Land O'Lakes, Eau Claire, Wisconsin.

539. Malone, Matt. 1983. Far-Mar-Co and Farmland Agriservices, Inc. (Interview). *SoyaScan Notes*. May 25. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** Far-Mar-Co is now part of Farmland Agriservices, Inc. They still produce soy flour (in St. Joseph, Missouri) and textured soy flour (in Hutchinson, Kansas). The capacity of their soy flour plant is 20,000 tons/year = 40 million lb/year. No figures are available on actual production of either commodity. Address: Farmland Agriservices, Inc., Hutchinson, Kansas. Phone: (316) 663-5711.

540. *Dawson Sentinel (Minnesota)*. 1983. NOBS. 98(43):15. May 26.

• **Summary:** The following story was first published in the house paper of Land O'Lakes Inc. titled *Beanery Bits*. Well written, it is being reprinted here for the enjoyment of readers. "At Dawson: Vision marks plant's story."

Contains a good, brief history of Dawson Mills. Note: The title of this column, "NOBS," is based on the initials of its writer, Norman O. Bacon.

541. *Soybean Digest*. 1983. ASA Expo: July 31 to August 3. July/Aug. p. 25.

• **Summary:** This expo will be held at the Opryland Hotel in Nashville, Tennessee. Trade show exhibitors include: Asgrow Seed Company, Cargill Investor Services, Ciba-Geigy Corp., Coker's Pedigreed Seed Co., Computerized Farm Info, Systems Inc., ContiCommodity Services Inc., DeKalb-Pfizer Genetics, DuPont, Elanco Products Co., Funk Seeds International, Monsanto Agri. Products Co., North



American Plant Breeders, Northrup King Co., On-Farm Computing Inc., Pioneer Hi-Bred International Inc., Riceland Foods, Rohm and Haas Company, Sandoz, Inc., Soybean Research Foundation, Inc., Chicago Board of Trade, and many others.

Note: This is the earliest document seen (Dec. 2004) that mentions DeKalb-Pfizer Genetics.

**542. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Staley (A.E.) Manufacturing Company.

**Manufacturer's Address:** Mexico, Missouri.

**Date of Introduction:** 1983. August.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Sinclair, Ward. 1983.

“Heat, drought, spider mites ruining Missouri fields, farmers.” *Washington Post*. Aug. 31. p. A3. A.E. Staley Co. has a soybean mill in nearby Mexico, Missouri.

Note: The '83 Soya Bluebook shows M.F.A. owning this plant. The '84 Soya Bluebook has no listing for this plant. The '85 Soya Bluebook shows ADM owning this plant. Yet ADM bought it from A.E. Staley Manufacturing Co. See: *J. of the American Oil Chemists' Soc.* 1985. “Soy pioneer bows out, others grow bigger.” March. p. 474, 476.

Letter (e-mail) from William Lester. 2005. Sept. 11. The MFA plant in Mexico, Missouri, was later operated by A.E. Staley, then purchased from Staley in about 1985 by ADM.

**543. Dawson Sentinel (Minnesota).** 1983. Name change made at soybean processing plant. 99(7):1. Sept. 15.

• **Summary:** Effective 1 Sept. 1983 the Land O'Lakes soybean processing plant in Dawson experienced a name change because of the merger of the cooperative soybean processing plants of Land O'Lakes, Farmland Industries, and Boone Valley. The local business will temporarily be known as Boone Valley Cooperative Processing Association, Inc. Locally it will be called simply Boone Valley-Dawson. The headquarters office for the six soybean processing plants involved in the merger will be in Omaha, Nebraska.

“The name change will apply also to the soybean processing plant at Sheldon, Iowa, also formerly owned by Land O'Lakes.” The Boone Valley name has also been assigned to the soybean processing plants at Eagle Grove, Iowa; St. Joseph, Missouri; Sergeant Bluff, Iowa; and Van Buren, Arkansas.

The plants at Van Buren (Arkansas), St. Joseph (Missouri), and Sergeant Bluff (Iowa), had previously been a division of Farmland Industries. The Eagle Grove plant had previously been Boone Valley's only soybean processing plant. Some 700 employees are part of the six plant cooperative. No changes are anticipated at the Dawson plant.

Note: This is the earliest document seen (March 2008) describing the creation of the cooperative soybean process-

ing company that would soon (March 1984) become known as Ag Processing Inc. (AGP).

**544. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Sheldon, Iowa.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 25-40, 153-172. This plant was previously owned by Land O'Lakes. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**545. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Sergeant Bluff, Iowa.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 77-86, 153-172. This plant was previously owned by Farmland Industries, Inc. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**546. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** St. Joseph, Missouri.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 87-102, 153-172. This plant was previously owned by Farmland Industries, Inc. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**547. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Van Buren, Arkansas.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff,

Arizona: Heritage Publishers, Inc. 178 p. See p. 69-75, 153-172. This plant was previously owned by Farmland Industries, Inc. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**548. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Dawson, Minnesota.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 51-68, 153-172. This plant was previously owned by Land O'Lakes. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**549. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Eagle Grove, Iowa.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 135-151, 153-172. This plant was previously owned by Boone Valley Cooperative Processing Association. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**550. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Fort Dodge, Iowa.

**Date of Introduction:** 1983. September.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 41-50, 153-172. This plant was previously owned by Plymouth Processing Mills, Cargill, Felco, then Land O'Lakes. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**551. Eagle Grove Eagle (Iowa).** 1983. Boone Valley Co-op names chief exec. Oct. 19. p. 5A.

• **Summary:** James W. Lindsay, age 49, of Decatur, Illinois, has been named general manager and CEO of "Boone Valley Cooperative Processing Association, Omaha, a newly-formed soybean processing cooperative,... Lindsay has been

serving as manager, operations, of the Archer Daniels Midland Co., Decatur, Illinois. His appointment as manager of the new company is effective October 24, 1983.

"The new venture began operation September 1, 1983, following unification of the soybean operations of three regional cooperatives including Boone Valley," Land O'Lakes, and Farmland Industries.

A native of Des Moines, Iowa, Lindsay attended Drake University [Des Moines, but did not graduate], then served in the U.S. Army from 1956-1958. Lindsay comes to Boone Valley after "a 25-year career in oilseed and grains sales, production and transportation. He began his career in the traffic department of Spencer Kellogg & Sons, Des Moines, Iowa, in 1958, moving through a series of traffic and sales positions. In 1961 he joined Archer Daniels Midland Company (ADM).

"With ADM, Lindsay held positions as general manager of soybean operations in Fredonia, Kansas, and Lincoln, Nebraska; manager, export sales; regional manager, soybean operations; vice president, soy processing group; president of ADM's soy operations in Brazil; manager, general traffic department; and vice president, corn sweetener operations, Cedar Rapids, Iowa; before assuming his most recent position in 1980.

One of the top priorities for the new CEO and board will be the selection of a new corporate name for the unified soy processing venture.

"The new company, headquartered in the First National Bank Building in Omaha, Nebraska, operates processing facilities in Eagle Grove, Sergeant Bluff, Fort Dodge, and Sheldon, Iowa; St. Joseph, Missouri; Dawson, Minnesota; and Van Buren, Arkansas.

"Lindsay will report to the Boone Valley Board of Directors," whose names and affiliations are given.

**552. Bentsen, Beth.** 1983. "French plant" closes for second time. *Eagle Grove Eagle (Iowa)*. Nov. 2. p. 3A.

• **Summary:** Boone Valley Cooperative Processing Association's "French plant," their older and less efficient processing facility, closed last Wednesday [Oct. 26] "for an indefinite period," but not permanently, according to General Manager Bill Lester. Unprofitability and weak demand throughout the soybean industry was given as the reason for the shutdown. This is the 2nd French plant shutdown this year.

"The French plant had been closed March 30 and was not reopened until Aug. 15. That closing resulted in the loss of employment for six workers who had been hired on a temporary basis in December 1982" and January 1983. Lester was unsure if any layoffs would result from last week's shutdown; a decision would be made soon. Lester said that before last Wednesday, "one-third of all Boone Valley's soybean processing was being done at the French plant."

Letter (e-mail) from Bill Lester in response to questions from Shurtleff of Soyfoods Center. 2005. Aug. 22. The plant described in this article plant located on the site in Eagle Grove. It was called the "French plant" because the French Oil Mill Machinery Co. (Piqua, Ohio) designed and manufactured the extractor and a lot of the milling equipment. Most plants built today are referred to as "Crown plants," designed by Crown Iron Works Co. (Minneapolis, Minnesota), from Joe Givens' original ideas.

The original French solvent extraction plant was built in the early 1960s [it opened in late 1969] as a replacement for the old expellers. It processed 1,500 tons/day of soybeans operated by Boone Valley prior to the 1982-83 building of the new plant and energy center. After this plant was shut down in 1983, it never reopened. It was later dismantled and the current vegetable oil refinery occupies this space. Address: News editor.

553. *Eagle Grove Eagle (Iowa)*. 1983. Soybean residue ignites at Boone Valley. Dec. 7. p. 16A.

• **Summary:** On Wednesday afternoon, about 200 pounds of soybean meal burned at Boone Valley's new soybean processing plant, according to plant marketing manager Bill Lester. The fire was confined to the meal, which was contained in a steam heated dryer. The fire fighters put out the fire "almost immediately," according to Lester. Firefighters were concerned that the fire might ignite the volatile hexane solvent gas used in the new plant, but it did not.

Boone Valley is presently operating on cycle of 10 days of production followed by 4 days idle. A photo by John Niebergall shows a fire engine outside the plant; it is dark and snow is on the ground.

554. **Product Name:** Ultra-Soy (Textured Soy Flour), and Textured Soy Protein.

**Manufacturer's Name:** PMS Foods, Inc.

**Manufacturer's Address:** 2701 E. 11th St., P.O. Box 1099, Hutchinson, KS 67504.

**Date of Introduction:** 1983.

**New Product-Documentation:** *Soya Bluebook*. 1987. p. 74. Note: PMS Food Inc. was formerly the part of Farmland and Far-Mar-Co that made TVP.

555. Wolf, Walter J. 1984. The soy protein isolate industry in America in 1983 (Interview). *SoyaScan Notes*. March 2. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Dr. Wolf talked with Dan Hooten who is now with Land O'Lakes, but who used to be with Dawson Mills. Land O'Lakes bought Dawson Mills several years ago. The following are Hooten's estimates of the capacities of America's largest isolate manufacturers in 1983:

Ralston Purina, 70 million lb/year. The company has 3 plants: Prior, Oklahoma, 30 million lb/year. Louisville,

Kentucky, 20 million lb/year. And Memphis, Tennessee, 20 million lb/year.

ADM (Archer Daniels Midland), 20-25 million lb/year.

Grain Processing Corp., 14-15 million lb/year.

Thus the total capacity of the top 3 U.S. companies is 104-110 million lb/year (47,200 to 49,800 metric tons/year). Some of these isolate products are exported. A.E. Staley Mfg. Co. began to make isolates about 1 year ago. Hooten does not know their capacity. Address: NRRC, Peoria, Illinois.

556. *Mankato Free Press (Minnesota)*. 1984. Satellite provides instant tab on grain market. March 15. p. 15D.

• **Summary:** In Sept. 1983 Honeymead installed a satellite and nine monitors so that company traders in Mankato could receive up-to-the-minute commodities market information. A large photo shows Honeymead's office with traders, phones, and offices. A small photo shows Stan Eichten, Honeymead general manager. Since soybean prices on the Chicago Board of Trade can rise or fall as much as \$0.30/bushel in five hectic minutes (often based on weather reports or world events), that can mean a \$5,000 profit or loss on a 15,000 bushel contract.

Originally prices came over ticker tapes and they were written on blackboards by hand. Next came telephones. The switch to satellites made gathering commodities information less expensive. A 12-inch monitor can be leased for \$225/month, with each additional costing only \$30/month.

Note: In about 1960, Dwayne and Lowell Andreas sold Honeymead to GTA (also a co-op). In June 1983 GTA merged with North Pacific Grain Growers (NPGG, headquartered in Portland, Oregon) to form Harvest States Cooperatives. Therefore, Honeymead is now part of Harvest States.

557. Frisch, Carlienne. 1984. Challenge and variety keep oil loader interested in job [at Honeymead]. *Land (The) (Southern Minnesota)* 8(13):1+. March 19.

• **Summary:** Photos show Jon Lageson as he: (1) Loads a rail car with soy oil. (2) checks oil supplies on a computer screen. Address: The Land Editor.

558. *Food Processing (Chicago)*. 1984. Plants & laboratories [Far-Mar-Co]. July. p. 18.

• **Summary:** In a patent infringement case involving textured soy flour, a U.S. District Court in Wichita, Kansas, has ruled in favor of Ralston Purina Co. (St. Louis, Missouri). The court issued an injunction against Far-Mar-Co, Inc. (Kansas City), to prevent it from making or selling this textured soy product. The court also found Far-Mar-Co guilty of international patent infringement.

559. Leidahl, Roy. 1984. New soy co-op makes cuts, expects profits. *Feedstuffs* 56(35):1, 31. Aug. 20.

• **Summary:** In Sept. 1983 Ag Processing, with headquarters



in Omaha, Nebraska, was formed by a partial merger of three farmers' cooperatives: Boone Valley Coop Assoc., Farmland Industries, and Land O'Lakes. Soybean crushing will be the primary business of the new company. The new firm reportedly controls 9% of the U.S. soybean processing industry through its 6 midwestern mills. A photo shows James Lindsay, AGP's CEO.

Note: This is the earliest published document seen (June 2005) that mentions Ag Processing Inc. Address: Feedstuffs Asst. Managing Editor.

560. Malone, Matt. 1984. Farmland [Agriservices] sold its textured soy flour operation to PMS Foods, Inc. (Interview). *SoyaScan Notes*. Aug. 27. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.

• **Summary:** The sale took place in August 1983. PMS makes Ultra-Soy textured soy flour under license from Ralston Purina Co. Address: Farmland, Hutchinson, Kansas. Phone: (316) 663-5711.

561. AGP—Ag Processing Inc a cooperative. 1984. Annual report. 11235 Davenport St., Omaha, Nebraska 68154. 20 p. 28 cm.

• **Summary:** Contents: Financial highlights (inside front cover). History & mission. To our stockholders: Report by Urban Knobbe, Chairman of the board of directors. CEO and General Manager's report (by James W. Lindsay). Fiscal year highlights. Financial reports. Soybean processing plants & management (for each of the six plants shows a photo of the plant manager, merchandising manager, and aerial view of the plant). Directors & officers (for each of nine men shows a portrait photo and gives the name, age, and a brief biographical sketch. They are: Urban Knobbe, Kenneth Nielsen, Ralph Hofstad, James Higgs, James Bauler, Eldon Peterson, Larry Wright, Robert Merkle, Don Frye). Stockholders (map showing locations of local cooperative members (dot), regional cooperative members (star), and AGP processing plants (hollow square) in approximate descending order of number of members—Iowa, Minnesota, South Dakota, Nebraska, Kansas, Missouri, Wisconsin, Oklahoma, Arkansas, and North Dakota).

Sales for 1984 (year ended Aug. 31) were \$896.164 million, 4.33 times as much as the \$206.759 in 1983. Earnings before taxes: \$2.048 million, versus a loss of \$5.330 million in 1983.

"Our history: The AGP story began 41 years ago with the formation of Boone Valley Cooperative Processing Association in Eagle Grove, Iowa.

"AGP assumed its present size with a major reconfiguration on August 31, 1983. On that date, Boone Valley purchased soybean processing plants in Dawson, Minnesota, and Sheldon and Fort Dodge, Iowa, from Land O'Lakes, Inc. and soybean plants in Van Buren, Arkansas, Sergeant Bluff, Iowa, and St. Joseph, Missouri, from

Farmland Industries. The St. Joseph facility includes a soy flour manufacturing plant.

"The corporate name was changed to Ag Processing Inc a cooperative on March 7, 1984. A new logo AGP was also approved. We remain an Iowa corporation with our headquarters in Omaha, Nebraska.

"Our mission: We are committed to serve cooperatives and agricultural producers by performing the business functions of acquisition, processing, and marketing of soybeans and soybean products." Logos show Land O'Lakes, Boone Valley, a cooperative, and AGP. Portrait photos show: Urban Knobbe, James W. Lindsay, Anthony L. Porter, Joseph L. Meyer, Daryl Dahl, James Yeates, Kenneth J. McQueen, Gordon V. Dorff, William C. Lester, Ronald O. Ostby, Tim E. Witty, Michael C. Reed (Information Systems Manager; they have a decentralized system of minicomputers, complemented by microcomputers). Address: Omaha, Nebraska.

562. Mills, Harold E. 1984. Construction of soybean oil refinery here planned. *St. Joseph News-Press (Missouri)*. Nov. 22. p. 1, 3A.

• **Summary:** Ag Processing Inc (a farm cooperative with headquarters at Omaha, Nebraska) has announced the construction of a refinery at 900 Lower Lake Road to process the output of the company's soybean processing plant there. Work on the new plant is to start immediately.

The local plant now processes about 70,000 bushels of soybeans daily. The refinery will have a capacity of 12 rails cars, or 720,000 lb, of refined soybean oil a day. Address: Business writer.

563. Peng, I.C.; Quass, D.W.; Dayton, W.R.; Allen, C.E. 1984. The physicochemical and functional properties of soybean 11S globulin—A review. *Cereal Chemistry* 61(6):480-90. Nov/Dec. [113 ref]

• **Summary:** "The soybean globulin called 11S protein or glycinin is the major soybean protein in terms of quantity and most importantly, in terms of functionality. The physicochemical characteristics of 11S protein relate directly to its functional properties."

"Soybean proteins were initially classified according to ultracentrifugal analysis into 2S, 7S, 11S, and 15S fractions (Naismith 1955, Wolf and Briggs 1956)." Address: 1. Food Science Dep., Purdue Univ., W. Lafayette, Indiana 47907; 2. Land O'Lakes Corp., Minneapolis, Minnesota 55440; 3-4. Minnesota Agric. Exp. Station, St. Paul, MN 55108.

564. **Product Name:** Lecithin [Lecigran (Granular Deoiled), Lecisoy, Leciprime, Lecikote, Lecisperse, Lecicap, and Magnasperse; Deoiled Granules, Powders, and Refined Lecithins].

**Manufacturer's Name:** Riceland Foods. Soy Specialties Div.

**Manufacturer's Address:** 650 S. Shackleford Rd., Little

Rock, AR 72211. Main office: Stuttgart, Arkansas.

**Date of Introduction:** 1984.

**New Product–Documentation:** Soya Bluebook. 1984. p. 55. “For dietary, pharmaceutical, food, industrial and magnetic media applications.” Soya Bluebook. 1986. p. 81. Only Leciprime lecithin and lecithin granules is listed. Company is now Riceland Foods, Inc. at 2120 S. Park Ave., P.O. Box 926, Stuttgart, AR 72160; 1987. p. 67. Company is now at 10800 Financial Parkway, Suite 380, P.O. Box 8201, Little Rock, Arkansas 72212. Products are Lecigran, Leciprime, and Lecikote.

565. Benson, Morris; Krugerud, Mary. 1984. Dawson Minnesota centennial: History—The first 100 years, 1884–1984. Dawson, Minnesota: Dawson History Book Committee. 228 p. Illust. 28 cm. See p. 7-8, 45-53.

• **Summary:** A chronology of the city of Dawson, Minnesota, states: 1951 Nov. 26–Dawson Mills (Tri County Soybean) begun [operating]. 1979–Isolate plant ribbon cutting ceremony held. 1980–Dawson Mills merged into Land O’Lakes interests. 1981–Joe Givens retired as head of Dawson Mills. City issued \$5,750,000 in Industrial Revenue Bonds for AMPI [American Milk Producers Inc.] purchase of former Land O’Lakes isolate plant (no obligation to city on bonds).

The section titled “Dawson Soybean Mills: Soybeans led to processing plant–Dawson’s largest industry” describes the founding then gives a chronological history. During the 1940s soybean acreage in and around Dawson, in southeastern Minnesota was steadily expanding; soybeans seemed to like the soil, climate, and latitude. In 1950 the Dawson Service Club (predecessor to the Chamber of Commerce) “appointed a committee to check into the feasibility of building a soybean processing plant here.” It would help both the city and local farmers. Glenn Blomquist, president of the Northwestern Bank in Dawson at the time, was the initial sparkplug. A famous photo shows the committee of four seated together talking in a cafe booth in 1950: John Hanson (a furniture store owner), Bert Dahl (an elevator manager), Glenn Blomquist, and Art Lee (a Ford dealer). “After visiting soybean plants at Blooming Prairie, Mankato and Glencoe [Minnesota] to find a pattern type to implement here, they agreed on the system at Blooming Prairie. Its workings were relatively inexpensive and its equipment was, by and large, manufactured by Crown Iron Works Co. right in Minneapolis. In addition, an attorney from Blooming Prairie [Mr. Thorson] was willing to lend his abilities in promoting and speaking with others to help get the project off the ground...” An informal meeting was called and the Tri-County Co-operative Soy Bean Association was formed. A board of directors was elected with Carl M. Hanson, president; Morris Enevoldsen, secretary; and with Melvin Knutson, Carl Barkeus, Merrill Lund, Volney Peterson, and John Lideen as directors. Their first purpose was to sell

stock. “Though there were numerous meetings, questions and doubts, it was not long before there was sufficient money so that orders could be placed for the equipment and buildings.” The group negotiated a loan for operating capital through the St. Paul Bank for Cooperatives.

Getting started: A site was selected near the railroad tracks. The sale of stock had brought in \$205,000. The plant chose the trichloroethylene solvent extraction process because it was less costly and safer from the hazards of fire and explosion. They had heard rumors that the meal made with this solvent was sometimes hard to sell because it had caused the death of cattle. The rumors were put aside. The plant started running on 28 Nov. 1951—somewhat later than planned. The Grand Opening on Dec. 8 “included a visit by the well-loved Cedric Adams, WCCO radio newscaster, who ‘packed them in’ at the Dawson armory for people to witness his reporting of the 10 o’clock nightly news.”

“A rugged start.” The 1951 bean crop was very wet. The machinery could not process 25 tons/day of soybeans. There was not enough money to pay for the equipment and the contractors who installed it. “To put it bluntly, the plant was losing money on all the meal and [unrefined] oil it sold. The first manager, Louis Sandbakken, resigned. The Board of Directors contacted Joe Givens, an engineer with Crown Iron Works, who had helped to install the original machinery, and pleaded with him be their new manager. He accepted their offer and began his duties on 20 Jan. 1952. “Only a few days later, the [soybean] processing plants at Blooming Prairie, Glencoe, and Grand Forks, North Dakota, curtailed their operations because of lawsuits pending against them resulting from the sale of toxic meal. What to do!” They found a company to buy the meal for use in making soybean glue. “The first fiscal year showed that 150,000 bushels of soybeans had been processed, but at a loss of \$44,389.” The St. Paul Bank for Co-operatives loaned the struggling co-op \$10,000 in matching funds. But 3 months later the Minnesota Department of Agriculture, Dairy, and Food notified the Tri-County business that any further sales of meal made with trichloroethylene solvent were prohibited! This essentially put the plant out of business. “It was a grim Christmas Eve in 1952 when the plant shut down. Only a few employees were retained; others were laid off.”

The company decided to start again using hexane as a solvent. “Crown Iron Works agreed to pay the cost of converting the plant to hexane in exchange for Tri County’s claims against the Iowa State Foundation [researchers on the extraction process] and the DuPont Co. [makers of trichloroethylene].

By 1 May 1953 the soybean plant had converted to hexane and was ready for business. An audit in Aug. 1953 showed that, even after the shutdown and conversion, the plant had processed 184,128 bushels and with net savings of \$17,081.

Al went well during the next two years, with 389,331

bushels processed in 1953-54—far above the rated capacity of the equipment. The company began to expand. In 1955-56 some 500,000 bushels of soybeans were processed with net savings of \$378,032. Fixed assets had climbed to \$378,032 and net worth was at \$308,660. In 1958 Joe Givens designed and Crown built a new extractor with a capacity of 200 tons/day of soybeans.

Starting in 1961, after a decade in business, the company, like its competitors, experienced keener competition, reduced crushing margins, and a drop in net savings. In 1962-63 a new product, DawSoy toasted soybean screenings, was developed. In 1963 a new, larger extractor was installed, with a capacity of 600 tons/day of soybeans.

In late 1966 the company celebrated its 15th birthday. "The initial investment of \$205,000 had been translated into 3½ million dollars in savings to soybean growers in western Minnesota and eastern South Dakota. Over a million dollars in cash refunds had been made to the soybean growers" who owned shares. The firm's net worth was over \$2.5 million, and its employment had grown from the original 11 employees to over 70 full-time employees. In 1969, the name of the cooperative was changed from Tri-County Soybean Association to Dawson Mills.

The 1970s: In about 1973 Dawson made its first human food, edible soy grits. In 1974 the Dawson Soy Specialties Division was started with plans to make soy grits, soy flour, and textured soy flour. A 7-story flour mill, started in 1974, began operation in 1975. It produced a good textured soy protein flour. In 1974 a record total of 13 million bushels of soybeans were processed. In 1976 Gerald Michaelson, one of the company's directors, was elected president of the American Soybean Association—and 14,645,123 bushels of soybeans were processed. A long drought in the summer of 1976 hurt operations in 1977—the first year the company reported a loss—even though the net worth had climbed to \$17.5 million.

In Jan. 1977 the stockholders approved plans to manufacture isolated soy protein and to construct a factory therefor. Joe Givens was named president and general manager. In July 1979 the \$20 million isolate plant, located 1½ miles east of Dawson, began production of isolated soy protein, a dry white powder. That year Dawson had nearly 300 employees.

On 1 March 1980, because of adverse economic conditions and with the desire to become a more viable organization, Dawson Mills merged with Land O'Lakes, a dairy cooperative. The name of the business was changed to Land O'Lakes-Soybean Division. On 1 March 1981, Joe Givens retired as head of Dawson Mills. "Givens was accorded the tribute of 'Joe Givens' Day' and was acknowledged in many ways as the 'captain' of the large soybean industry in Dawson for about 30 years." Bob Jordheim was made general manager of the soybean processing business in Dawson.

In May 1981 officials of Land O'Lakes Inc. announced

the need to close the soy protein isolate plant. Attempts to find markets for the isolates had failed. Some 100 employees had to be laid off. Yet the main plant continued processing about 15 million bushels of soybeans a year. In May 1983 Land O'Lakes announced the closing of the flour milling operations in Dawson—largely as a result of the elimination of the PL-480 (Food for Peace) program. In Sept. 1983 the merger of Land O'Lakes, Boone Valley Co-op, and Farmland Industries led to another change of structure. On 7 March 1984 the name of the group was changed to AGP—Ag Processing Inc.—a cooperative, and the local plant to AGP (Dawson). The headquarters is now in Omaha, Nebraska. Yet the future looks bright.

Photos show: (1) The famous photo of the original committee meeting in 1950 in a restaurant. (2) Dawson Mills' first board of directors. (3) Visitors at a plant tour in 1951 or 1952. (4) Dave Owen, one of the soybean plant's first truck drivers (1953). (5) Aerial view of the plant in the late 1950s. (6) Ground view of plant with first expansions. (7) Joe Givens (portrait). (8) Further expansion; new office, water tank erected near site. (9). Slip-form concrete storage silos being erected. (10) Flour mill nearly complete. (11) Soybean plant office and part of truck fleet. (12) Isolate plant being erected. (13) New, huge extractor designed by Joe Givens and operated outdoors before being inserted into plant. (14) Tanker car loading soybean oil. (15) Dawson Mills' laboratory in winter. (16) Soybean Princess standing at office entrance. (17) 1976 office and lab personnel, standings in 4 rows, with names of each. (18) 1976 plant personnel, standings in 4 rows, with names of each. (19) 1976 trucking personnel, standings in 5 rows, with names of each.

566. Honeymead Products Company. 1984? Honeymead: Refining partnerships (Brochure). Mankato, Minnesota: Honeymead. 6 p. Undated. 28 cm.

• **Summary:** Contents: The soybean. History. Production facilities. Customer service.

The "History" page begins: "In 1939, rural Minnesota farmers were looking for a way to recover from the economic and agricultural turbulence of the 1930s. Their search led them to the soybean. Ultimately, the seed of opportunity was sown when Mankato Soybean Products was founded.

"The company operated from a site of reclaimed warehouses and railroad tracks. Its hopes for prosperity were vested in a single seed expeller, which extracted oil from soybeans. Throughout the 1940s, the growing popularity of the soybean, and the abundant harvests yielded by the area, led Mankato Soybean Products to steady growth."

The last paragraph states: "Today, Honeymead is a division of Harvest States, a regional marketing, supply and processing cooperative. Although Honeymead serves markets that include the Midwest, the United States and select foreign countries, the Company—and its more than 200



employees—still calls Mankato, Minnesota home. Adjacent to the corporate offices, Honeymead operates a state-of-the-art crushing and dehulling facility, a flour plant and one of the single-largest oilseed refineries in the United States.

Two photos show the Honeymead plant at Mankato, one from ground level, the other an aerial view. Note 1. The source of this 1-page history is unknown. It may be from a book on the history of Harvest States.

Note 2. This is the earliest document seen (Nov. 2007) stating that Honeymead is a division of Harvest States, a regional marketing, supply and processing cooperative. Address: 2020 South Riverfront Dr., P.O. Box 3247, Mankato, Minnesota 56002. Phone: 1-800-328-3445.

**567. Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer's Name:** Archer Daniels Midland Co.

**Manufacturer's Address:** Mexico, Missouri.

**Date of Introduction:** 1985. January.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** *J. of the American Oil Chemists' Soc.* 1985. "Soy pioneer bows out, others grow bigger." March. p. 474, 476. On 12 Jan. 1985 A.E. Staley Manufacturing Co. announced that it had sold its five soy processing plants "to Illinois-based Independent Soy Processors Co., owned by a general partnership of individuals associated with Archer Daniels Midland (ADM) and including ADM as a minority partner." One of the plants was at Mexico, Missouri.

Note: The Staley Continental Annual Report for 1985 states (p. 40) that the five soybean processing plants were sold on 11 Jan. 1985 for approximately \$84 million in cash.

568. Boyer, Robert A. 1985. *Reminiscences: Automotive design—Oral history project.* Dearborn, Michigan: Henry Ford Museum and Greenfield Village. 130 p. Accession #1673.

• **Summary:** This is the transcript of an interviews conducted by Dave Crippen of the Henry Ford Museum on 7 Feb. 1985 at Mr. Boyer's home in Dunedin, Florida. It covers all aspects of Boyer's work with soybeans at the Ford Motor Co., including: Growing up in Royal Oak, Michigan; his father worked in the accounting department of the Ford Motor Co. at Highland Park, Michigan (p. 1). Boyer's first meeting with Frank Campsall (p. 2). Growing up at the Wayside Inn (the oldest hotel in America, in South Sudbury, Massachusetts, p. 1-6). Attending high school in Framingham, Massachusetts (p. 6). First meeting with Henry Ford when the two ice skated together on the mill pond behind the Wayside Inn (p. 7). Moving to Dearborn in Sept. 1927 to attend Ford's Trade School (p. 7-11). Early work at the chemical plant (quarter-size model of Iron Mountain plant) in Greenfield Village (p. 12-13). Ford's trip to Germany and the origins of his chemurgic thinking. In 1934

the first National Chemurgic Conference was held at Dearborn Inn; Boyer was in charge of the program. Mr. Irene DuPont attended and Mr. Ford spent a lot of time with him. Before that, the DuPonts and the big banks did not trust Ford. (p. 14). Opening of Greenfield Village in late 1929 on the 50th anniversary of Edison's first successful light bulb (p. 15). Chemical experiments on truckloads of farm crops using a retort; Frank Calvert (p. 16-19).

Experiments starting in about 1933 using hexane as a solvent to extract the oil from soybeans; the Ford Extractor (p. 20-23). Boyer's group wanted to get pure protein from soybeans. So "in the lab we developed our own process for extracting the oil... We used hexane solvent, like dry cleaning. We'd flake the beans and run them through a pipe that was full of hexane on an angle with a screw in it." Hexane solvent is "distilled out of petroleum. It has a very narrow boiling point—66° centigrade. The Ford extractor... got quite a lot of attention. We built it across the street from the chemical plant. It was about 150 feet away. Mounted it all by itself because everybody was afraid of fire." A roof was built over it but no walls. It was probably built in about 1933.

In 1933 at the World's Fair [sic, the Ford Exposition of Progress] in New York City, Boyer's group had a glass model (on a table) of this extractor that used hexane solvent.

Note: Ford boycotted Chicago's A Century of Progress Exposition which opened in 1933, in part to call attention to the company's 30th anniversary; he held his own "industrial fair," first in Detroit and then in New York, in late 1933. *Business Week* described it as "the greatest industrial show ever held." Some 2.3 million people attended the two-week show in New York.

A working model of the Ford extractor, using hexane solvent, was at the Chicago World's Fair, starting in mid-1934, in the Ford Industrial Barn. "They would never let you do that today. Too dangerous."

Research on purified soy protein and soy plastics with formaldehyde; Bakelite (p. 24-25). Use of soy oil for foundry core binders for casting the Ford V-8 engine block; thus, the soy experiments are now commercialized. Building a 50 ton/day extractor (p. 26-27). Spinning soy protein fiber like rayon, based on spinning milk protein in Italy. Using the fibers to make wrinkle resistant synthetic wool, a suit of clothes for Henry Ford and others, overcoats, neckties, felt hats. "We also found that these fibers blended in very well with rabbit fur for making men's felt hats. So the Hat Corporation of America took all the fiber we could make. It wasn't very much and they would blend it in with rabbit fur. And they actually had them [the men's felt hats] on the market." Rabbit fur is very expensive (p. 29-36). Ford's suit of clothes contained 65% wool and 35% soy fiber. Boyer leaves Ford Motor Co. in 1943. Problem with fiber was tensile strength, especially wet strength. Ford's interest in this fiber work and his fitness at age 75 (p. 37-38). Ford

“was not a true vegetarian but he was pretty close” (p. 38). Edsel Ruddiman’s work with foods (p. 39-47). Boyer and Ruddiman attend American Soybean Assoc. soybean conference in Washington, DC [in Sept. 1932] where they saw “leather-like products that the Chinese make” [yuba]. Boyer tried unsuccessfully to use the idea to make “synthetic leather.” USDA’s experimental farm in Holgate, Ohio, where many soybeans sent back by W.J. Morse were tested (p. 40-42). Work with soybean milk (p. 43-46). The executive dining room in the Engineering Laboratory. Henry Ford invited Boyer to lunch there about 6 times (p. 45). Development of soy ice cream; lipoxidase enzyme inactivation (p. 45-46).

Visits to Battle Creek, Michigan and Dr. John Harvey Kellogg (p. 47). Boyer’s work was with industrial products; the plastic car and structural plastics with hemp, flax, and phenol formaldehyde (soya protein Bakelite resin) (p. 47-64, 70). Making trunk lids using a hydraulic press (p. 50). Ford’s famous axe demonstration on a trunk lid (p. 50-52). Lowell Overly and Joe Stewart (p. 53-56, 61, 78-79). Boyer drives the plastic car home (p. 63). Ford’s aim with the plastic car: to provide industrial markets for farmers (p. 65). World War II stops plastic car development (p. 65-66). Contract to build an airplane wing of plastic (p. 66-70). The plastic lid and car contain little or no soy (p. 70). Fiberglass and the Chevrolet Corvette (p. 71). Plexiglas and the B-24 bomber made at Willow Run (p. 72). Edsel Ford’s death of stomach cancer in the spring of 1943 and its effect on his father, Henry (p. 73-74). Ending work with soy fiber (p. 74).

Boyer leaves Ford in 1943 and goes to work for Drackett Co. in Cincinnati, Ohio. Wife needs to leave Detroit. After 1943 Boyer’s career really takes off. Dr. Gangloff (p. 75-77). Use of soy fiber by Drackett in felt hats. “We sold them a lot of fiber and we decided to build a bigger plant.” Building a protein plant and a fiber plant in Cincinnati big enough to supply the hat company’s demands and larger “than we needed just to supply our fiber operation.” They also had a big operation in Cincinnati for high-impact (not structural) plastic (p. 78-80). Drackett’s marketing people knew how to market Windex and Drano “but they had no feeling for the soybean operation. So when Mr. Drackett died, they sold the whole soybean plant to Archer-Daniels-Midland (ADM, p. 81-83). Before Mr. Drackett died, Boyer’s division had developed commercial soy products, and Drackett was making money on the plastic (phenol formaldehyde plus hemp) and the fiber (p. 81). Use of soy protein as a paper coating (p. 83). ADM finally closes the old Drackett protein plant and sells it to Central Soya, which used the million bushel elevator capacity for storage (p. 83-84).

Shortly after Mr. Drackett died, Boyer left Drackett to work on his edible soy fiber, where he owned patents. “If we can make a fiber from soy protein that resembles the outside of a sheep, why not make a fiber that will resemble the inside (p. 84-86). Idea of building an edible soy protein plant

is in Cincinnati, with Mr. Drackett’s approval (p. 87). Boyer tries to find companies to license rights to his landmark patent: Virginia Carolina Chemical (Taftville, Connecticut, p. 88); Swift & Co. (p. 89-92); Unilever, which was interested in peanut protein in Africa and at Port Sunlight near Liverpool (p. 92-94, 112-13); General Foods and Nabisco (Fairmont, New Jersey research lab) (p. 94, 99). Unilever and Swift pay licensing fees of \$20,000 a year plus consulting fees. General Mills and Ralston Purina (p. 94-95). Why Swift dropped its interest (p. 95-96). General Mills and Bacos (p. 96). Patent expires in 1971 after 17 years (p. 96). Worthington Foods (p. 97). Ralston Purina was getting into protein. In about 1956-58 they “had bought Procter & Gamble’s protein plant in Louisville [Kentucky], which was making industrial protein for paper coating” (p. 98). Worthington Foods was too small to make their own soy protein fibers, so Ralston Purina made it for them (p. 78-80). Ralston Purina’s great success with edible soy protein and their small conflict: pet food vs. human food (p. 100-01). From 1961 to 1971 Boyer was receiving licensing fees / patent royalties from Ralston Purina, Worthington, and General Mills (p. 102). General Mills and Bacos (p. 103-04). Ralston Purina’s patent lawsuit against Far-Mar-Co. Ralston won \$8 million. Boyer testified as an expert witness (p. 104-05).

Boyer remarries and retires in 1971 (p. 102, 105, 107). Subsequent work with Miles and Worthington; the Morningstar Farms line (p. 105-08). Companies now spinning soy protein fiber (two in the Netherlands, one in Japan, one in Australia). Ford Foundation was not interested in his work with soy protein for Third World nations (p. 110). Central Soya bought the ADM plant that was located in Chicago (p. 113-14). Kellogg’s Corn Soya breakfast cereal (p. 114-15). Worthington’s Soyloin Steaks; all early Kellogg and Worthington vegetarian products based on wheat gluten (p. 119). When Worthington bought Battle Creek they got their lady research director; she worked at Worthington until she was quite elderly. Boyer visited her in her lab at Battle Creek several times (p. 119-20. Note: Josephine F. Williams was in charge of the lab and product development at Battle Creek, where she worked closely with Dr. John H. Kellogg. She kept similar positions at Worthington Foods, according to Ron McDermott). Henry Ford as a soybean pioneer and visionary. The soybean is now America’s No. 2 cash crop and also our second largest earner of foreign exchange. “That really started from Ford. When we first started in 1931, hardly anybody ever heard of the soybean, and Henry Ford’s penchant for publicity publicized the soybean... He certainly made it popular and made people become aware of it. Today it’s darned important.” He should be remembered as the “Father of the Soybean.” “I always thought it would be nice if they would rebuild the [Soybean] laboratory [in Greenfield Village] or restore it like it was when we were doing the soybean work and give it the real credit that it

deserves...” (p. 120). After Henry Ford died in 1947 his family wanted no part of any of his pet projects. They completely eradicated the old Ford company (p. 121). Henry Ford was deeply interested in the welfare of American farmers. His tractors and Model T were of great use to them (p. 121). Origins of Ford’s interest in chemurgy; William Hale and Dow Chemical Co. in Midland, Michigan; the first three chemurgic conferences in Dearborn, Michigan, in May 1935, 1936, and 1937 (p. 122-27). Ford and Ruddiman establish a complete canning line for good-tasting green soybeans on the outskirts of the Ford estate. The equipment was quite expensive. When World War II threatened, Ford gave it to Michigan State University to teach canning to students. (p. 129-30). Boyer’s personal impressions of Henry Ford (p. 128-30). Address: 632 Edgewater Dr. #731, Dunedin, Florida 33528.

569. *J. of the American Oil Chemists’ Soc.* 1985. Soy pioneer bows out, others grow bigger. 62(3):474, 476. March.

• **Summary:** The soybean crushing industry is undergoing major restructuring as A.E. Staley Manufacturing Co., a pioneer in soybean processing, leaves the business. On 2 Jan. 1985 Cargill finalized its purchase of six soybean processing facilities from Ralston Purina. At that time it probably passed ADM to become America’s largest soybean crusher. The plants acquired by Cargill are in Bloomington, Illinois; Lafayette, Indiana; Iowa Falls, Iowa; Kansas City, Missouri; Louisville, Kentucky; and Raleigh, North Carolina. A 7th plant owned by Ralston Purina at Memphis, Tennessee, was not offered for sale, but was scheduled to be closed in February.

With this acquisition, Cargill now has 20 soybean crushing plants in the Midwest and Southeast. The location of each of Cargill’s 14 other soybean crushing plants, with daily processing capacities ranging from 20,000 bushels to 120,000 bushels, are given.

Ten days later the A.E. Staley Manufacturing Co. announced it had sold its soybean crushing business to Illinois-based independent Soy Processors Co., owned by a general partnership of individuals associated with Archer Daniels Midland (ADM) and including ADM as a minority partner. With this, ADM probably recaptured its lead, but only by a slight edge.

In October Staley agreed to buy CFC Continental Inc., the nation’s second largest supplier to the food service business. Ralston Purina, meanwhile, in October acquired ITT’s Continental Baking Co.

Central Soya Co. has 9 soybean crushing plants, 7 of them in the USA at: Gibson City, Illinois; Decatur and Indianapolis, Indiana; Bellevue, Delphos, and Marion, Ohio; and Chattanooga, Tennessee. These 7 U.S. plants are said to have a total capacity of about 10,000 tons/day of soybeans. The 2 plants outside the U.S. are in Utrecht, The Netherlands, and Victory Soya Mills in Toronto, Ontario, Canada.

Ag Processing, a cooperative based in Omaha, Nebraska, operates 6 soybean crushing plants in the USA at: Van Buren, Arkansas; Eagle Grove, Sergeant Bluff, and Sheldon, Iowa; Dawson, Minnesota; and St. Joseph, Missouri. Total crushing capacity is estimated at 11,000 tons/day of soybeans. Ag processing is now entering the edible oil refining business, constructing its first refinery adjacent to its soybean crushing plant at St. Joseph, Missouri. Expected to be completed in 1985, it is rated to have a refining capacity of 12 tank cars (720,000 pounds) of soybean oil per day.

Two poultry-related firms that are building oil refineries next to their soybean crushing plants are Perdue Inc. of Salisbury, Maryland, and Townsends of Millsboro, Delaware. Each refinery will have a capacity of 12 tank cars (720,000 pounds) of soybean oil per day.

According to the *Soya Bluebook*, the capacities of Perdue’s two crushing plants are 700 tons/day at Salisbury, Maryland, and 600 tons/day at Cofield, North Carolina. Townsend’s single crushing plant has a 1,200 tons/day capacity.

570. Far-Mar-Co (Archival collection and finding aid). 1985. Manhattan, Kansas: Kansas State Univ.

• **Summary:** Accession No. PC 1985.07 (formerly No. 36). The introduction to the collection states: “The records of Far-Mar-Co, Inc. and its predecessor organizations were donated to Kansas State Univ. to start the Arthur Capper Cooperative Research Collection, as a resource for the study of cooperatives. Far-Mar-Co. was dissolved in 1985, prompting the directors to donate the material. The collection documents the history of the company from 1914 through 1985 with papers, photos, films and correspondence. Legal documents, board minutes and financial statements provide a rich resource enabling the researcher to study past decisions and moved of cooperatives.

Concerning Dannen Mills, which was sold to the Farmers Union Cooperative Marketing Association in Oct. 1963: Box 13, folder 3—Describes the sale. Box 14, folders 20-34—Cover 1964. Box 69, newsletters—Includes the *Dannen Gossip* from 1963 Aug. 9 to 1964 Oct. 16. In the Photos section: Box 1, folder 21—Of a meeting on 31 Aug. 1963, a Dannen sales agreement.

Concerning Financial records of CMA [Farmers Union Cooperative Marketing Association]: Reports and statements—Box 14, folders 1-59.

Note: In the summer of 1968 four cooperatives merged to form Far-Mar-Co, with headquarters in Hutchinson, Kansas. The four were: Farmers Union CMA, the Equity Union Grain Exchange (Lincoln, Nebraska), the West Central Cooperative Grain Company (Omaha, Nebraska), and Farmers Cooperative Commission Company (Hutchinson, Kansas). The new organization became one of the largest grain cooperatives in the USA. Address: Manhattan, Kansas.



571. Franklin, John. 1985. History of Honeymead Products Co. (Interview). *SoyaScan Notes*. Sept. 10. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Honeymead is an agricultural cooperative that crushes soybeans. Honeymead's parent company is Harvest States Cooperatives. John Franklin is the director of public relations there. Honeymead was formerly part of GTA (the Farmers Union Grain Terminal Association), which had 2 plants—Mankato (which crushes soybeans and makes edible products) and Minnesota Linseed Oil (which also recently started to crush some sunflower seeds). An old-timer at Mankato is Stan Eichten.

Honeymead was started by a group of businessmen in Mankato. Then it was sold to the Andreas family; Dwayne and Lowell Andreas ran it. They sold it to GTA (also a co-op) in about 1960. GTA purchased a margarine company in Kansas City, then purchased 2 margarine plants—Drew in Kansas City and a salad dressing plant named Wholesome Foods. They may have owned or bought a refinery also.

In June 1983 GTA merged with North Pacific Grain Growers (NPGG) to form Harvest States Cooperatives. NPGG, headquartered in Portland, Oregon, grew mostly white wheat. GTA was looking for an outlet on the Pacific Rim.

Honeymead now makes industrial soy oil mainly for adhesives/coatings, paints & varnishes, pesticides, and soaps.

Note: This is the earliest document seen (March 2008) that mentions "Harvest States Cooperatives" in connection with soybeans—and with Honeymead. Address: 720 Minneopa Rd., P.O. Box 3247, Mankato, Minnesota 56002. Phone: 507-625-7911.

572. Dunn, John R. 1985. Update on U.S. cooperatives and soybeans (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 21. 2 p. typescript. [1 ref]

• **Summary:** Estimated capacities (in tons/day) of the major U.S. soybean crushers (Sept. 1985). Mr. Dunn has compiled the following statistics from the trade literature: 1. ADM 33,000. Ownership: Public. 2. Cargill, Inc. 26,000. Private. 3. Bunge 12,700. Private. Ag Processing Inc. 10,500. Co-op. 5. Central Soya 9,800. Private. 6. Quincy Soybean 4,600. Public? 7. Continental Grain. 4,100. Private? 8. Ralston Purina. 3,000. Public. 9. Harvest States Cooperatives (Mankato). 2,500. Co-op.

In August 1983 Land O'Lakes, Farmland Industries, and Boone Valley Processing Assoc. put all their plants into an interregional cooperative named Ag Processing Inc., headquartered in Omaha, Nebraska. It began operation in August 1983. Boone Valley no longer exists; its feed mill was taken over by Farmland. Land O'Lakes and Farmland still exist—they just spun their soybean processing assets into Ag Processing, of which they are owners. In Sept. 1983 [or June 1982] Ag Processing Inc. closed its plant in Fort

Dodge, Iowa.

A ranking of the cooperative soybean processors is as follows: 1. Ag Processing Inc. 2. Harvest States (including Honeymead). 3. Gold Kist. 4. Riceland. 5. Agri-Industries. Address: USDA Agricultural Cooperative Service (ACS), Washington, DC 20250. Phone: 202-475-4929.

573. AGP—Ag Processing Inc a cooperative. 1985. Annual report. 11235 Davenport St., Omaha, Nebraska 68154-2627. 20 p. 28 cm.

• **Summary:** Sales for 1985 (year ended Aug. 31) were \$643.469 million, down 28% from \$896.164 million in 1984. Earnings before income taxes: \$8.141 million, 3.98 times as much as the \$2.048 million in 1984.

"The changes in the agricultural community, particularly the soybean crushing industry, have been more profound in this past year than in any one year in previous memory. The consolidation of the industry was the major factor affecting these changes."

In mid-1985 AGP embarked on an exciting new venture—soybean oil refining. The new refinery, located in St. Joseph, Missouri, began operation on 19 July 1985. It will receive both crude and degummed soybean oil from AGP's six soybean crushing plants.

"Administration (p. 5): The Board of Directors approved one new regional cooperative member (Harvest States, St. Paul, Minnesota) and one new local member (Cottonwood, Minnesota).

Note: Talk with Bell Lester (expert on AGP history) of Omaha, Nebraska. 2007. Nov. 6. Harvest States was originally named Farmers Union Grain Terminal Association (GTA). When Harvest States became a member of AGP in 1985 (see above), it did not merge with AGP and was not purchased by AGP; it kept its own identity and remained an independent regional cooperative, which sold soybeans to AGP and received a patronage refund from AGP. In 1998 Harvest States merged with Cenex, Inc. to become Cenex Harvest States (CHS).

Four local cooperative members were lost: "Snyder, Nebraska, withdrew; Story City, Iowa, merged; Ida Grove and Toeterville, Iowa, liquidated." The plant in Fort Dodge, Iowa, is idle; most of its processing equipment and other facilities were relocated. "There were 560 employees at the end of the fiscal year." Contains many color photos of the refinery, officers, directors, management, and the CEO. Address: Omaha, Nebraska. Phone: (402) 334-8010.

574. Anderson, Ronald L. 1985. Re: History of Continental Grain Company's involvement with soybeans. Letter to William Shurtleff at Soyfoods Center, Nov. 11. 10 p.

• **Summary:** The following is excerpted from a 1985 Continental Grain Strategic Planning Study: History—World Processing Division: 1946—Allied Mills—Bought Taylorville, Illinois soybean crushing plant (100 tonnes/day capacity).

Note: Allied Mills owned a soybean crushing plant at Taylorville, Alabama, by Aug. 1935.

1960–Allied Mills–Guntersville, Alabama, crushing plant start-up (500 TPD).

1965–Continental acquires 51% of Allied Mills, a major feed producer [Wayne Feeds] as well as a producer of fresh poultry. 1973–Acquired Allied Mills’ plant in Cameron, South Carolina (300 TPD) and expanded it to 800 TPD. 1974–Allied Mills becomes a wholly owned subsidiary of Continental Grain. Continental’s new Processing Division is created by consolidating the above three soybean plants from Allied Mills. That year Continental expanded its charter to include participation in international processing and oilseed product trading. Thus the company first expanded outside the USA. 1975–Acquired a specialty plant in Culbertson, Montana, to crush safflower and sunflower seeds (no soy; Expanded to 400 TPD in 1983). 1975–77–Constructed a soybean crushing plant at Liverpool (1,500 TPD; expanded to 2,200 TPD in 1982). 1976–Acquired a soybean and cottonseed crushing and oil refining plant at Capsa, Paraguay (600 TPD). 1977–79–Constructed a soybean crushing plant at Maringa, Brazil (2,200 TPD). 1979–Rebuilt a plant in Maurie, Australia, with a toll crush agreement with the Australian government, to crush soybeans, sunflower, and safflower seeds (300 TPD). 1980–81–Built a plant to crush sunflower and soybeans at Chivilcoy, Argentina (800 TPD). 1981–Acquired 50% of ICIC plant at Ancona, Italy. It crushes 800 TPD of soybeans and 250 TPD of sunflower seeds, and also refines oil. 1983–Bought plant in Sydney, Australia (300 TPD). 1984–Sold plant at Taylorville, Illinois. 1985–Acquired soybean crushing plant at Venice, Italy (1,200 TPD). 1986–Sold Liverpool plant (2,000 TPD). 1987–Sold Cameron plant (1,000 TPD). 1987–Closed Oleaginosa tung nut plant in Argentina. 1988–Sold Culbertson plant (400 TPD). 1989–Plant to sell all South America and Australia plants and upgrade Italian plants. 1989–Formed joint venture marketing company [Conti-Quincy] with Quincy Soybean of Quincy, Illinois.

In 1975 Continental’s oilseed crushing capacity was 3,000 TPD or 1,100,000 tonnes/year. By 1985 this had increased roughly four-fold to 11,800 TPD or 4,300,000 tonnes/year.

A table lists all U.S. soybean crushers, the city and state of each of their plants, and the capacity of each. There were 78 plants with a total capacity of 121,025 TPD

America’s largest soybean crushers are ADM (18 plants, 32,900 TPD, 27.3% market share), Cargill (21 plants, 29,200 TPD, 24.2%), Bunge (8 plants, 14,600 TPD, 12.1%), Central Soya (8 plants, 12,000 TPD, 9.9%), Ag Processing (6 plants, 10,050 TPD, 8.3%), Quincy Soybean Co. (3 plants in Illinois and Arkansas, 5,700 TPD, 4.7%), and Others (12 plants, 16,270 TPD, 13.5%). Address: Senior Vice President and General Manager, Continental Grain Co., World Processing Div., 277 Park Ave., New York, NY 10172. Phone: 212-207-5100.

**575. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer’s Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer’s Address:** Mason City, Iowa.

**Date of Introduction:** 1985. December.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** AGP Annual report. 1986. “AGP acquired soybean processing facilities in Manning, Iowa, and Mason City, Iowa, in December, 1985 from Agri Industries” (p. 1).

**576. Product Name:** Soybean Oil, and Soybean Oil Meal.  
**Manufacturer’s Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer’s Address:** Manning, Iowa.

**Date of Introduction:** 1985. December.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Ringgenberg, Lana. 1986. “AGP assumes ownership of soybean processing plant.” *Monitor* (Manning, Iowa). Jan. 30. On 30 Dec. 1985 Ag Processing Inc. (AGP) of Omaha, Nebraska, purchased the soybean processing plant in Manning, Iowa, previously owned by AGRI Industries. At the same time, AGP also purchased a soybean processing plant in Mason City, Iowa, from AGRI Industries. This brings to 8 the total of soybean processing plants owned by AGP, which now controls 11.5% of the total U.S. domestic soybean processing capacity.

AGP Annual report. 1986. “AGP acquired soybean processing facilities in Manning, Iowa, and Mason City, Iowa, in December, 1985 from Agri Industries” (p. 1).

Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 103-114, 153-172. This plant was previously owned by AGRI Industries. The name Ag Processing Inc (AGP) was formally adopted on 7 March 1984.

**577. Product Name:** Soy Flour, and Soy Flour Mixes.

**Manufacturer’s Name:** Ag Processing Inc.

**Manufacturer’s Address:** 900 Lower Lake Rd., P.O. Box 427, St. Joseph, MO 64502.

**Date of Introduction:** 1985.

**New Product–Documentation:** Soya Bluebook. 1985. p. 85, 101; 1986. p. 84.

**578. Flider, Frank J.** 1985. The manufacture of soybean lecithins. In: B.F. Szuhaj and G.R. List, eds. 1985. *Lecithins*. Urbana, IL: American Oil Chemists’ Society. viii + 393 p. See p. 21-37. Chap. 2. [18 ref]

• **Summary:** Contents: Introduction. Seed preparation and extraction. Filtration. Degumming. Bleaching. Drying. Standardization and fluidization. Custom-blended lecithins.

Deoiled lecithin. Refined deoiled lecithin. Fractionated lecithins (fractionated by alcohol to redistribute the phosphatides according to their respective hydrophobic and lipophilic properties). Storage and handling. Acknowledgments.

Tables show: 2-1. Lecithin types (Natural, refined, or chemically modified). 2-2. Degumming conditions from the literature. 2-3. Analysis of good-quality crude lecithin. 2-4. Soybean lecithin specifications. 2-5. Specifications for crude lecithin for deoiling. 2-6. Effects of low quality crude lecithin on deoiled lecithin. 2-7. Approximate compositional analysis of commercial lecithin fractions. Address: Riceland Foods, 650 S. Shakelford Rd., Little Rock, Arkansas 72211.

579. Johnson, Dale W. 1985. Curriculum vitae. Golden Valley, Minnesota. 5 p. Unpublished manuscript. 28 cm. [3 ref]

• **Summary:** 1932-34—Teachers College, River Falls, Wisconsin. 1934-37—University of Minnesota School of Chemistry (BSc in chemistry). 1937-41—Univ. of Minnesota Graduate School (PhD, major in microbiology, minor in physical chemistry; Thesis title: “Chemical method for the determination of waste strengths”). 1949 Sept.–1942 March—Hormel Fellow (Post PhD), Univ. of Minnesota; problems concerning meat processing, by-products, studies on waste disposal. 1942-45—Pillsbury Mills, Inc., Minneapolis; Chief bacteriologist. 1945-48. The Diversey Co, Research Labs., Chicago, Illinois; Chief bacteriologist. 1948-1955—The Glidden Co., Central Organic Research Labs., Chicago, Illinois; Head, microbiology and nutrition labs. 1955-58—The Glidden Co., Chemurgy Div., Chicago; Research consultant. 1959-63—Central Soya Co., Chemurgy Div., Chicago; Manager, Edible Protein Products. 1963-67—Soypro International Inc., Chicago, Illinois; Vice president. 1963-73—Crest Products, Inc., Park Ridge, Illinois; Executive vice president. 1971-73. Agricon Co., Park Ridge, Illinois. 1971-73—Universal Proteins, Inc., Park Ridge, Illinois; Vice president. 1973-82—Food Ingredients Inc., Elk Grove Village, Illinois. President. 1978-81—Dawson Food Ingredients, Eden Prairie, Minnesota; Director. 1982 Sept.—Food Ingredients (Minnesota) Inc.; President. Address: Food Ingredients (Minnesota), Inc., 2121 Toledo Ave. No., Golden Valley, Minnesota 55422. Phone: (612) 588-9456.

580. Ringgenberg, Lana. 1986. AGP assumes ownership of soybean processing plant. *Monitor (Manning, Iowa)*. Jan. 30.

• **Summary:** On 30 Dec. 1985 Ag Processing Inc. (AGP) of Omaha, Nebraska, purchased the soybean processing plant in Manning, Iowa, previously owned by AGRI Industries. At the same time, AGP also purchased a soybean processing plant in Mason City, Iowa, from AGRI Industries. This brings to 8 the total of soybean processing plants owned by AGP, which now controls 11.5% of the total U.S. domestic soybean processing capacity.

William C. Lester, Vice President of Membership and Public Relations at AGP in Omaha, stated that the plant is operating pretty much as usual. AGP is a soybean processing company owned by 326 local cooperatives in ten states plus six regional cooperatives serving the Midwest.

581. *New York Times*. 1986. Briefs [Agri Industries and Cargill may form partnership]. Feb. 7. p. 31 (Natl); p. D3 (Late).

• **Summary:** The full text of this short announcement reads: “Agri Industries, Des Moines [Iowa], said it had tentatively agreed to form a grain marketing partnership with Cargill Inc. of Minneapolis [Minnesota].”

582. Slater, Frederick W. 1986. Ag Processing operation here ‘star’ in cooperative’s lineup. *St. Joseph News-Press (Missouri)*. July 20. p. 5B.

• **Summary:** James W. Lindsay, chief operating officer of Ag Processing Inc (AGP, based in Omaha, Nebraska), says that the cooperative’s soybean processing plant in St. Joseph, Missouri (on Lower Lake Road) is “the star” of the firm’s soybean processing operations.

Moreover, “soybeans purchased for processing at the St. Joseph plant result in a pay-out of more than \$84 million a year to area producers.”

AGP has just completed the addition of a salad oil refinery at the St. Joseph facility, and is contemplating the addition of a hard oil processing [hydrogenation] unit.

AGP has made more improvements at the St. Joseph plant during the cooperative’s 2½ years of existence than at any of its 7 other plants.

AGP, which is comprised of over 320 local cooperatives in 10 states, is listed in the Fortune 500 companies. There are 270,000 soybean producers / growers in the USA and AGP has 11.5% of the nation’s soybean processing. The St. Joseph plant processes 50,000 bushels of soybeans a day, 7 days a week—which comes to 16 million bushels of soybeans a year. The plant also makes soy flour, and has 105 employees.

A photo shows Doug Forsberg (AGP marketing manager), Mike Turpin (St. Joseph plant manager), and James Lindsay (AGP CEO). Address: Editorial page editor.

583. AGP—Ag Processing Inc a cooperative. 1986. Annual report. 11235 Davenport St., Omaha, Nebraska 68154-2627. 20 p. 28 cm.

• **Summary:** Sales for 1986 (year ended Aug. 31) were \$625.404 million, down 3% from \$643.469 million in 1985. Earnings before income taxes: \$2.048 million, down 75% from the \$8.141 million in 1985.

“AGP acquired soybean processing facilities in Manning, Iowa, and Mason City, Iowa, in December, 1985 from Agri Industries.” AGP also established an active political action committee (PAC) to lobby for the company in Washington, DC. Color photos show Lindsay, Knobbe, and each member



of the board of directors. Address: Omaha, Nebraska. Phone: (402) 334-8010.

584. Audrain County Historical Society. comp. and pub. 1986. History of Audrain County, Missouri: An update 1936-1986. 1st ed. Mexico, Missouri: ACHS. vi + 599 p. Illust. Index. 29 cm.

• **Summary:** The section titled "Active history" notes (p. 9) that one of major fires during the half century covered by this book "destroyed the main feed mill and elevator building of the MFA (Missouri Farmers Association) at 400 East Holt Street on March 17, 1944." Flames and sparks, rising 150 feet into the night sky, were seen from nearby towns, whose firemen helped to fight the fire. "Loss of the former W.W. Pollock Mill, remodeled by the MFA for soybean processing, was estimated at \$280,000. MFA rebuilt, and the location is now operated by Archer-Daniels-Midland."

An updated history of the MFA (which started on 10 March 1914) (p. 252-52) states that one of the first cooperative soybean processing plants in the USA was located in Mexico, Missouri, owned and operated by the MFA. On 21 May 1943 the MFA purchased the W.W. Pollock Milling and Elevator Company of Mexico, Missouri. "It consisted of a 60,000 bushel wooden elevator and a 4 story brick building that housed flour milling machinery. The M.F.A. immediately began converting the mill into a soybean processing and feed manufacturing plant. They had installed all the feed mixing equipment and about half of the soybean processing equipment when it was destroyed by fire on March 17, 1944. By the end of the year plans for rebuilding were progressing.

"The new M.F.A. Soybean Mill was dedicated on November 2, 1946. It was the only such plant in outstate Missouri. With the completion of this plant was born a brand new industry in the northeast quarter of the state where soybean production had been expanding during the past five years with no suitable markets at hand.

"In a radio broadcast at the dedication ceremonies, F.V. Heinkel pointed out that fourteen counties in Northeast Missouri, all within a radius of 50 miles of the Mexico Mill, produced a half-million bushels of soybeans in 1941, worth \$752,000. But this year (1946), he disclosed, the same counties increased production of soybeans to 3,600,000 bushels [up 7.2 fold] valued at approximately \$9 million [up 12.0 fold]. (Revised government figures for that year show production of 3,109,700 bushels, valued at \$7,929,735.) The counties he named were Audrain, Randolph, Montgomery, Callaway, Boone, Howard, Warren, Shelby, Marion and Macon. Until 1946 practically the only markets afforded this new crop were at Quincy, Illinois and St. Louis [Missouri].

In his speech, Heinkel said "We dedicate this plant in the name of progress and advancement to the rendering of service to the soybean producers, livestock feeders, and poultry raisers of this fine agricultural area with the objective

of increased prosperity for the farmers and townspeople of Audrain and surrounding counties."

Heinkel then introduced E.W. Lierheimer, who produced soybeans in Audrain County and who helped raise money to build the new plant. "Lierheimer recalled the late William Hirth had often told him that he had longed to have a major M.F.A. plant located in Mexico, county seat of his home county... Lierheimer also said that this plant didn't grow up or wasn't built overnight. 'It is the result of longrange thinking and careful planning on the part of a lot of people.'"

The Mayor of Mexico, Missouri, Hon. Robert Finley, also appeared on the program and welcomed the new mill. Several days before the dedication ceremonies, the *Mexico Ledger* published a special edition devoted to the MFA, and especially telling all about the new soybean mill. Mitchell White, the editor of this newspaper—published both daily and weekly—appeared on the program. He "recalled a time many years ago when County Agent, Earl Rusk, began to talk of soybeans and their possibilities, and of a mill to process them." Today, he declared, "this dream has become a reality through the splendid plant of the M.F.A."

The section titled "Agriculture: A history of agriculture in Audrain County—Emphasis 1933-43" (p. 280-83, by Glen Mutti), begins with an excellent analysis of the effects of the Great Depression on local farmers. Surpluses of agricultural products, low farm prices for these products, terrible summer droughts (1930, 1934, 1936), plagues of grasshoppers and chinch bugs, heavy debt, many farm foreclosures, and almost no agricultural credit. "The year 1933 ushered in the first huge U.S. government farm program, The Agricultural Adjustment Administration" (called The Triple A or AAA); its goal was to reduce acreages of basic crops thereby reducing production in that hope that depressed farm prices would improve. It was followed by a host of other government programs designed to help farmers. By 1939 the Rural Electrification Administration (REA) and farm mechanization (tractors and combines) had begun to transform farm life. "Rural Electrification and Soybeans, for Processing have probably had more impact than anything else on the Agriculture and standard of living of rural Audrain Countians.

"Soybeans introduced in the 1920s were first used mostly for hay. the crop was harvested with a grain binder tying the beans into bundles, which were shocked up in the field," and left until they were hauled to the farmstead and fed to cattle. "A few farmers fed threshed soybeans to hogs as a protein supplement to corn. The result was soft pork and a lower price to the farmer for his hogs.

There became a demand for both oil and meal from processed yellow soybeans. In 1936 experimental test plots were set up by the Extension Service on seven Audrain County farms using the best known soybean varieties to determine those which were superior. The Alton Railroad cooperated with the Audrain County Agricultural Agent by

furnishing farmers with seed beans. The work was continued into the early 1940s, then in March 1942, meetings were held at Laddonia, Vandalia, and Mexico [cities in Audrain Co.] to discuss the possible establishment of a commercial plant for processing (extraction of oil and meal) of soybeans.

"In 1945 the M.F.A. completed construction of the first soybean processing plant in northeast Missouri. The plant, now A.D.M., is still operative in 1985.

"One third of the land area of Audrain Co., about 145,000 acres, has been planted to soybeans—1974–1984. For more than 25 years soybeans have been the largest crop of the county."

"The use of agricultural lime in Audrain increased from 180 tons in 1934 to 55,000 tons in 1942." This expanded use had the most important impact of farming practices during this period.

After World War II began, it was "impossible to replace worn out farm machinery with new equipment. It was patch it up and try to keep it running." As farmers' sons entered the military, there was a shortage of farm labor. Many older farmers and their wives shouldered the burden, becoming a "loyal, patriotic, and dedicated work force." The slogan was "Food for Freedom." Fortunately the years from 1940 to 1955 were outstanding one for farmers, with record highs in farm income, crop prices, and general prosperity.

Contains detailed federal time series data for each of the following in Audrain County: Number of farms, average size of farm, land prices per acre, percentage of land tenants (renters), number of horses and mules (work and draft), tractors, combines, yields of corn, soybeans, and wheat (p. 282).

The section on "Irrigation" (p. 283) discusses the importance of irrigation to first crop and double crop soybean yields in Audrain Co., and gives yield statistics. Address: 501 South Muldrow, Mexico, Audrain Co., Missouri.

585. Mills, Harold E. 1986. Soybean oil plant pours \$70 million into farm economy. *St. Joseph News-Press (Missouri)*. Dec. 7. p. 6B.

• **Summary:** The AG Processing Inc. soybean oil refinery at 900 Lower Lake Rd. has finished its first year extracting salad oils from soybeans; it began operation late last year. The soybean processing / crushing plant and the refinery injected about \$70 million into the area's agricultural economy. Since late 1985 the refinery has processed around 15 million bushels of soybeans using 100 workers operating around the clock. The soybeans are purchased largely from growers in northwest Missouri and southern Iowa. The oils are used in Wishbone, Seven Seas, Sun Blend Miracle Whip dressings. AG Processing headquarters are in Omaha, Nebraska. A photo shows Terry Weiland unloading a trailer of soybeans at AG Processing Inc. Address: Business writer.

586. **Product Name:** Ultra-Soy Soy Protein Concentrates,

and Isolates.

**Manufacturer's Name:** PMS Foods, Inc. (Formerly Far-Mar-Co).

**Manufacturer's Address:** 960 N. Halstead, P.O. Box 1099, Hutchinson, KS 67504. Phone: 316-663-5711 (Oct. 1995).

**Date of Introduction:** 1986.

**New Product–Documentation:** Soya Bluebook. 1986. p. 89.

587. **Product Name:** Imagic Soy Flour [Textured, Flavored, or Unflavored].

**Manufacturer's Name:** PMS Foods, Inc.

**Manufacturer's Address:** 960 N. Halstead, P.O. Box 1099, Hutchinson, KS 67504.

**Date of Introduction:** 1986.

**New Product–Documentation:** Soya Bluebook. 1986. p. 84.

588. Kahn, E.J., Jr. 1987. Profiles: The absolute beginning [Dwayne Orville Andreas and ADM]. *New Yorker* 62:41–68. Feb. 16.

• **Summary:** The best biography seen of Dwayne Andreas, with emphasis on his work with soy. Contains a nice portrait (illustration, line drawing) of Andreas on the first page. Address: New York.

589. *Courier (Corning, Arkansas)*. 1987. Riceland and AGP agree on lecithin purchases. May 14.

• **Summary:** Riceland, a farmer-owned co-op, is the largest U.S. rice milling and marketing company, one of the principal U.S. marketers of lecithin since early 1960s, and the operator of a soy processing plant and vegetable oil refinery at Stuttgart. AGP is the largest U.S. "farmer-owned cooperative soybean processing company. It has soybean processing plants in Iowa, Minnesota, Missouri and Western Arkansas." Riceland will purchase lecithin made at AGP's soybean processing plant in St. Joseph, Missouri. James W. Lindsay, AGP's chief executive, said that his company's entry into lecithin manufacturing fits well with its policy of moving toward value-added products.

590. *St. Joseph Gazette (Missouri)*. 1987. Local soybean plant will expand. July 30. p. 4A.

• **Summary:** AGP will add a hydrogenation unit and about 15 full time employees to its oil refinery at 900 Lower Lake Road. "Hydrogenation changes liquid oils into a solid product sold to food processors to make such products as margarine, shortening, and mayonnaise." The total facility now employs about 100 workers. Earlier this year AGP announced that it was beginning to produce lecithin at the plant. Address: Business writer.

591. *Milling and Baking News*. 1987. ADM acquires Gold Kist soybean processing facility. 66(19):1. July 7.

• **Summary:** On July 2, Archer Daniels Midland Co. acquired the Valdosta, Georgia, soybean processing plant of Gold Kist, Inc. a farmer's cooperative. The plant produces soybean meal and crude oil. Gold Kist is one of several cooperatives holding an ownership interest in Toepfer International Group, a grain trading firm in Hamburg, West Germany. ADM owns 45% of that group and thus controls it.

592. *Journal (Des Arc, Arkansas)*. 1987. Bunge to acquire three elevators from Farmland Industries. Aug. 6.

• **Summary:** The corporation has announced plans to acquire three grain elevators in Missouri, in the towns of Louisiana, Caruthersville, and Hannibal. John E. Klein is president and CEO of Bunge. Bunge Corporation began as a merchandiser of raw and processed agricultural commodities, primarily for export. Although it has shifted its orientation to include the domestic food ingredient business in recent years, Bunge plans to remain a major force in grain handling. In addition to its grain division, Bunge's business includes a Soybean Processing Division; an Edible Oil Division, which produces shortenings and cooking oils; the Lauhoff Milling Division, which is the nation's largest dry corn miller; and the Dariatech Division, which produces stabilizers, processed fruits and flavors for the dairy and carbonated beverage industries. In addition, the company recently announced plans to acquire Carlin Foods Corporation, a manufacturer of speciality food ingredients for the bakery, dairy, and food service industries. Bunge's Corporation's headquarters are located in New York City.

593. *Steele-Enterprise (Steele, Missouri)*. 1987. Bunge acquires elevators. Aug. 6.

• **Summary:** The company will acquire three grain elevators in Missouri from Farmland Industries. Bunge's businesses include a Soybean Processing Div. and an Edible Oil Div. Corporate headquarters are in New York City.

594. AGP—Ag Processing Inc a cooperative. 1987. Annual report. 11235 Davenport St., Omaha, Nebraska 68154-2627. 20 p. 28 cm.

• **Summary:** Sales for 1987 (year ended Aug. 31) were \$676.279 million, up 8.1% from \$625.404 million in 1986. Earnings before income taxes: \$8.862 million, 4.3 times as much as the \$2.048 million in 1986.

"The future—adding hydrogenation. The addition of hydrogenation capacity to AGP's St. Joseph, Missouri, refinery represents a major expansion of the Company's ability to produce value-added products." Hydrogenation increases the oil's melting point, enabling it "to remain semi-solid at room temperatures (hence the term oil hardening.) The breaking of the 'double bonds' in the glyceride chain improves the ability of the oil to remain odorless and tasteless for longer periods of time after deodorization and packaging. This stability of the oil is of great importance to

the finished oil consumer."

"Plant operations: Upon approval by the AGP Board of Directors, processing equipment at the Fort Dodge, Iowa, plant and the 'French' extraction plant at Eagle Grove, Iowa, were dismantled. The Van Buren, Arkansas, plant was closed down indefinitely on March 5, 1987."

Also in 1987 the production of edible lecithin began at the refinery in St. Joseph, Missouri. "The process: Crude soybean oil is heated followed by the addition of diatomaceous earth to filter out solid impurities. Water and hydrogen peroxide are added, and a centrifuge is used to separate away the heavy liquid gums. The edible lecithin is cooled and stored, ready for delivery by truck." Color photos show Lindsay, Knobbe, top corporate management, and each member of the board of directors. Address: Omaha, Nebraska.

595. Blank, Eugene W. 1987. Fats and oils chronology. *J. of the American Oil Chemists' Soc.* 64(11):1479-82, 1484, 1486, 1488-92. Nov. Revised. Originally published in *Oil and Soap*. June 1942. [20 ref]

• **Summary:** A fascinating overview of historical highlights from 259 B.C. to 1964.

1876—Oleomargarine production begins in Germany.

1897—Sabatier and co-workers start research on catalysis, thus laying the foundation for fat hardening by hydrogenation.

1902—Normann applies the Sabatier process of catalytic hydrogenation to liquid oils permitting preparation of fats of any desired hardness.

1910—Procter & Gamble introduces the Sabatier-Normann-Kaiser process for hydrogenation of vegetable oils.

1911—Soybeans are first processed in the U.S. by Herman Meyer in Seattle, Washington, using a hydraulic press; the plant later is known as Pacific Oil Mills.

1911—Procter & Gamble offers Crisco [shortening] for retail sale.

1911—The Duren disease first appears in Scotland, killing large numbers of cattle that have been fed soybean oil meal extracted with trichloroethylene.

1915—Domestically grown soybeans are processed by the Elizabeth City Oil and Fertilizer Co., Elizabeth City, North Carolina.

1917—Soybeans are crushed by expeller press at the Chicago Heights Oil Manufacturing Co., a linseed mill.

1919—German patents are issued to Hermann Bollmann for continuous solvent extraction of fats, as well as British patents for a continuous oilseed extractor.

1922—Large-scale soybean processing [crushing] is undertaken by A.E. Staley Manufacturing Co. at Decatur, Illinois, marking the real beginning of the soybean processing industry in the USA.

1923—Funk Bros. Seed Company at Bloomington, Illinois,



begins permanent soybean processing operations, using equipment from Chicago Heights Oil Manufacturing Co.

1923—The first processing of soybeans by batch solvent extraction is undertaken by Piatt County Soybean Cooperative Co. at Monticello, Illinois, a short-lived operation.

1923—The first “bible” of the soybean industry, *The Soybean*, is published by McGraw Hill Book Co. of New York. The authors are William J. Morse (who had [sic, who later] studied soybeans in Manchuria and brought samples of varieties to the U.S.) and Charles V. Piper.

1924—Eastern Cotton Oil Co. in Norfolk, Virginia, begins solvent extraction of soybeans in a continuous Bollmann extractor obtained from Germany.

1924—AOCS begins publishing the *Journal of the Oil and Fat Industries*.

1927—The AOCS’ publication is renamed *Oil and Fat Industries*.

1932—The AOCS’ publication is renamed *Oil and Soap*.

1947—The AOCS journal *Oil and Soap* is officially renamed the *Journal of the American Oil Chemists’ Society*.

596. **Product Name:** Lecithin.

**Manufacturer’s Name:** Ag Processing Inc.

**Manufacturer’s Address:** 11235 Davenport St., Omaha, NE 68154.

**Date of Introduction:** 1987.

**New Product—Documentation:** Soya Bluebook. 1987. p. 66.

597. Lester, William (Bill) C. 1988. An overview of soybean processing. In: L. McCann, ed. 1988. *Soybean Utilization Alternatives*. St. Paul, MN: Univ. of Minnesota Center for Alternative Crops and Products. vi + 429 p. See p. 13-19. [2 ref]

• **Summary:** Reviews the processing of soybean meal and oil in the U.S., including a step by step procedure of what happens to soybeans in a processing plant. Address: Ag Processing Inc., Omaha, Nebraska.

598. *Soybean Digest*. 1988. Soy milk solves dairy shortage. Feb. p. 44.

• **Summary:** Professionals from Mexico’s dairy industry and government food and nutrition programs attended a 10-hour seminar in Mexico City on how soy can help alleviate Mexico’s shortage of dairy products. Two U.S. technicians, Emil Huang of Land O’Lakes and Allan Routh of St. Peter’s Creamery, were among the seminar speakers. A program highlight was Huang’s demonstration on tofu and soy milk manufacturing.

Note: This is the earliest document seen (July 2001) concerning SunRich or Allan Routh.

599. *Clay County Courier (Corning, Arkansas)*. 1988. Riceland selects Noble to direct advertising. April 14.

• **Summary:** “Riceland is the nation’s leading rice marketing firm and a major regional processor and marketer of soybeans and edible oil products. It is also one of the leading manufacturers and marketers of lecithin. Riceland’s annual sales during 1988 are expected to be about \$600 million. About half of its business is international with sales of rice to 42 countries last year.”

600. Spiers, Wally. 1988. Soybean oil use increases. *News-Democrat (Belleville, Illinois)*. May 10.

• **Summary:** There has been a 4% nationwide increase in soybean oil consumption. Palm oil imports have dropped 28% and food manufacturers are replacing tropical fats with soybean oil. Phil Bradshaw, chairman of the Illinois Soybean Checkoff Program, said the increase is directly related to a letter-writing campaign by Bean Boosters, a volunteer group that promotes soybean use. The Illinois checkoff program administers the money collected from a ½ cent per bushel checkoff on soybeans. The soybean board has recently recommended that the checkoff amount be raised in ½ cent steps to 2 cents per bushel. The proposal would raise the checkoff ½ cent this year, another half-cent in 1990 and another half-cent in 1992. The tropical fats campaign is a grass roots effort. Other companies switching to soybean oil from tropical fats include Archway Cookies, Pepperidge Farms, Sunshine Bakers, Nabisco, Lance, Riceland Foods and Frito Lay.

601. Steffens, Ken. 1988. Farmland, Far-Mar-Co., and PMS Foods, Inc. (Interview). *SoyaScan Notes*. Aug. 22. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Far-Mar-Co merged with Farmland in the late 1970s. Farmland then started losing money in a big way, so they wanted to divest some of their assets and get out of the business of making TVP. So three of the personnel bought Far-Mar-Co in 1983 in a leveraged buyout. The new company was called PMS Foods Inc., standing for Parke, Major and Shoup. They are still in Hutchinson, Kansas, making TVP. Farmland is a mere shadow of its former self, a manufacturer in Kansas City.

PMS paid ADM a licensing fee to make TVP. It goes for another 3 years. Four companies made TVP: ADM, PMS, Cargill, and Central Soya (in that order of size). The latter three all license the process from ADM. Ken, who worked for Ralston, says that Ralston is also named on the original patent and they get lots of licensing money. They litigated against all the producers of TVP. There were three different rights: process, chemical, and one other. ADM, Ralston, and Staley were co-holders of the patent—not just ADM. Ralston is no longer in the business.

Update. 1998. April. PMS Foods, Inc. is listed in the 1998 Soya Bluebook Plus on p. 192. Location: 2701 E. 11th, P.O. Box 1099, Hutchinson, Kansas 67504-1099. Phone: 316-663-5711. Fax: 316-663-7195. e-mail:

sales@pmsfoods.com. Internet: www.pmsfoods.com.  
Contact: Derek Park, President. Plant manager: Floyd Shoup. Facility: Extrusion, served by rail & truck. Edible products: Meat analogs, textured soy flour. Address: PMS Foods, Inc., 2701 East 11th St., Hutchinson, Kansas 67501. Phone: 316-663-5711 (Oct. 1995).

602. AGP—Ag Processing Inc a cooperative. 1988. Annual report. 11235 Davenport St., Omaha, Nebraska 68154-2627. 24 p. 28 cm.

• **Summary:** Net sales for 1988 (year ended Aug. 31) were \$910.240 million, up 34.6% from \$676.279 million in 1987. Earnings before income taxes: \$56.429 million, 6.4 times as much as the \$8.862 million in 1987.

AGP participated in huge soybean meal export sales to Russia.

Contains many color photos. Address: Omaha, Nebraska.

603. Continental Grain Company. 1989. U.S. soybean processor consolidation: Capacity by major processor. New York, NY. 1 p. Unpublished manuscript. Internal report. April 11.

• **Summary:** The table gives figures for 1975, 1983, and 1989. The following April 1989 figures list ranking, percent-age of total capacity, number of plants, and capacity in short tons/day (TPD).

1. ADM, 31%, 17 plants, 37,300 TPD.
2. Cargill, 26%, 16 plants, 31,300 TPD.
3. Bunge, 10%, 7 plants, 12,000 TPD.
4. Central Soya, 9%, 7 plants, 11,000 TPD.
5. Ag Processing, 9%, 6 plants, 11,000 TPD.
6. Quincy, 5.8%, 2 plants, 7,000 TPD.
7. Owensboro, 2.5%, 1 plant, 3,000 TPD.
8. Continental, 0.6%, 1 plant, 1,800 TPD.
9. All others, 5%, 6 plants, 6,000 TPD.

Total: 63 plants, 120,400 TPD.

Note that the top 5 companies controlled 85% of capacity in 1989, but only 64% in 1983 and 45% in 1975. The total number of plants in 1989 was 63, compared with 88 in 1983 and 103 in 1975. The total capacity was 120,400 TPD, down from 123,025 in 1983 but up from 92,600 in 1975. Address: Continental Grain Co., World Processing Div., 277 Park Ave., New York, NY 10172.

604. **Product Name:** EV Concentrate (Post-Emergence Herbicide Additive).

**Manufacturer's Name:** Cenex/Land O'Lakes Agronomy Co.

**Manufacturer's Address:** Winona, Minnesota.

**Date of Introduction:** 1989. April.

**Ingredients:** 94% soy oil.

**New Product—Documentation:** Soybean Update. 1989.

May 1. A company agronomist says that there seems to be a little less injury to the plants and not quite a much burning as

when this product based on soy oil is used instead of petroleum.

605. Krizmanic, Judy. 1989. Why co-ops make cents. *Vegetarian Times*. May. p. 22-25, 72-73.

• **Summary:** "In the United States, the idea that a group of people could successfully pool resources to fill a common need—like lower food bills—is one that matured alongside the concept of trade unions. Over the years, cooperatives have been especially popular during times of volatile economic or social conditions: The Great Depression and the political and social changes of the '60s and early '70s fomented the two biggest waves of food cooperatives in American history... During the last wave of popularity, the number of food co-ops peaked at about 9,000, then waned throughout the late '70s and early '80s. Mismanagement or mere lack of interest caused some of the earlier co-ops to fall apart. But co-ops are coming back, more sophisticated than ever; today there are as many as 5,000 food co-ops, according to the National Cooperative Business Association."

Today, according to USDA's Agriculture Cooperative Service, the 40,000 co-ops across America fall into the following categories: Credit unions and finance 47%, food and consumer goods 17%, agriculture marketing and supply 14%, housing 5%, insurance 5%, utilities 4%, and other (childcare, crafts, healthcare, student services, transportation, hardware, burial services, worker) 8%.

606. National Soybean Processors Assoc. 1989. Soybean processors to expand membership (News release). 1255 23rd St. N.W., Washington, DC 20037. 1 p. May 24.

• **Summary:** "The National Soybean Processors Association will expand its representation to include those firms which crush canola, sunflower, flax, and safflower seeds, according to NSPA Chairman James Lindsay [of AGP]. The association's expanded membership will be reflected in its new name, which will change to the National Oilseed Processors Association (NOPA). The new name will become official on August 1, 1989."

Founded in 1929, the NSPA is celebrating its 60th anniversary this year. NOPA will maintain its offices in Washington, DC, with Sheldon J. Hauck as President. Address: Washington, DC. Phone: 202-452-8040.

607. *Soybean Update*. 1989. Canola stirs industry turn [NSPA will change its name to NOPA and widen its membership after 59 years]. June 19.

• **Summary:** "Responding to growth in the U.S. oilseed crushing industry, the National Soybean Processors Association has decided to expand its membership and change its name. The National Oilseed Processors Association membership will be extended to include companies crushing canola seed, sunseed, flax and safflower seed. The change will be effective as of August 1."

“On a somewhat related note, the Federal Grain Inspection Service is now accepting public comment on setting up a schedule of marketing standards for canola. Both changes come partially on the heels of increased interest in growing canola in the U.S.”

Note: The chairman of the new group will be James Lindsay [of AGP].

608. Grace, G. 1989. Preparation of vital wheat gluten. In: T.H. Applewhite, ed. 1989. Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs. Champaign, IL: American Oil Chemists' Society. xii + 575 p. See p. 112-15. Contains 7 figures (charts and diagrams) and 3 tables. [3 ref]

• **Summary:** Contents: Abstract. Introduction. World production. Methods of manufacture: Farmarco process, Pillsbury hydromilling process. Current production methods: Wheat selection, flour milling, wet gluten separation, dough washing, batter systems, gluten drying (spray dryers, hydrocyclone process [K.S.H.], flash drying), wheat starch and effluent.

A photo shows G. Grace. Address: Manildra Starches Pty. Ltd., Auburn, New South Wales, Australia.

609. *J. of the American Oil Chemists' Soc.* 1989. NSPA becomes NOPA. 66(8):1042. Aug.

• **Summary:** On 1 Aug. 1989 the National Soybean Processors Association (NSPA) will change its name to the National Oilseed Processors Association (NOPA), and will expand its membership to include firms that crush canola, sunflowerseed, flaxseed, and safflowerseed. The new unified approach will correspond to that which has existed in Europe for many years as FEDIOL—which represents both European oilseed crushers and refiners.

The move corresponds to the “recent emergence of the canola oil industry as a distinct segment of the U.S. oilseed crushing complex and the continuing expansion of the sunflower crushing industry...”

NOPA will maintain the same offices held by NSPA in Washington, DC. Sheldon J. Hauck will continue as president; James Lindsay [of AGP] is chairman. Address: JAOCS.

610. National Oilseed Processors Association. 1989. Yearbook and trading rules 1989-1990. Washington, DC. [iv] + 123 + 11 p. 23 cm.

• **Summary:** On the cover (but not the title page) is written: Effective August 1, 1989. Contents: Constitution and by-laws. Officers and directors. Executive office. Members. Associate members. Standing committees. Trading rules on soybean meal. Appendix to trading rules on soybean meal: Official methods of analysis (moisture, protein, crude fiber, oil {only method numbers listed}), sampling of soybean meal {at origin} (automatic mechanic sampler, pneumatic

probe sampler, probe sampler), sampling of soybean meal (at barge loading transfer facilities), official weighmaster application, semi-annual scale report, certification of installation of automatic sampler & mechanical divider (at origin), semi-annual certification of automatic sampler & mechanical divider (at origin), certification of installation of automatic sampler & mechanical divider (at barge loading transfer facility), semi-annual certification of automatic sampler & mechanical divider (at barge loading transfer facility), official referee laboratories (meal), official NSPA soybean meal sample bag. Soybean meal export trading rules: Minimum blending procedures for export meal blended at ports, sampling of soybean meal (at vessel loading facilities), weighing of soybean meal (at vessel loading facilities), certification of installation of automatic sampler & mechanical divider (at vessel loading facility), semi-annual certification of automatic sampler & mechanical divider (at vessel loading facility), semi-annual certification of scales at vessel loading facilities. Trading rules on soybean oil. Sales contract. Definitions of grade and quality of export oils. Soybean lecithin specifications. Appendix to trading rules on soybean oil: Inspection, grading soybean oil for color (NSPA tentative method), methods of analysis (A.O.C.S. official methods): Soybean oil, crude; soybean oil, refined; soybean oil, refined and bleached; soybean oil for technical uses; soap stock, acidulated soap stock and tank bottoms (only method numbers listed), official weighmaster application, semi-annual scale report, official referee chemists (oil). Soybean oil export trading rules. Uniform soybean oil export contract. Foreign trade definitions (for information purposes only) Appendix 1.

The section on officers, executive committee, and board of directors (p. 7-8) gives the name, company affiliation, and phone number of each person. Officers (executive committee)—Chairman: James W. Lindsay, Ag Processing Inc a cooperative [AGP], Vice Chairman: C. Lockwood Marine, Central Soya Co., Inc. Secretary: John March, Cargill, Inc. Treasurer: John Burritt, National Sun Industries, Inc. Immediate past chairman: John G. Reed, Jr., Archer Daniels Midland Co.

Executive staff: President: Sheldon J. Hauck. Executive vice president: Brose A. McVey.

Board of directors (alphabetically by company; each member company may have up to two representatives on the board; only the first of these may vote): James W. Lindsay & William C. Lester, Ag Processing Inc a cooperative. John G. Reed, Jr. & Michael D. Andreas, Archer Daniels Midland Co. John March & Thomas O. Palmby, Cargill, Inc. C. Lockwood Marine & David H. Swanson, Central Soya Co., Inc. David B. Mulhollem & Bernard Steinweg, Continental Grain Co. Ian White & Donald G. Foster, Elders Oilseeds Inc. Merritt E. Petersen & Stan Eichten, Honeymead Products Co. John Burritt & Jeff Berkow, National Sun Industries, Inc. John M. Wright & Henry E. O'Bryan,



Owensboro Grain Co., Inc. Sewell L. Spedden & William Bohan, Perdue Incorporated. Paul D. Otto & J. Richard Galloway, Quincy Soybean Co. James K. Smith & Richard E. Bell, Riceland Foods, Inc. Thomas L. Harper, Southern Soya Corp. D. Daryl Houghton & P. Coleman Townsend, Townsends, Inc.

Executive office, Washington, DC: President, Sheldon J. Hauck. Executive vice president: Brose A. McVey. Administrative asst.: Steven C. Kemp. Legislative asst.: Elizabeth A. Loudy. General counsel: Elroy H. Wolff, Sidley & Austin. Special counsel: Richard O. Cunningham, Steptoe & Johnson.

Members (listed alphabetically by company; within each company, first the name of the official Association representative {who is on the Board and votes}, followed by the other personal members listed alphabetically by surname. For example, Archer Daniels Midland Co., the company with the most personal members, has 34. After the name of each personal member is given with his address and phone number. In the listing below, the number of personal members is shown in parentheses after the name of each company, followed by city and state of the various locations): Ag Processing Inc a cooperative (21); Van Buren, Arkansas; Eagle Grove, Iowa; Manning, Iowa; Mason City, Iowa; Sergeant Bluff, Iowa; Sheldon, Iowa; Dawson, Minnesota; St. Joseph, Missouri. Omaha, Nebraska. Archer Daniels Midland Co. (23); Archer Daniels Midland Co. (24); Little Rock, Arkansas; Augusta, Georgia; Valdosta, Georgia; Decatur, Illinois; Galesburg, Illinois; Granite City, Illinois; Taylorville, Illinois; Frankfort, Indiana; Des Moines, Iowa; Fredonia, Kansas; Destrehan, Louisiana; Mankato, Minnesota; Red Wing, Minnesota; Kansas City, Missouri; Mexico, Missouri; Clarksdale, Mississippi; Fremont, Nebraska; Lincoln, Nebraska; Fostoria, Ohio; Kershaw, South Carolina; Memphis, Tennessee. Cargill, Inc. (20); Osceola, Arkansas; Gainesville, Georgia; Lafayette, Indiana; Cedar Rapids, Iowa; Des Moines, Iowa; Iowa Falls, Iowa; Sioux City, Iowa; Washington, Iowa; Bloomington, Illinois; Chicago, Illinois; Wichita, Kansas; Burnsville, Minnesota; Minneapolis, Minnesota; South Savage, Minnesota; Wayzata, Minnesota; Kansas City, Missouri; Fayetteville, North Carolina; Raleigh, North Carolina; Sidney, Ohio; Memphis, Tennessee; Chesapeake, Virginia. Central Soya Co., Inc. (13); Gibson City, Illinois; Decatur, Indiana; Fort Wayne, Indiana; Indianapolis, Indiana; Belmond, Iowa; Bellevue, Ohio; Marion, Ohio; Delphos, Ohio; Chattanooga, Tennessee. Continental Grain Co. (8); Guntersville, Alabama; Chicago, Illinois; New York City, New York. Elders Oilseeds Inc. (3); Culbertson, Montana; Blaine, Washington. Honeymead Products Co. (3); Mankato, Minnesota. National Sun Industries, Inc. (3); Minneapolis, Minnesota. Owensboro Grain Co., Inc. (4); Owensboro, Kentucky. Perdue Incorporated (4); Salisbury, Maryland; Cofield, North Carolina. Quincy Soybean Co. (6); Helena, Arkansas, Quincy, Illinois.

Riceland Foods, Inc. (7); Stuttgart, Arkansas. Southern Soya Corp. (2); Estill, South Carolina. Townsend's Inc. (2); Millsboro, Delaware.

Associate Members: ADM Agri-Industries Ltd., Windsor, Ontario, Canada. Beatrice / Hunt-Wesson, Fullerton, California. Best Foods, a Unit of CPC International Inc., Englewood Cliffs, New Jersey. Bestel Inc., Minneapolis, Minnesota. C&T Refinery, Inc., Richmond, Virginia. Con Agra Poultry Co., El Dorado, Arkansas. Conti-Quincy Export Co., New York City, New York. Louis Dreyfus, Wilton, Connecticut. Empire Kosher Poultry, Inc., Mifflintown, Pennsylvania. Garnac Grain Co., Overland Park, Kansas. Goldman Sachs-J. Aron Div., New York City, New York. K&L Feeds, Inc., Selinsgrove, Pennsylvania. Kraft Food Ingredients Corp., Glenview, Illinois; Memphis, Tennessee. Krohn Trading Limited Partnership, New Orleans, Louisiana. Lever Bros Company, Inc., New York City, New York. Overseas Commodities Corp., Minneapolis, Minnesota. Pilgrim's Pride Corp., Pittsburg, Texas. Pillsbury Co. (The), Overland, Kansas; Minneapolis, Minnesota. Procter & Gamble Co., Cincinnati, Ohio. Purina Mills, Inc., St. Louis, Missouri. Ralston Purina Co., St. Louis, Missouri. Schouten International, Inc., Minneapolis, Minnesota. A.E. Staley Manufacturing, Decatur, Illinois. Alfred C. Toepfer International, Inc., New York City, New York (Knud Winkelman). Tradecom, Inc., Boca Raton, Florida. Van Den Bergh Foods Co., Chicago, Illinois.

Standing committees: For each committee, the function of the committee, the names of all members (with the chairman designated), with the company and company address of each are given—Crusher committees: Canola, flaxseed, safflower seed, sunflower seed. International trade policy. Soybean meal trading rules. Soybean oil trading rules. Safety, health, and loss prevention. Technical. Address: 1255 Twenty-Third St., N.W., Washington, DC 20037. Phone: 202/452-8040. Telex: 248959. Fax: 202/833-3636.

611. Grider, Stephen D. 1989. AGP expands main office. *St. Joseph News-Press / Gazette (Missouri)*. Oct. 3. p. 5B.

• **Summary:** The company will expand and remodel its main office at 900 Lower Lake Road. Address: Staff writer.

612. AGP—Ag Processing Inc a cooperative. 1989. Annual report: Partners—Working together in food production. 11717 Burt St., Burt Plaza, Suite 2, Omaha, Nebraska 68154-1581. 24 p. 28 cm.

• **Summary:** Net sales for 1989 (year ended Aug. 31) were \$946.707 million, up 4.0% from \$910.240 million in 1988. Earnings before income taxes: \$46.483 million, down 17.7% from the \$56.429 million in 1988. "The business environment the past two years has resulted in record earnings for your cooperative soybean processing company." AGP's financial position is "considerably more stable than it was six years ago." "Many of AGP's immediate goals have been

realized. We have redeemed the Class A preferred stock, paid back loans to our founders, redeemed two-thirds of the Class B preferred stock and original allocated equities, and reduced our long term debt. In addition, we have been able to more than double members' equity. The Company's earnings before taxes have averaged \$20.7 million over the past six years, representing a 25.4 percent average return on equity over the same period." AGP paid several years worth of allocated equities.

Bar graphs (p. 13-15) show annually, from 1984 to 1989: (1) Capital spending. (2) Depreciation. (3) Long term debt to equity ratio. (4) Long term debt. (5) Members' equity. (6) Earnings before taxes. (7) Earnings before taxes to equity ratio.

Color photos show Lindsay, Knobbe, top corporate management, and each member of the board of directors, plus two satellite photos of the Midwest with state boundaries and AGP sites and shareholders added, inside a poultry factory farm, an AGP oil tanker, men working the phones in the grain merchandising room. Address: Omaha, Nebraska.

613. *Yearbook and Trading Rules*. 1989-2000. Serial/periodical. National Oilseed Processors Association. Annual. • **Summary:** Preceded by: Year Book and Trading Rules. Issued annually to all members of the association. The 1981-82 Year Book, for example, was spiral bound and 23 cm high. The last published yearbook was 2000-2001. Thereafter, most of the information appeared on the association's website nopa.org.

Letter (e-mail) from Kathy Pennington, office administrator of NOPA. 2005. Aug. 15. NOPA no longer publishes the Yearbook & Trading Rules. In 2003, when she joined NOPA, it was available online only with purchase. Beginning in 2004 NOPA made the trading rules available to all on its website. Names and contact information for the officers and board members, are listed under "About us—Board and staff. The member companies names, headquarter addresses, headquarter phone numbers, and weblinks are under Membership." The detailed membership roster (contact information, committee membership, etc.) is available to Members Only. HOPA has no extra printed copies at all; they have only one copy of each Yearbook for their records. Address: 1800 M. St., N.W., Washington, DC 20036.

614. Riceland Foods. 1989. Fire or explosion in solvent extraction plant. Stuttgart, Arkansas.

• **Summary:** Kingsbaker, C. Louis. 2005. "List of fires and explosions in extraction plants." Atlanta, Georgia. 3 p. Aug. 4. Unpublished manuscript. Address: Stuttgart, Arkansas.

615. Gertz, Deborah. 1990. Quincy Soybean sees record sales, growth. *Herald-Whig (Quincy, Illinois)*. March 25. p. 31.

• **Summary:** "In 1984, the company added a coal-fired boiler

system for energy economy at the Quincy plant."

The firm has also begun refining vegetable oil. In Sept. 1984, Quincy Soybean purchased a soybean crushing facility at Helena, Arkansas, from Riceland Foods. That facility, located on the Mississippi River 65 miles south of Memphis, Tennessee, includes a processing plant, vegetable oil refinery, and an elevator.

The company recently purchased 15 oil barges for transporting soy oil to and from New Orleans, Louisiana. A portrait photo shows Mike Foster, executive vice president. Address: H-W staff writer.

616. Anderson, Jim. 1990. Lowell Andreas tells of start in Kato. *Mankato Free Press (Minnesota)*. April 28. p. 3.

• **Summary:** A speech to the Venture Capital Club, Lowell Andreas carried important business lessons. Dwayne and Lowell Andreas, brothers, arrived in Mankato (Minnesota) from Iowa in 1947. For nearly two decades they ran the Honeymead Products Co. In 1947, when they bought the expeller plant, it could process 1,500 bushels of soybeans a day. After a disastrous fire, the plant was rebuilt to a capacity of 3,500 bushels a day. During the 1950s this grew to 50,000 bushels.

In 1960 the Farmers Union Grain Terminal Association (GTA) bought the plant; Lowell agreed to manage the plant for 10 years for a share of the profits.

After a 1965 flood, dikes were built around the plant and surrounding residential area.

In 1966 the brothers were approached by ADM—then based in Minneapolis—and invited to buy controlling stock and run the company. As competitors, the Andreas brothers knew what was wrong with ADM from the outside. They could see all the dumb things the company was doing so they knew what needed to be done to correct the situation. For example, they unloaded ADM's unprofitable chemical division.

One of the toughest decisions was to move ADM's headquarters to Decatur, Illinois, where its biggest plant was located. During a trip to the Grand Cayman Islands, Lowell recalls how he sat in the bow of his sailboat alone, mulling over this problem. Finally he called to his wife, Nadine—who thought he was being romantic. When she sat down next to him, he asked her how she would like to live in Decatur, Illinois.

In 1965 ADM was a struggling company with sales of \$323 million; in 1989 it had sales of more than \$8 billion.

A portrait photo shows Lowell Andreas. Address: Staff writer.

617. United States Court of Appeals for the Federal Circuit. 1990. Ralston Purina Company, Plaintiff-Appellant, v. A.E. Staley Manufacturing Company, Defendant/Cross-Appellant. Court Decicion 90-1019, -1045. 3 p. Decided July 5, 1990. Unpublished manuscript.

• **Summary:** “Decision: Ralston Purina Company (Ralston) appeals from a judgment of the United States District Court for the Central District of Illinois, No. 84-1378 (July 27, 1989), holding the United States Patent No. 3,940,495 (‘495) unenforceable for inequitable conduct. A.E. Staley Manufacturing Company (Staley) cross-appeals denial of its motion to amend the judgment to include an award of attorney fees. We affirm.”

“Opinion: Evidence that Ralston intended to deceive the Patent and Trademark Office (PTO) includes: (1) Brukardt and Price knew of the Archer-Daniels-Midland (ADM) Dutch application no later than 1968; (2) Ralston made no disclosure of the ADM Dutch application until 1973; (3) Ralston’s disclosure of the ADM Dutch application appeared in an 18 page statement discussing 118 references; and (4) when the PTO examiner said that he had not fully considered the cited references and objected to the statement, citing Manual of Patent Examining Procedure 707.05(b), Ralston refused to limit the statement to the five most pertinent references... Ralston did not and could not contest the finding that the ADM Dutch Patent application was material. The findings are not clearly erroneous and support the inferences drawn.

“Ralston’s reliance on *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 227 USPQ 177 (Fed. Cir. 1985) is misplaced. Inequitable conduct was neither at issue nor considered in that case.

“In denying Staley’s motion for attorney fees, the district court considered all relevant factors (Ralston’s inequitable conduct, that ‘the issues in the case were very hotly contested and the case was vigorously litigated,’ and our holdings on validity and infringement in *Far-Mar-Co*). We cannot say the district court abused its discretion in denying Staley’s motion.”

Before Markey and Michel, Circuit Judges, and Brewster, District Judge.

“Note: This opinion has not been prepared for publication in a printed volume because it does not add significantly to the body of law and is not of widespread legal interest.”

618. AGP—Ag Processing Inc a cooperative. 1990. Annual report: Partners—Working together in food production. 11717 Burt St., Burt Plaza, Suite 200, Omaha, Nebraska 68154-1581. 24 p. 31 cm.

• **Summary:** Net sales for 1990 (year ended Aug. 31) were \$848.621 million, down 10.4% from \$946.707 million in 1989. Earnings before income taxes: \$65.200 million, up 40.3% from the \$46.483 million in 1989.

AGP “retired all Class B Preferred stock held by Land O’Lakes and Farmland Industries, and issued a cash payout of remaining allocated patronage equities.”

Note: Talk with Bell Lester (expert on AGP history) of Omaha, Nebraska. 2007. Nov. 6. The Class B Preferred stock was really money that Land O’Lakes and Farmland

Industries invested in AGP on the original day of reorganization in 1983. By retiring or redeeming that preferred stock, AGP is basically paying back that debt. AGP did the same thing with the AGP members—members of the old Boone Valley—who had loaned AGP startup capital and been given an equivalent amount of Class B Preferred stock. In 1982 and 1983, Bill had gone out and raised that money for AGP’s capitalization.

AGP also acquired the Lincoln, Nebraska, grain terminal. Stockholders from Utah, New York, Mississippi, and Canada came aboard. The company now has 8 soybean processing plants.

On pages 2-12 is an excellent year by year history of AGP, with good “big picture” context and background information for each year, sidebar quotations, and many color photos including Lindsay, Knobbe, and each member of the board of directors. AGP “was the product of a forced marriage in the uncertain early 1980s.” CEO Lindsay says (p. 11): “I started mentioning the word ‘profits’ when I first came to the company. Back in the old days, cooperatives used the word ‘savings.’ That word has the connotation that you’re not there to try to make money for the company so it can grow and sustain itself. I think cooperatives are now coming to the realization that they have to finance the business they’re in. Our most significant accomplishment in the past seven years has been the dramatic improvement in our financial position—going from 135 percent debt to equity [ratio] down to the 20 percent level, paying off the Class A & B preferred stock on which we were originally committed.” “At AGP, we never forget that everything we do begins in the field and returns to the farmstead.” On the rear cover (for the first time): “Printed with Soy Ink.” Address: Omaha, Nebraska.

**619. Product Name:** Health Burger Mix (Dry Mix) [“Sausage” Flavor or Grille Flavor].

**Manufacturer’s Name:** Mission Foods.

**Manufacturer’s Address:** 2205 Highway 66, P.O. Box 3075, Ashland, OR 97520. Phone: 503-488-2451.

**Date of Introduction:** 1990. December.

**Ingredients:** TVP—soy flour [fortified with zinc (oxide), iron (ferrous sulfate), vitamin B-3 (niacinimide [niacinamide]), calcium (pantothenate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-1 (thiamin hydrochloride), vitamin A (palmitate), vitamin B-12], rolled oats, soybean oil, parsley, onion salt, caramel and certified color, natural and artificial flavorings, hydrolyzed vegetable protein. No MSG or animal products used.

**Wt/Vol., Packaging, Price:** 8 oz plastic Ziploc bag. Makes 1 lb.

**How Stored:** Shelf stable.

**Nutrition:** Per 2 oz ready to eat meatless serving: Calories 198, protein 19 gm, carbohydrates 25 gm (Dietary fiber 8.2 gm), total fat 2.8 gm (% calories from fat 12% vs 64% for beef burger; saturated fat 0.25 gm), cholesterol 0 mg,



calcium 75 mg, copper 0.6 mg, iron 7.7 mg, potassium 925 mg, sodium 138 mg, zinc 8.6 mg.

**New Product–Documentation:** Talk with Clyde Boismenu of Basic Foods. 1991. March 7. Robin and Paul Noll are marketing a product that looks something like what Fantastic Foods has done. Its a dry product.

Talk with Robin Noll. 1991. March 7. This product was introduced in test market in Dec. 1990. Their organization, whose official name is simply “Mission,” is a portable mission, a church on wheels in the form of a bus. They provide local soup kitchen service.

Label with sample, letter, photo of bus, and leaflet sent by Robin Noll. 1991. March 8. Label. 4.75 by 1.6 inches. Black, white, pink, and orange on yellow. Illustration of 3 angels holding a large heart, in the middle of which is written, “Cholesterol-free! High fiber and protein. Low sodium & fat!” The label also states: “Quick & easy! Use with or without ground meat. Needs no refrigeration. 8 oz. makes 1 lb.”

The leaflet (8.5 by 11 inches, black on tan) states that Health Burger is “Made with Profibertine, combining protein and fiber in a unique way... Ideal for folks allergic to wheat (and gluten) eggs and dairy products, or who want to reduce their fat, cholesterol and salt intake while adding high quality protein and fiber.” Then it lists “Four easy ways to use Burger Mix,” gives a typical nutritional analysis and compares it to beef. “Diabetic exchanges: Equal to 2 lean meats and one bread portion.”

The letter notes: “Although we have sold 8 oz. retail packages for test-marketing purposes as well as frozen burgers for local hospital use, we really would like to specialize in the 25 lb. bulk boxes (@\$1.50/lb = \$37.50 F.O.B. Ashland)... We have a full range of dry textured soy products available that we broker for the Pacific Northwest, as well as carrying the Chewy Lumen/Heartline products... We are considering relocating to the Eugene area this summer.”

Talk with Robin Noll. 1991. March 12. TVP (made by ADM) is NOT one of the ingredients. The Nolls buy textured soy flour in the form of flavored bits from PMS Foods in Kansas. The Nolls use a process developed by Paul (an inventor) to mix these bits with oats and grains so that the grain fiber combines with the soy to yield Profibertine, a unique product made and trademarked only by them. They fund their work from their savings. Their children are grown up and they wanted to do something they enjoyed and believed in. It is not yet supporting itself. They are too small to ask for county funding. Meals on Wheels does not like soy products.

620. Lundin, Vernard E.; Berg, Ken. 1990. At the bend in the river: An illustrated history of Mankato and North Mankato [Minnesota]. Chatsworth, California: Windsor Publications, Inc. 128 p. See p. 103. Illust. Index. 29 cm. [1 soy ref]

• **Summary:** Contains a very good 1-page history of Mankato Soybean Products, Inc., which was renamed Honeymead Products Co. in 1947. The first half of this history is very similar to (but shorter than) that which appears in the following article: Torgerson, Susan. 1980. “Mankato No. 2 in nation in soy processing: 40 years ago industry didn’t amount to a hill of beans.” *Land (The)* (Southern Minnesota) 4(10):1, 13, 38. April 24.

The second half adds: In 1947, when the Andreas family bought the company from the Washington Egg and Poultry Association, the family had feed mills [and soybean crushing plants] in Iowa under the name Honeymead; so they decided to rename their Mankato company Honeymead Products Co.

Lowell Andreas introduced modern solvent extraction technology to the Mankato plant to replace the old-fashioned expeller that pressed out the oil.

In 1960 Honeymead was sold to the Farmers Union Grain Terminal Association, a grain marketing cooperative based in St. Paul, Minnesota. In 1964 Honeymead expanded into hydrogenating the soybean oil it extracted from soybeans; this “hardened” soybean oil was sold to companies making margarine or shortening.

In 1968 Lowell Rasmussen was named president and continued the growth initiated by the Andreas family.

During the past 25 years—from 1965 to 1990—production has expanded markedly, from a soybean processing capacity of 50,000 bushels, five railroad tank cars of refined oil, and four tank cars of hydrogenated oil per day, to 80,000 bushels, 12 cars of refined oil, and 18 cars of hydrogenated oil daily.

Rasmussen retired in 1984 and Merritt Petersen succeeded him as president. “Honeymead Products Co. and its 185 employees continue to serve Minnesota, the United States, and several foreign countries.” A large glossy black-and-white aerial photo shows the present Honeymead plant in Mankato. Address: Mankato, Minnesota.

621. **Product Name:** Soybean Oil.

**Manufacturer’s Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer’s Address:** Denison, Texas.

**Date of Introduction:** 1991. March.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product–Documentation:** Finnerty, Margaret. 1992. *Soybeans, Cooperatives and Ag Processing Inc.* Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 125-32, 153-172. This plant, a vegetable oil refinery not a crushing plant, was previously owned by Conway Oil. Ag Processing Inc (AGP) purchased the plant on 1 March 1991.

622. Eichberg, Joseph. 1991. The lecithin industry and market worldwide (Interview). *SoyaScan Notes*. May 23. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** There are basically two types of lecithin companies: Soybean crushing companies that produce crude lecithin from soy oil (e.g. Ferruzzi/Central Soya, ADM, Honeymead), and lecithin companies that buy crude lecithin from soybean crushers and fractionate it to make various products (e.g. Lucas Meyer, Nattermann Phospholipid GmbH). These lecithin products can be further classified into two broad types: those used in foods, and those used in pharmaceutical and cosmetic products.

A ranking of lecithin companies worldwide sales of lecithin products (i.e. total monetary value) would look something like this: 1. Ferruzzi/Central Soya. 2. Nattermann Phospholipid GmbH. 3. Lucas Meyer. 4. Archer Daniels Midland Co. (ADM). 5. Honeymead Products Co.

It is not clear whether Nattermann or Lucas Meyer is the second largest in sales. Lucas Meyer probably moves a larger volume by weight, but Nattermann sells mostly pharmaceutical and cosmetic products with a very high price per unit weight. Address: American Lecithin Co., P.O. Box 4056, Atlanta, Georgia 30302.

623. Rasmussen, Wayne David. 1991. *Farmers, cooperatives, and the USDA: A history of Agricultural Cooperative Service*. Washington, DC: U.S. Department of Agriculture. xii + 292 p. July. Illust. No index. 22 cm. Series: Agricultural Information Bulletin No. 621 [97 ref]

• **Summary:** Contents: Preface. Foreword, by Randall E. Torgerson, Administrator, ACS, USDA. 1. Agricultural cooperatives—What and how: Defining agricultural cooperatives (definitions, principles), types of agricultural cooperatives (early cooperatives, production cooperatives, marketing cooperatives, purchasing cooperatives, mixed-typed cooperatives, cooperatives in other nations), need for cooperatives, role of cooperatives, cooperatives today, role of government, Agricultural Cooperative Service vision.

2. American cooperation in the beginning: From settlement to the Civil War (American Indian agriculture, Jamestown and Plymouth, other pioneer efforts, butter and cheese cooperatives), Civil War and agricultural revolution (National Grange, Cooperative Coopers of Minneapolis, Farmers Alliance, National Farmers Union, American Society of Equity, commodity and independent cooperatives, fruit and vegetable marketing associations), a continuous thread. 3. Early federal work with cooperatives: Benign neglect, research work begins, Federal Farm Loan Act, postwar (World War I) reorganization of cooperative work.

4. Farm depression, cooperatives, and Capper-Volstead: Farm depression, building farmer cooperatives, cooperatives and antitrust (need for legislation, forces for legislation), Capper-Volstead Act of 1922. 5. Cooperative Marketing Act of 1926: Division of Agricultural Cooperation, pressure for legislation for cooperative work, Cooperative Marketing Act of 1926, Division of Cooperative Marketing organizes.

6. Federal Farm Board and Farm Credit Administration,

1929-1953: Federal Farm Board, Farm Credit Administration, USDA and farmer cooperatives, 1939-1953. 7. Independence, change and challenge—1953-1969: Agriculture's changing face, independence for FCA and FCS, Farmer Cooperative Service organizes, challenges of the 1950s, decade of the 1960s. 8. Good times for farming—the 1970s: Changing administrations and organizations, strengthening cooperatives in the 1970s, toward a new decade.

9. Farm depression and recovery—The 1980s: Administration: Cooperative support cools, Agricultural Cooperative Service organizes, helping cooperatives survive a Depression decade, recovering from the decade. 10. Agricultural Cooperative Service—Today and tomorrow: A future for cooperatives, ACS and the cooperative community, working with federal agencies, rural development opportunities, state universities and experiment stations, educating industry and the public, tomorrow's problems, looking to the future, and a few final thoughts.

Appendixes: A. Agricultural Cooperative Service: A chronology. B. Capper-Volstead Act of 1922. C. Cooperative Marketing Act of 1926. D. Agricultural Fair Practices Act of 1967.

E. Number of farmer cooperatives, memberships, and farms [1913-1989]. The number of co-ops increased from 3,099 in 1913 to a peak 12,000 in 1930, had fallen to 9,345 in 1960, and was 4,799 in 1989. Total memberships increased from 651,186 in 1915, reached a peak of 7.7 million in 1956, and had fallen to 4.1 million in 1989.

F. Farmer cooperatives business volume [1913-1989]. The gross volume [sales] of farmer cooperatives increased from \$310.3 million in 1913, rose to a peak of \$101,479.2 million in 1981, and had fallen to \$85,501.8 million in 1989. The net business volume [profits] of farmer cooperatives rose from \$8,147 million in 1951 to a peak of \$71,534 million in 1981, and had fallen only slightly to \$71,109.5 million in 1989.

Appendix: A. Agricultural Cooperative Service: A chronology. 1867—National Grange, first general farmers' organization to sponsor cooperatives, organized by a USDA employee.

1913 May 1—T.N. Carver was appointed as collaborator to organize the Rural Organization Service, which was in the USDA but was financed by the private General Education Board.

1913 May 16—Office of Markets, which included studies of cooperative marketing and distribution, established within the Rural Organization Service, with Charles J. Brand as chief.

1913—T.N. Carver, in article in USDA Yearbook, urged cooperation among farmers and in rural communities.

1914 May 8—Smith-Lever Act establishing the Cooperative Extension Service, approved (38 Stat. 372).

1914 Oct. 15—Clayton Antitrust Act approved.

1915 July 1—Office of Markets merged with Rural Organization Service as the Office of Markets and Rural

Organization (38 Stat. 1087).

1916 July 17—Federal land banks established by Federal Farm Loan Act (39 Stat. 360).

1917 July 1—Office of Markets and Rural Organization redesignated as the Bureau of Markets (39 Stat. 1162).

1921 July 1—Bureau of Markets and Bureau of Crop Estimates combined as Bureau of Markets and Crop Estimates, with a Division of Cooperative Relations (41 Stat. 1341).

1922 Feb. 18—Capper-Volstead Act, giving cooperatives certain exemptions from antitrust laws, approved (42 Stat. 388).

1922 July 1. Bureau of Markets and Crop Estimates was combined with the Office of Farm Management and Farm Economics to form the Bureau of Agricultural Economics, with a Division of Agricultural Cooperation (42 Stat. 5311).

1925 Jan.—American Institute of Cooperation organized.

1926 July 2—Cooperative Marketing Act approved. It established the Division of Cooperative Marketing in the Bureau of Agricultural Economics, which transferred functions of the Division of Agricultural Cooperation to it (44 Stat. 802).

1935 May 11—Rural Electrification Administration established.

1953 Dec. 4—The Cooperative Research and Service Division, formerly part of the Farm Credit Administration, became Farmer Cooperative Service (FCS), reporting to the Assistant Secretary of Agriculture for Federal-States Relations.

1954 April 13—Joseph G. Knapp, who had been acting administration of Farmer Cooperative Service since its establishment, was named administrator.

1966 Sept 1—David W. Angevine became administrator of FCS, replacing Joseph Knapp who retired on 2 July 1966.

1977 Dec. 23—Farmer Cooperative Service combined with Economic Research Service and Statistical Reporting Service to form Economics, Statistics, and Cooperative Service (ESCS). The new agency reported to the Assistant Secretary for Economics and Policy Analysis.

1980 Sept. 17—Secretary of Agriculture Bob Bergland established the Agricultural Cooperative Service (ACS) as an independent agency under the Assistant Secretary for Marketing and Transportation Services.

1980 Oct. 1—ACS formally began operations with Randall E. Torgerson as administrator.

Soy is mentioned occasionally in passing, as on p. 245.

Wayne Rasmussen was born in 1915. Note: A positive review of this book appeared in 1992 in the *American J. of Agricultural Economics* 74(3):843-45. Aug. Address: Agricultural historian, USDA.

624. Kahn, E.J., Jr. 1991. Supermarketer to the world: The story of Dwayne Andreas, CEO of Archer Daniels Midland. New York, NY: Warner Books. viii + 320 p. Illust. Index. 24

cm.

• **Summary:** The colorful, carefully researched story of Dwayne Andreas, the 73-year old CEO of the largest agricultural processor in the USA. The success he has made of ADM makes “the better-known success stories of Xerox and IBM look like kid’s stuff. Andreas has multiplied revenues 25 times over (from \$3223 million to \$7.9 billion) since taking the Archer Daniels Midland helm in 1965—en route converting his own \$1,500 investment into \$180 million. His sales staff produce at an annual rate of three quarters of a million each. He doubles ADM profits every five years with the regularity of a Swiss clock. And since the Bush election, he’s hoisted revenues by about a billion dollars a year. All of this with long-term debt 30 percent less than cash on hand...

“But there’s a lot more than numbers to Dwayne Andreas. He’s known by insiders as the new Armand Hammer. When Mikhail Gorbachev met Tip O’Neill, the Soviet premier greeted him with, ‘I hear you know my friend Dwayne Andreas.’ He is an almost mystical guru to the power elite, yet he is little understood by professional analysts.”

In 1936 the Andreases moved their family milling company (named R.P. Andreas & Sons) to Cedar Rapids, Iowa (from Lisbon, Iowa), and renamed it Honeymead Products Co. Dwayne “came under the tutelary spell of one of his Jewish mentors, Joseph Sinaiko, a leading soybean processor.” The two became close personal friends. Joe, whose was 27 years older than Dwayne, owned Iowa Milling Co. in Cedar Rapids. Years later Andreas said of Sinaiko: “A very classy guy, and the best soybean processor of that era.”

In 1936, Lowell Andreas was in charge of soybean processing at Honeymead and Dwayne ran sales and transportation. But Dwayne soon became executive officer.

In Aug. 1937 the Iowa Securities Commission authorized Honeymead to do a public stock offering. The company’s net worth was appraised at \$24,200. The Andreases kept most of the stock for themselves—but the value rose rapidly. Also in 1937 Dwayne got a pilot’s license and bought a Ercoupe plane—so he could expand his sales territory and decrease the time it too him to cover it.

From 1938 to 1945 Honeymead grew steadily, with Dwayne at the helm. Then in June 1945 Dwayne’s draft classification was changed to 1A. In anticipation of being called into the military, he sold 60% of the family’s Honeymead holdings to Cargill. Dwayne was now age 27 and his personal sale of the proceeds from the sale was about \$1.5 million. Soon the war ended and Dwayne was not drafted, so Cargill invited him to become general manager of the former Honeymead plant at Cedar Rapids, Iowa—with a salary of \$25,000 a year. Dwayne accepted the offer and ended up working for Cargill for seven years, eventually rising to vice president in charge of soybean and linseed-oil operations.

Andreas has said that “Except for nuclear war, world



hunger is the world's biggest threat to peace."

On the cover is a nice color photo of Andreas standing in front of a field of soybeans. Andreas was born in 1918. The author, Ely Jacques Kahn, was born in 1916. Portions of this book appeared, in considerably, different form, in *The New Yorker*. Address: Writer for The New Yorker.

625. Raffensperger, Terry. 1991. Ag plant expands building. *St. Joseph News-Press / Gazette (Missouri)*. Oct. 13. p. 1E, 4E.

• **Summary:** Ag Processing Inc, a farm cooperative based in Omaha, Nebraska, with a soybean processing plant in St. Joseph, continues "to expand and solidify its position as a major player in the agri-business network." The company prefers a low profile, says Bill Lester, vice president of corporate relations and governmental affairs. Lester says the company has 8 soybean processing plants in 4 states, but "St. Joseph is its flagship plant."

In 1987 AGP constructed its hydrogenation plant. But 1987 also saw problems as 72 Teamsters union workers went on a 4½-month strike—a process "marked by high tensions and emotions that resulted in several rock-throwing and vandalism incidents."

626. AGP—Ag Processing Inc a cooperative. 1991. Annual report: Partners in food production. 11717 Burt St., Omaha, Nebraska 68154-1581. 24 p. 28 cm.

• **Summary:** Net sales for 1991 (year ended Aug. 31) were \$864.675 million, up 1.9% from \$848.621 million in 1990. Earnings before income taxes: \$43.016 million, down 14.1% from the \$65.200 million in 1990. Contains an 8-year summary of consolidated operating and financial statistics.

The truck department expanded. A special division of Engineering and a Rail Transport Specialist were added. AGP Grain Cooperative organized and sold stock to local cooperatives. On 1 March 1991 AGP acquired a full-service vegetable oil refinery in Denison, Texas. A color aerial photo shows the plant.

Bar graphs (p. 13-15) show annually, from 1984 to 1989: (1) Capital spending. (2) Depreciation. (3) Capitalization. (4) Long term debt to equity ratio. (5) Long term debt. (6) Members' equity. (7) Earnings before taxes. (8) Earnings before taxes to equity ratio. Contains many color photos, including top management and the Board of Directors, currently made up of four farmers and five cooperative elevator managers.

Membership: At fiscal year end, there were 381 active local cooperatives and 11 regional cooperatives located in 15 states and Canada. These AGP stockholders represent more than 300,000 farmers. Address: Omaha, Nebraska.

627. Zerschling, Lynn. 1991. AGP picks S.D. site for plant: Firm signs option to buy 300 acres. *Sioux City Journal (Iowa)*. Dec. 11. p. A1, A14.

• **Summary:** On land adjacent to the Park Jefferson Speedway in Union County, South Dakota, AGP might build a \$300 million corn processing plant. Address: Journal staff writer.

628. Dreeszen, Dave. 1991. AGP plant would have big impact. *Sioux City Journal (Iowa)*. Dec. 12. p. A1, A14.

• **Summary:** AGP has proposed building a \$300 million corn processing plant in Union County, South Dakota. The company announced Tuesday it has signed a long-term option to buy land just north of North Sioux City.

Note: This proposal was discussed in this newspaper in articles during 1992 dated Jan. 25 (p. A3), Feb. 19 (p. A3), March 12 (p. A14), and March 20 (p. A1, A14), then during 1993 on Feb. 20 (p. A10), and May 1 (p. A3). The plant was apparently never built, in part because of expected competition from Cargill, that announced in 1992 that it would build a plant in Blair, Nebraska, about 30 miles north of Omaha. Address: Journal staff writer.

629. *Ag Innovation News (AURI—Agricultural Utilization Research Inst., Crookston, Minnesota)*. 1992. Cenex/Land O'Lakes introduces corn, soybean-based surfactant developed in partnership with AURI. 1(1):1, 7. Jan.

• **Summary:** The new product, named "Preference," is a non-ionic surfactant which is mixed with various herbicides and applied by farmers to control weeds. Soy oil and corn oil are used in place of petroleum. The product offers high performance at a very competitive price. "Surfactants are added to spray mixtures to improve the absorption and effectiveness of foliar-applied insecticides, herbicides, fungicides, and defoliants."

630. Associated Press. 1992. Proposed Cargill plant with compete with AGP operation. *Sioux City Journal (Iowa)*. March 12. p. A14.

• **Summary:** Cargill's corn-milling division plans to build a corn processing plant (its 5th) in western Iowa or Eastern Nebraska. It would produce high fructose corn syrup and polymers used in biodegradable products. AGP of Omaha, Nebraska, is considering building a \$300 million corn wet-milling plant in extreme southeastern South Dakota. Cargill and ADM are the two biggest U.S. corn processors.

631. Nebraska Soybean Development, Utilization and Marketing Board. 1992. Meeting agenda. Jefferson City, Missouri. 2 + 4 p. March.

• **Summary:** This meeting took place on March 17-18, 1992 at the Cornhusker Hotel, Lincoln, Nebraska. Soy Diesel was on the agenda in four sessions. Present at dinner on March 17 were: John Campbell, AGP; Marc Berg, South Dakota, American Soybean Association Board of Directors; Scott Frederickson, ADM.

Attached is the following 4-page document (which see):

Requested report to United Soybean Board on Soy Diesel, by Kenlon Johannes (March 1992). Address: Jefferson City, Missouri.

632. Johnson, Lawrence A.; Meyers, D.J.; Burden, D.J. 1992. Soy protein's history, prospects in food, feed. *IN-FORM (AOCS)* 3(4):429-30, 432, 434, 437, 438, 440, 442-44. April. [54 ref]

• **Summary:** "This is the second part of a review that chronicles the individuals and the historical and economic factors noteworthy in the development of soy protein as food and feed ingredients." Contents: Introduction. Early Western food uses (whole and defatted soy flour, enzyme-modified isolated soy proteins as whipping agents, whipped toppings, cereal-soy blends). Soy flour and grits. Protein concentrates and isolates (Griffith Laboratories, Central Soya Co., Mead Johnson and Co., Central Soya). Dairy analogs (Dr. Harry W. Miller, Loma Linda Foods, Mull-Soy and Borden, Vitasoy, Edensoy, Worthington Foods and Soyamel, Prosoabee and Mead Johnson, Rich Products and Chill-Zert, Tofutti). Spun fibers (Robert Boyer and the Ford Motor Co., Temptein, Worthington Foods, Bontrae, Bac\*O's, Bac-O-Bits, Miles Laboratories, Morningstar Farms). Textured soy protein and meat analogs (W. Atkinson, ADM and TVP, General Mills and frozen Bontrae, the U.S. School Lunch Program). Nutritional advances in soy products. Today's world soybean and soy protein production (consolidation among manufacturers of modern soy protein ingredients: ADM, Cargill, Central Soya Co., Protein Technologies International, A.E. Staley Mfg. Co.). Future of soy protein products.

Tables show: (1) Soy meal consumption in the USA by type of animal: Poultry 41.1% of total 18.9 million metric tons, swine 27.4%, beef cattle 9.0%, dairy cattle 9.0%, other livestock 9.5%, human food 3.2%, industrial 0.5%. Thus, industrial (nonfood, nonfeed) uses for soybeans presently comprise no more than 0.5% of the protein produced from soybeans grown in the United States. (3) U.S. companies supplying protein in 1948-50 versus 1990 (industrial and edible flours, concentrates, and isolates). 23 companies then vs. 5 in 1990.

Note: Talk with Ed Milligan of EMI by phone. 1992. May 5. This article contains some misleading information. It refers to an article by Ken Becker written in 1971. In 1958-59 USDA developed a laboratory prototype of flash desolventizing. In 1959 they contacted EMI corporation in Des Plaines to commercialize the flash desolventizing system for production of light-colored, edible soybean flakes, for soy flour and grits, with a maximum PDI (protein dispersibility index). At that time Ed Milligan was just a newly hired member EMI, which undertook the project. Ed designed and installed the world's first commercial flash desolventizing system for Honeymead Products Corp. in Mankato, Minnesota, in 1960. Note that this system was used to make food, rather than feed. All but 2 systems have

been used exclusively to make foods. All such systems produce a flake with a very light color and controlled PDI, whereas a DT (desolventizer-toaster) produces a golden colored flake. He is leaving for India in a few weeks to commission EMI's 22nd such unit. He has designed, installed, and started every one of the 22. Address: Center for Crops Utilization Research, Iowa State Univ., Ames, Iowa 50111.

633. Milligan, Edward D. 1992. Re: History of his and EMI's pioneering work in developing flash desolventizing. Letter to Larry A. Johnson at Iowa State University, May 15. 2 p.

• **Summary:** Describes "The history of EMI Corporation's participation in the development of the Flash Desolventizing System, for the production of edible desolventized soybean flakes with high, medium and low PDI.

"In 1959, EMI (then known as 'Engineering Management, Inc.') was approached by USDA to collaborate on commercialization of the process they had developed in their Peoria facility [the Northern Regional Research Laboratory]. See April 20, 1959 letter attached. EMI did proceed with this project and in 1960 completed the first such FDS for Honeymead Products Co. in Mankato, Minnesota. See attached cover sheets for 'Flour Desolventizing System' dated July 11, 1960 attached. Also see Central Soya Co. memo on test samples dated Aug. 22, 1961.

"Though originally experimental, the unit was highly successful and operated for more than 10 years until Honeymead built a complete new flour plant in the 1970's, including a new FDS with more than double the original capacity.

"The first plant was designed simply to produce flakes with maximum PDI and it achieved that objective, the flakes produced analyzed as much as 90 PDI, depending upon the PDI of the inlet flakes.

"In the late 1960's the most significant development was in the process for flake stripping and cooking, to produce high medium and low PDI (fully cooked) flakes, having a light color. EMI developed the combination of a horizontal 'stripper' vessel, combined with another horizontal 'cooker' vessel, to achieve this. This process proved highly successful and became standard for the industry. EMI received a Food Processing Award for this process in 1977." Address: Chief Engineer, EMI Corp., 3166 Des Plaines Ave., Des Plaines, Illinois 60018-4223. Phone: (708) 827-3164.

634. *Hm News (Honeymead Newsletter)*. 1992. Honeymead's history dates back to 1938. No. 26. Spring. p. 1.

• **Summary:** An excellent 1-page history of Honeymead Products Co.

1939-Mankato Soybean Products Inc. is formed on the site of the abandoned Minnesota Pipe and Tile Co. The key man is William Blethen, a young lawyer. The principal piece

of equipment was a single expeller. Riley Lewis was the first plant manager.

1942—Washington Egg and Poultry Association, a cooperative, purchased the company and operated it until...

1949—The company is purchased by the Andreas family, which had feed mills in Iowa under the name Honeymead. As a result, Mankato Soybean Products Co. became known as Honeymead Products Co. Lowell Andreas, Honeymead's chief officer, soon introduced solvent extraction equipment from Europe.

1960—Honeymead is sold to the Farmers Union Grain Terminal Association (GTA), a grain marketing terminal based in St. Paul.

1963—Honeymead expands into hydrogenating soybean oil.

1968—Lowell Rasmussen is named president; he continues the growth initiated by the Andreas family.

1984—Rasmussen retires as president and is succeeded by Meritt Peterson.

1992—Today Honeymead Products Company has 200 employees. Its present capacity is 80,000 bushels, 12 railroad tank cars of refined oil, and 18 cars of hydrogenated oil.

An aerial photo shows the huge plant, next to a river, next to a freeway. Address: [Mankato, Minnesota].

635. Johannes, Kenlon. 1992. [SoyDiesel]. *SoyNotes: A Newsletter for MSA and MSMC Board Members (Missouri)*. Aug. 11. p. 1-2.

• **Summary:** "Our summer interns are John Kleiboeker, who is working with me on SoyDiesel... Jennifer Lichte, who is working with Susie on Soyoil promotions." Both interns are from UMC [Univ. of Missouri—Columbia].

"The final draft of the national SoyDiesel plan of attack prepared by Information Resources, Inc. (IRI) of Washington, DC, will be reviewed by the National Soy Fuels Advisory Committee (NSFAC) at their August 21 meeting. The NSFAC was created by state checkoff boards to 'nationalize' the SoyDiesel effort. Gary Ellington serves as chairman of the group. I serve as staff person for the effort. The Council [MSMC] decided at their May meeting that Missouri would provide staff and general services for the national effort at least until October 1. That is when the national effort should be organized.

"Petrofsky Bagel Company, St. Louis, is the latest Missouri company agreeing to use the SoyMark on their packaging labels. Petrofsky's was honored by the Missouri Department of Agriculture as being the 1992 exporter of the year. They bake some 100,000 bagels a day, using Soyoil in their recipe. The SoyMark will appear on labels beginning in January 1993."

"Dennis Fulk displayed the Ford SoyDiesel truck at the Platte County Fair [Missouri] on July 16. Then it traveled to the Four-State Farm Show in Pittsburg, Kansas, on July 17-19." The event was co-sponsored by the Kansas Soybean

Association.

"Tom drove the truck to the Milan, Tennessee field day held July 23. There was good media covered of the truck at this event sponsored in cooperation with the Tennessee Soybean Association." Three other places where the truck appeared in Missouri are described.

Missouri elevator managers and support the national checkoff but they think the rate is too high.

"Tom traveled to the Clean Air Transportation and Engine Show in Milwaukee [Wisconsin] June 27-July 1. Tom worked at the ASA [American Soybean Association] sponsored booth that featured the UMC SoyDiesel pickup, the diesel / electric hybrid car and AgP's [AGP] semi-tractor fueled with SoyDiesel."

"The Soybean Month proclamation signing takes place at 10:30 a.m., Wednesday, August 26 in the Governor's office at the Capitol. Soybean Month activities are being finalized." Address: Jefferson City, Missouri.

636. *St. Joseph News-Press (Missouri)*. 1992. Ag Processing confines acid spill to roof. Aug. 9. 2B.

• **Summary:** On Saturday afternoon 150 gallons of sulfuric acid spilled on the roof of AGP's building at 900 Lower Lake Road. It was contained by the plant's own chemists and did not spread to the ground.

637. Petka, Tom. 1992. The casein industry and market (Interview). *SoyaScan Notes*. Sept. 14. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Casein became classified as a chemical and a non-dairy product in about 1948-49 by the Federal Trade Commission, at about the same time that price supports for dairy products began. At that time it was used almost exclusively for industrial applications (such as adhesives and sizings) rather than in foods. Today about 80% of the casein in America is used for foods—mainly imitation cheeses, whip toppings, and other imitation dairy products, plus medical and nutritional products prescribed by doctors. The remaining 20% is used for industrial purposes—mainly adhesives and sizings.

There are presently no companies in America that make casein; government price supports for milk price it out of the world market. The last U.S. manufacturer, Land O'Lakes, stopped in the 1970s. All casein used today in America is imported, mainly from New Zealand, Ireland, France and the Netherlands.

Note: If this outdated and misleading classification of casein as a non-dairy product could be changed, it would open up a huge market for soy protein products (isolates, soymilk, tofu), primarily in foods and beverages. Address: American Casein Co., 109 Elbow Lane, Burlington, New Jersey 08016. Phone: 609-387-3130.

638. Davis, Susan. 1992. Tank up with SoyDiesel: Clean Air



Act pumps interest in alternative fuel. *Soybean Digest*. Aug/Sept. p. 10-11.

• **Summary:** Leon Schumacher of the University of Missouri–Columbia, tests and drives a Dodge pickup with “Powered by Soybean Oil” printed on the tailgate. It turns plenty of heads and evokes the “thumbs up” sign. What started as a simple research project has exploded into a national campaign. “SoyDiesel is made by esterifying degummed soybean oil. As requirements of the Clean Air Act of 1990 start to take effect, “everything from boats to buses will be required to reduce emissions.” Tests have shown that SoyDiesel can cut pollution by up to 86%.

Bill Ayres, vice president of Interchem Industries, has a pilot plant manufacturing SoyDiesel at Leawood, Kansas. It sells for \$2.50/gallon compared to \$1 for regular diesel. “Interchem has 15 million gallons of SoyDiesel available and plans to build a new plant for additional production. Cargill, ADM, and Ag Processing [AGP] are exploring building esterification plants near soybean processing plants.”

One problem with SoyDiesel is that it jells at 28 degrees F, according to Bill Ayres.

Ferruzzi-Montedison is building a plant in Livorno, Italy, to make 18 million gallons a year of Diesel-Bi.

A sidebar, titled “Projects hit the road,” discusses: Sunrider: USB is “providing 17,500 gallons of 100% SoyDiesel and funding a \$60,000 educational program.” Ferruzzi-Montedison is testing two buses in Sioux Falls, South Dakota. During the summer Olympics in Barcelona, Spain, vehicles will use Diesel-Bi. Bi-State Industries fuels 60 buses in the greater St. Louis, Missouri, area with a blend of 25% soy and 75% diesel. MSMC is funding a project with five tractors. “More than 100 maintenance vehicles at Lambert International Airport in St. Louis, Missouri, run on a 30% methyl soyate blend. Missouri, Ohio, Michigan, and Nebraska use SoyDiesel in demonstration vehicles.”

A photo shows Kenlon Johannes standing by the rear of a Ford pickup truck. The license plate reads “Soy-Oil.”

639. Green, Cindy. 1992. Soy-based Preference debuts to rave reviews. *Ag Innovation News (AURI–Agricultural Utilization Research Inst., Crookston, Minnesota)* 1(4):5. Oct.

• **Summary:** Preference is a new non-ionic surfactant or adjuvant based on soy oil that mixes with pesticides to make them more effective. It is manufactured in Winona, Wisconsin by Cenex/Land O’Lakes. AURI helped launch the product’s development with \$78,000 in June 1989.

640. AGP–Ag Processing Inc a cooperative. 1992. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 24 p. 28 cm.

• **Summary:** Net sales for 1992 (year ended Aug. 31) were

\$1,126.667 million, up 30.0% from \$864.675 million in 1991. Earnings before income taxes: \$43.236 million, up 0.5% from the \$43.016 million in 1991. Contains a 9-year summary of consolidated operating and financial statistics.

AGP is the largest cooperative soybean processing company in the world. “On December 2, 1991 AGP entered into a partnership agreement with Archer Daniels Midland [ADM] to purchase International Multifoods’ North American Ag Operations which included Supersweet Feeds, Supersweet Agri Centers, the Supersweet Research Farms, a Grain Division, and Masterfeeds in Canada. In conjunction with this came the acquisition of ADM Feed Corp. with its formula feed mills and pet food operations. The two U.S. feed divisions have been merged into one under Supersweet Feeds... Pet Foods was set up as a separate division in 1991.” AGP manages all these operations for the partnership [of which it is the majority partner] under the name AGP, L.P.; it “operates 19 feed manufacturing plants, 3 pet food plants and 29 Agri Centers located throughout the midwest.” The Agri Centers are “retail stores selling feed and other farm supplies.”

AGP tells the story of its origins in the book *Soybeans, Cooperatives, and Ag Processing Inc.*, by Margaret Finnerty, which is published in 1992. Address: Omaha, Nebraska.

641. *Biodiesel Alert (Arlington, Virginia)*. 1992. Background: NSDB supports SD/BD. 1(1):1. Dec.

• **Summary:** “The National SoyDiesel Development Board (NSDB) has grown out of and replaced the National SoyFuels Advisory Committee (NSFAC), which was founded by a group of mid-west soybean farmers. They were concerned that the worldwide buildup of soybean oil reserves would seriously depress the value of soybean oil, and consequently the value of soybeans. They were, therefore, looking for a major new market for soybean oil, and saw that SoyDiesel / Biodiesel (SD/BD) has the potential to be that market.

“The Missouri Soybean Council took the lead in advancing the concept and was supported by the pioneering SD/BD work of Interchem, STRATCO, Procter & Gamble, AgP [AGP] and the University of Missouri.” Note: This is the earliest document seen (July 2007) that mentions AGP in connection with biodiesel.

“The members of the NSFAC were fully aware of how the growing ethanol industry had helped to stabilize the price of corn, one of ethanol’s main feedstocks. They were also aware that the Biodiesel industry is quickly advancing in Europe, particularly in Austria and Italy, and judged that soybean farmers could benefit from an American Biodiesel industry. Fortunately, enough research has been done in the United States and other countries... to provide a good scientific and technical foundation on which to build a SD/BD industry in the United States.

The NSFAC hired an outside contractor, Information

Resources, Inc. of Washington, D.C., to explore the potential of the industry, develop a strategic plan, and propose an organizational structure and budget. The resulting study recommended the formation of NSDB and this advice was accepted by the NSFAC. The leadership of NSFAC became the leadership of NSDB which has helped to maintain the momentum. The NSDB is moving rapidly; establishing the Biodiesel Coordinating Council (BCC) to bring all interested parties (farm groups, government, industry, universities, etc.) together in a cooperative effort to advance the SD/BD industry. The first major meeting of the BCC was held in Washington, D.C., on November 6, 1992. (A report of that meeting is on page 4).

"Gary Ellington of Missouri is the Acting Chairman of NSDB and Kenlon Johannes, also from Missouri, is the acting Chief Executive Officer. Jim Gay of Illinois is Vice Chairman as well as chairman of the Research Committee. David Stone of Iowa is Secretary / Treasurer and a Board Member. Leroy Brammer of Indiana, Richard Prascher of Nebraska, Don Settlemire of Ohio, and Wayne Bietz of South Dakota are also Board Members.

"The NSDB is supported by farmer check-off dollars provided by the United Soybean Board through the American Soybean Association. This makes NSDB a subcontractor to the ASA. Farmer check-off dollars are also made available to NSDB by the Qualified State Soybean Boards."

"NSDB is temporarily headquartered with the Missouri Soybean Council. Mr. Johannes can be reached at: (800) 841-5849 and (314) 635-5122. His address is P.O. Box 104898, Jefferson City, Missouri 65110-4898."

642. Finnerty, Margaret. 1992. Soybean processing: Manning, Iowa. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 102-13.

• **Summary:** This plant was not a cooperative. Thus, it was unlike many others in the vicinity. On 23 Aug. 1973 it was incorporated as a privately owned company under the laws of the State of Iowa. Its name was Continental Soya Corporation, generally known as Consoy.

Raising capital was a big problem. The estimated cost of the facility was \$4.8 million. On 24 Oct. 1973, a prospectus was issued advertising 1 million shares of common stock. This resulted in investment of nearly \$2 million in private funds; "over \$800,000 was from Manning residents. Working with Iowa Congressmen Charles Grassley and Tom Harkin, they reached the Farmers Home Administration," which agreed in 1976 to guarantee a loan of \$3.75 million.

The 43 organizers purchased 172,000 shares at \$3.00 each and elected officers. Ivan L. Opperman, a farmer-entrepreneur from Manning and the originator of the idea, was president. Claus Bunz was vice-president and secretary-treasurer. Willis Peck, Leo Rasmussen, and Robert W. Fischer (consultant, from Cedar Falls, Iowa) rounded out the

board.

Work on the large plant began in Nov. 1976. Initially it was designed to handle 500 tons/day of soybeans, with expansion plans for processing 1,000 tons/day. The solvent extractor cost \$902,790, purchased the French Oil Mill Machinery Co. of Piqua, Ohio.

In March 1978 Consoy began receiving soybeans. A ceremony on June 7 (Wednesday) marked completion of plant construction and the closing of a key loan. Full production began the following Monday, June 12; soybean oil and meal were now ready for marketing. The formal opening ceremony (including an open house), however, took place on a Saturday in August, officially named "Agricultural Appreciation Day." "The town of Manning had great hopes for the success of the new enterprise. Advertisements in the special supplement published by the *Manning Monitor* on 17 Aug. 1978 expressed the good wishes of nearly every business in the small town, population 1,656."

But good wishes were not enough. Consoy had serious problems from the beginning. They were undercapitalized, so they bought used equipment, which soon began to break down. A harsh, early winter forced the plant to close down for 2 weeks, just as it was starting to run properly, and also brought the railroad to a halt. Income was cut off and shipments were missed. Problems with the poor communications, uncertainty as to whether or not the Milwaukee Road rail line would continue to operate, dependence on second-hand market information, high interest rates, and millions of dollars tied up in inventories, a cost overrun of \$1.5 million on the plant's construction—all plagued the relatively isolated company. On Monday, 4 Dec. 1978, President Ivan Opperman was given a devastating ultimatum: come up with \$750,000 by Friday or close the plant. Even though he managed to establish a new line of credit, the plant was forced to close in March 1979—"with much bitterness over the failure." The loss of 40 jobs in the small community of Manning hurt. However in August 1979 AGRI Industries, a large cooperative based in Des Moines, Iowa, bought the plant. To facilitate the sale, the Manning City Council approved a \$10 million industrial revenue bond."

On 13 Oct. 1979 the plant in Manning began crushing soybeans again. Ken Sullivan was not AGRI's soybean processing manager at both their Manning and Mason City plants. AGRI immediately planned \$250,000 in improvements, including storage for an additional 700,000 bushels of soybeans, to bring the plant's total storage capacity to over 1 million bushels. In July 1980, in a freak accident caused by "bridging" of the meal in the silo, one of the 3 original soybean meal silos collapsed, killing the plant superintendent, Ken Weets.

In 1983, when many cooperative soybean processors were invited to join the new AGP, AGRI Industries, with its two soybean plants at Manly and Iowa City, was involved in the studies and considered the matter carefully. However, in the

end, Jerry O'Dowd, AGRI's CEO, and his board decided not to get involved. Yet only 2 years later, when AGRI Industries got into financial problems, AGP did purchase the two Iowa plants at Manning and Mason City, on 30 Dec. 1985.

Photos show: (1) Aerial view of AGP's soybean processing plant at Manning in 1991. (2) Article (undated) from the *Manning Monitor* titled "Consoy is 'go.'" (3) Ken Weets, who was killed in 1980 when a silo filled with soybean meal collapsed. (4) Article from the *Manning Monitor* (21 Oct. 1976) titled "\$4.8 million soybean plant will be erected in Manning." (5) Massive equipment inside the Manning plant dwarfs a worker. (6) Article from *Agri Industries Graphic* (24 Oct. 1979) titled "Bean crush begins at Manning—Soybean processing starts October 13..." including a photo of a long train parked by the plant. (7) Page from a supplement to the *Manning Monitor* (17 Aug. 1978) titled "Presenting Continental Soya Corporation—Consoy." Includes a photo of Bob Fischer and Ivan Opperman examining the first soybeans to arrive at the new plant. (8) Another aerial view of AGRI Industries' soybean processing plant at Manning before its acquisition by AGP. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001.

643. Finnerty, Margaret. 1992. Soybean processing: Sergeant Bluff, Iowa. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 76-84.

• **Summary:** Sergeant Bluff, Iowa (located 14 miles south of Sioux City on the Missouri River). In May 1973 Farmland Industries, Inc. decided to expand into the soybean processing field. The board authorized over \$12 million to construct a facility from the ground up. It started operating on 1 Oct. 1975. The official grand opening and open house was Oct. 16.

Photos show: (1) Aerial view of the Sergeant Bluff facility in 1991. (2) Ernest T. Lindsey, who was president and CEO of Farmland Industries when the Sergeant Bluff plant was built. (3) Barge loading facilities which have been damaged by river ice. (4) The plant's concrete storage silos. (5) Guests and visitors at the plant on grand opening day, 1975. (6) "Trucks banner first loads of soybeans" from 4 different states—South Dakota, Nebraska, Iowa, and Minnesota. Standing in front of each truck, several men hold a large sign (black on white) that reads: "Farmland soybean plant. Co-op. 1st load in from {state name}." (7) Inside the office where staff support the plant. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001. Phone: (602) 526-1129.

644. Finnerty, Margaret. 1992. Soybean processing: Mason City, Iowa. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 114-23.

• **Summary:** In 1943 the North Iowa Cooperative Processing Association was organized in Manly, Iowa (a railroad center) to serve farmers in northern Iowa and southern Minnesota. "The 'founding fathers' of the project included Earl Dean, Al K. Karstens, R.T. Nelson, and Glenn Pogeler. Dean became president of the Board of Directors in 1944 and Pogeler served as general manager until 1964. The leaders got 24 co-ops in the area to work together, with financial help from the Omaha Bank for Cooperatives. They raised stock, but the soybean was still a relatively new crop and putting it all together "was a big struggle."

World War II was on and the federal government was promoting crops like soybeans that yielded vegetable oil. But equipment was hard to get. Bill McArthur, a Mason city native who was now with the USDA, helped smooth out bureaucratic wrinkles. For its building, the Association bought an abandoned rail roundhouse. In 1944 the plant opened, with only one Expeller, but it was busy from the start. Another Expeller was soon added. During and immediately after the war, the business "was very profitable because of a government contract which allowed a fairly good margin"—as a co-op brochure explained.

Glenn Pogeler recalled: "They gave us a subsidy and we made the fattest per-bushel profits at that time. The government was controlling it; we bought the [soy] beans and had to guarantee that we paid the support price to the farmer. Then we sold the beans to the government and we bought them back from the government with a margin [profit] and it was all on the basis of the oil content of the beans. They had a formula: higher oil content got higher prices."

Not long after the war, the government controls were lifted and the margins shrank. But a relatively new technology, solvent extraction, reduced the oil left in the meal from over 3% to less than 0.5%. More oil meant bigger profits. The co-op's membership voted for 3 big changes: Buy a solvent extraction system, expand the plant's processing capacity fourfold, and move it 10 miles south to Mason City—a bigger town with better transportation connections. The new facility, which cost approximately \$1.5 million, had a processing capacity of 150 tons/day of soybeans and 45 employees, began operating in the fall of 1953. The most impressive feature of the new operation was the cluster of nine concrete storage bins, each 135 feet tall, and the adjacent 178-foot head house. [Note: The head house contains the elevators that lift the grain from storage or from the place the grain is dumped up to the top of the storage bins; it can also move grain from one silo to another]. The bins had a storage capacity of 350,000 bushels of soybeans. Land adjacent to the plant was sold to Felco and they built a feed mill. "Felco Soy Bean Oil Meal" was the signature product of the new Mason City plant.

Despite the many safety precautions, plant superintendent Harold Tietjens lost his right arm in an accident; yet he later returned to his job.



In 1962 the co-op built two new 500,000 gallons soybean oil storage tanks. By 1963 the plant's processing capacity had tripled to 450 tons/day. Then came 1964, an especially bad year financially. After 21 years as manager, Glenn Pogeler wrote his farewell message in the annual report: "I have the disagreeable task of bringing you a financial report... showing a loss of \$281,107. The auditors advised me that we will have a substantial income tax refund coming that will reduce this loss." Pogeler concluded that the future looked bright for the plant and its members.

Several cooperatives were interested in purchasing and taking over the plant. In 1965 the Mason City cooperative merged into the Farmers Grain Dealers Association, which became AGRI Industries in 1979. Then in 1985, when AGRI Industries got into financial problems, Ag Processing (AGP) purchased the two plants at Mason City and Manning, Iowa, from them [on 30 Dec. 1985].

Photos show: (1) Aerial view of the Mason City soybean processing plant, including front office and six tall concrete grain elevators, in 1953. (2) A diagram of the Mason City plant in 1953, showing each piece of equipment inside the plant (labeled) and product flow lines. The two main rooms are the preparation dept. and the extraction dept. (3) In 1963 Glenn Pogeler, general manager of the North Iowa Cooperative Processing Association, chats with visitor Themis Soteriadis of Athens, Greece. In the background are 3 railroad cars, the processing plant, and at least 9 tall concrete grain elevators. (4) Ground-level of the Mason City plant (probably in about 1963), with the office in the left foreground and a small bridge in the immediate foreground. (5) Glenn Pogeler inspects a display of soy products on a table. The SCA (Soybean Council of America) signs behind them read: "The world is your market: Soya. Over 40% of today's soybean crop is exported." "Soybeans feed today's hungry world while supplying ideas and products for the future." (6) The front of a bag of Felco soy bean oil meal. (7) AGP Mason City in 1991. (8) Entering the plant in 1953. (9) Aerial view of the plant in 1964. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001.

645. Broehl, Wayne G., Jr. 1992. *Cargill: Trading the world's grain*. Hanover, New Hampshire, and London: University Press of New England (Dartmouth College). xx + 1007 p. Illust. Index. 24 cm.

• **Summary:** Cargill, one of the world's great multinational commodity trading companies, is one of the largest corporations in the USA, with annual sales of over \$44 billion. It is the largest privately owned U.S. company, with almost all ownership in the hands of the Cargill and MacMillan families. In descending order of size in this industry are Cargill, Continental Grain, Louis Dreyfus, and Bunge y Born. All are privately owned, each by a dominant family. Only Cargill has been in the USA from its birth. Though it is

now 125 years old, Cargill has had only five CEOs (p. xvii).

The soybean arrives: Cargill purchased and stored some soybeans in 1935 and continued the same small transactions in 1936, though none remained in inventory at the year's end. Cargill began to take notice of soybeans in mid-1936 when the Chicago Board of Trade initiated a soybean futures contract as a new source of revenue. Cargill leadership expressed little interest in soybean processing, which was already in the hands of "big fellows" like ADM, Staley, Allied Mills, Glidden, and Spencer Kellogg & Sons (p. 447).

Cargill's work with soybeans is discussed extensively, starting with Chapter 15, "Cargill in World War II" (p. 617+). In 1942 President Roosevelt persuaded Congress to pass price-control legislation, creating the powerful OPA, the Office of Price Administration. It had a dramatic effect on U.S. agriculture. Meat and poultry were increasingly in short supply, so feed grains took priority over food grains. Corn and even surplus wheat was used as feed. Labor shortages in agriculture led to more mechanization and fertilizer use rose dramatically (p. 618). Soybeans became a key ingredient in animal feeds, and Cargill began purchasing in larger quantities. The OPA ceilings on soybean meal were so low that it was much more profitable for crushers to put their meal into their own feeds, rather than sell it. Against this background, in Jan. 1943, Cargill announced the purchase (for \$300,000) of a soybean mill and feed plant, the Iowa Milling Co., in Cedar Rapids, Iowa [from Joe Sinaiko]; the initial push came from Julius Hendel.

Then in Oct. 1943 additional soybean crushing capacity was acquired through the purchase of the Plymouth Processing Mills (capacity: 75 tons/day of soybean meal) of Fort Dodge, Iowa.

Later that same month another soybean crushing plant was purchased—the Illinois Soy Products Company (soybean crushing capacity: 3,900 bushels/day) of Springfield, Illinois. These were small facilities and none used solvent extraction, but they represented a beginning; soybean crushing soon became a major part of for Cargill as the company worked to diversify (p. 665-66).

In May 1945, again with Hendel's leadership, Cargill purchased the Honeymead Products Co. in Cedar Rapids, Iowa. It had a feed plant with a capacity of 300 tons/day and a soybean solvent extraction plant (designed by Allis-Chalmers Co.) which initially had a capacity of 50 tons/day, expanded to 130 tons/day. Cargill called Honeymead their "West Side Plant"—but they forgot to buy the Honeymead name. The Andreas family sold the company because Dwayne Andreas had been classified 1-A in the draft (the highest priority for being drafted). The Andreas family owned the property and Dwayne agreed to join Cargill. Cargill asked the draft board for and received a 3-month deferment. At the end of that time the Pacific war was over. Andreas soon became a vice president of Cargill, the youngest in the company's history. "He thought like an

owner" (p. 682, 687). Later, other Andreas family members resurrected the Honeymead name for their new oilseed crushing plant at Mankato, Minnesota (p. 683).

Rocky reconversion after World War II. During World War II there was a major increase in scientific livestock feeding, using nutritionally balanced feeds—in response to the shortage of all feeds. Cargill already owned the profitable Blue Square feed operation, but they wanted to expand it. So in Oct. 1945 Cargill purchased (for \$1.6 million) the entire capital stock of Nutrena Mills Inc., a leading Midwest feed manufacturer with three mills (Kansas City and Coffeyville [Coffeyville], Kansas; and Sioux City, Iowa) and a combined capacity of 23,000 tons/month. Nutrena, now 25 years old, was one of the industry pioneers in both feeds and feed sacks (p. 688).

During World War II, the all-out agricultural production in the USA led to record output. Total production of soybeans increased from 78 million bushels in 1943 to 193 million bushels in 1945. Yet Cargill and others had great difficulty in obtaining the soybeans they needed. Gilbert C. Fite describes the agricultural revolution that took place during the war (p. 695-96). There was great pressure on government price administrators to loosen or remove controls; when they finally started to do, in May 1946, inflation followed. Julius Hendel wisely remarked: "The cure for high prices is high prices." The ceiling price on soybeans was not removed until 17 Oct. 1946 (p. 703).

Dwayne Andreas has a good idea and receives a \$10,000 bonus (p. 704). Nutrena and Honeymead cause organizational problems. Centralization vs. decentralization. Tension between the Grain Division and the Oil Division—especially over soybean purchasing. The Alfred P. Sloan model of decentralized management at General Motors is widely imitated. By the early 1950s Cargill was decentralized (p. 707-712).

Chapter 17, "Korean War and Tradax beginnings." After World War II came the cold war, Truman Doctrine, NATO, and the Korean War. In agriculture, the New Deal policies of the 1930s continued essentially unchanged (p. 737-38). In 1950 Cargill purchased a new oilseed / soybean processing plant (capacity: 700 tons/day) in Chicago for more than \$2 million. By 1951 the Oil Division was renamed the Vegetable Oil Division (p. 745). The Cargill Oats Case of May 1954. In Oct. 1954 ADM pleads guilty to CCC allegations. Selling oat futures vs. soybean futures (p. 761). 1952—Dwayne Andreas "resignation" after his unauthorized trip to Russia in April. He went on to an outstanding career, first with his family's company, then as an executive with the company that bought it, the Grain Terminal Association (later called Farmers Union Grain Terminal Association), and finally as CEO and a major owner of ADM. He was replaced by M.D. "Pete" McVay as head of the Oil Division (p. 762-64).

1954—Cargill begins international trading with the move to

Montreal of Kerrgill, a subsidiary of Cargill Internacional. It was soon renamed Tradax Canada Ltd. Cargill's headquarters on Lake Wayzata, Minnetonka, Minnesota (p. 774-75).

1953 Jan.—Dwight D. Eisenhower is inaugurated as president. In July 1953 he settled the Korean war. Ezra Taft Benson advocates a new farm policy, a return to a free market economy and flexible price supports (p. 776-77).

1955 Sept.—Julius Hendel retires. He was considered the "dean of grain trading." He had pioneered Cargill's grain laboratory in the 1920s, introduced scientific mixed feeds in the 1940s, and designed Cargill's renowned training program. (p. 782-85).

Eisenhower's second term in office (1956-60) is an era of farm surpluses. The P.L. 480 or "Food for Peace" shipments were an "heroic attempt to insulate some of this production from commercial channels." They totaled over \$1 billion each year from 1956 into the 1960s. In 1959 Cargill had sales of \$1.089 billion, making it the 34th largest company in the USA (p. 786-87). The Chase Manhattan Bank's consulting report and analysis of Cargill is blunt, credible, very positive but with many important suggestions for change; the soybean was the star of the Oil Division (p. 868-71). Summary of Cargill, 1963-1991 (p. 874-75).

Photos show: (1) Dwayne Andreas ca. 1950 (p. 682). Address: Dartmouth College, Hanover, New Hampshire.

646. Finnerty, Margaret. 1992. Soybean processing: St. Joseph, Missouri. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 86-101.

• **Summary:** In 1826, St. Joseph, Missouri (on the Missouri River) was founded by fur trader Joseph Robidoux and settled as a trading post. It became the jumping-off place for 49ers and the eastern terminus of the Pony Express (1860-61). In 1900 its population was 100,000.

In 1918 Henry Dannen started the Dannen Hay and Grain Company in St. Joseph. The city's population had now dropped to 70,000. In 1934 the company built its first feed mill and elevator in St. Joseph; it still stands at 8th and Atkinson streets. Henry's son, Dwight, fresh out of college, became manager of the feed mill.

Since they were using a lot of soybean meal in their feed, they decided to make it themselves. Dannen purchased a press with a capacity of 600 bushels/day from the French Oil Mill Machinery Co. in Piqua, Ohio, and bought an old building from the Missouri-Pacific Railroad. This became the home of Dannen Soybean Corporation. The soybean mill began operation on 22 Feb. 1938. It was the first soybean processing plant in Missouri. Dannen found it difficult to sell this "new-fangled" product, soybean meal, to conservative farmers on the Great Plains; if they were feeding any protein at all, they preferred to use cottonseed cake, linseed meal, corn gluten feed, and/or tankage. In those days, soybean oil was selling for 3½ cents a pound, but the demand for the

meal was so poor the some crushers considered using it as fertilizer. A few agricultural schools even discouraged soybean production.

But as World War II began to appear inevitable, some people realized that imports of vegetable oils might be cut off. Even before Pearl Harbor, the U.S. government encouraged increased meat production, which required more soybean meal.

Convinced that the soybean processing business had potential, Dannen purchased 5 more French Oil Mill presses. By late 1939 the Dannen plant was processing 4,200 bushels/day.

After the start of World War II, the U.S. government stepped in as a new buyer and seller. The government took ownership of all the soybeans grown in America, then paid mills like Dannen a fixed price to process them into oil and meal. That arrangement was much more safe and profitable because the mills no longer had to own the soybeans or to market their products. The government took care of that. "The oil and meal were considered war essentials just like gasoline."

But during the war there was a serious shortage of labor. Dwight Dannen hired 30 Americans of Japanese descent, but local opposition killed the project in two weeks. The white Americans refused to work with these newcomers. "Eventually, Dannen remembered, the Japanese-Americans were put in relocation camps."

During this time Dannen added a hexane solvent plant from V.D. Anderson Co. It was fairly small, was set up outdoors, and wasn't very efficient. In 1948 the hexane plant exploded, destroying the plant and killing Dannen's mill superintendent, their general superintendent, and their soybean meal superintendent. The explosion was caused by a hexane leak; when the motors were turned off, a spark ignited the hexane-saturated air.

The tragic loss of life sobered everyone. But soon the six expellers were replaced by a new Blaw-Knox solvent plant, which was up and running within a year. During the war, the Dannens set up a preferred stock that employees to help them save; it paid 6% interest at a time when typical interest rates were about 2%.

On 27 Nov. 1953 a fire destroyed the Dannen Mills soybean plant at 22nd and Garfield. But within two months, on 20 Jan. 1954, a ceremony was held to commemorate the start of work on a new feed mill. Not far from the smoldering ruins, it was an apt metaphor for a company that just kept growing. The processing plant was not only rebuilt, but expanded, with added processing and storage capacity. Dannen was soon storing a large amount of grain for the U.S. government; when their total grain storage reached 15 million bushels, they were the 7th largest grain handler in the USA.

The company acquired an abandoned dump on Lower Lake Street near its soybean plant and used the property to

build barging facilities. "In the spring of 1960 the first barges left the new Dannen wharf carrying soymeal and oil downriver to New Orleans [Louisiana] and on to export markets." On the return trip they would load the barges with molasses, to be used as an ingredient in their animal feeds.

In 1963 the Farmers Union Cooperative Marketing Association, CMA, wanted to buy Dannen as a way of entering the soybean processing business. They approached Dwight Dannen, who decided to sell the whole company, which by now consisted of the soybean crushing plant, the feed manufacturing plant, a grain marketing facility, and poultry operation with about 100,000 hens, a trucking operation, and many local elevators. Dwight Dannen retired in 1964—to much fanfare, since he was widely regarded as a fine employer, a fine businessman, and a fine person. Upon his retirement, John Dotson became manager of the facility in St. Joseph.

Brief history of CMA: In 1914 it was incorporated under the name Farmers' Union Jobbing Association, in Topeka, Kansas, as a feed miller and marketer. It served for many years as a regional grain marketing organization. In 1962 its name was changed to Farmers Union Cooperative Marketing Association. In 1963 they expanded greatly through acquisitions, including Dannen; that year they had combined assets of \$37.7 million and served more than 100,000 farmers. Since their interest in Dannen was mainly in the soybean mill, grain elevator and wharf, they sold the other segments, including the grain elevators. Their goal at Dannen was to focus on soybean crushing, and then to begin integrating vertically. Soybean oil degumming equipment, costing about \$100,000, was being installed when they bought Dannen.

But as work on the plant and refinery progressed, the economics and politics of cooperative business was changing. In the summer of 1968 four cooperatives merged to form Far-Mar-Co, with headquarters in Hutchinson, Kansas. The four were: CMA (Kansas City, Missouri); the Equity Union Grain Exchange (Lincoln, Nebraska); the West Central Co-operative Grain Company (Omaha, Nebraska), and Farmers Cooperative Commission Company (Hutchinson, Kansas). The new organization became one of the largest grain cooperatives in the USA. Shortly thereafter, the St. Joseph facility got out of the feed manufacturing business.

In early 1977 the members of Far-Mar-Co voted to merge with Farmland Industries; it became a subsidiary of Farmland and the plant in St. Joseph also became part of Farmland.

In the mid-1970s Farmland built a successful soy flour mill at the St. Joseph plant. This was followed by a plant to make soy protein concentrate, but it was plagued by endless problems and shut down after 18 months—at some time before 1983.

Photos show: (1) Aerial view of the St. Joseph plant (undated). (2) Company officials at dinner for 25th anniversary.



sary of Dannen Mills (from the *St. Joseph Gazette*, undated): Includes George O. Lines, Ed Gumbert, Miss Edna Dawson, Fred Woelfffing, Bob Waite, and Dwight L. Dannen, president. (3) Aerial view of plant showing how Missouri River offers barge transportation. (4) Article titled "Nearly 1,000 see fine Dannen facilities" (from the *St. Joseph Gazette*, undated). Photos at the open house show the office at 5th and Sylvania streets, and a huge trading board in the grain and jobbing department. About 220 persons are employed at Dannen Mills Co. Facilities include a research farm. "Dannen operates two other feed mills in addition to the one here. They are located at Red Oak, Iowa, and Milliken, Colorado. Branch offices are maintained at Omaha, Kansas City, Hutchinson, and Denver, Colorado. Grain storage facilities are maintained in Illinois, Missouri, Kansas, and Oklahoma," and 25 country grain elevators are operated in Missouri, Iowa, Kansas, Oklahoma, and Colorado. (5) Dwight L. Dannen and his wife being honored by Harold Alexander as he steps down from his post as manager of the Dannen division of the Farmers Union CMA (from the *St. Joseph Gazette*, undated). (6) A page from *The Marketer* (Far-Mar-Co periodical, undated) describing the 9th annual meeting at which delegates approved the merger with Farmland Industries by 462 to 44. (7) The huge, tall deodorizer in the soybean oil refinery. (8) A water-wash centrifuge in the refinery. (9) The long and towering row of grain storage elevators at the St. Joseph plant. (10) Initial soybean oil refinery equipment being installed. (11) A caustic dilution tank at the refinery. (12) Loading a barge at the St. Joseph in 1955. (13). Extensive construction to expand the St. Joseph refinery in 1987. (14-15) Two lab employees checking quality in a test tube and retort. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001.

647. Finnerty, Margaret. 1992. Soybean processing: Eagle Grove, Iowa. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 134-51.

• **Summary:** In 1942 the farmers of Eagle Grove, Iowa (20 miles northeast of Fort Dodge) were in trouble. That year, farmers in surrounding Wright County had planted 40,000 acres of soybeans; they expected the price to rise to \$1.80/bushel from \$1.60. World War II was underway and they were raising soybeans that the U.S. government wanted. Their cooperative elevators could store their soybeans, but it was almost impossible to find a place to process their beans into soybean oil and meal. In December 1942, after trying to deal with the frustrations of wartime transportation and government regulations, the Farmers Grain Dealers Association called a meeting in Fort Dodge, Iowa, to "discuss a brilliant concept, at once simple and complex: let's do it ourselves! The idea was enthusiastically backed, if not inspired, by the Omaha Bank for Cooperatives," which said

that if those who wanted a plant would raise the money for the building, the bank would provide a loan for the operating capital.

At about the same time, seven other groups in Iowa were forming soybean processing cooperatives. Their plants would soon be located in Sheldon, West Bend, Talston, Manly, Hubbard, Martelle, Dike, and (of course) Eagle Grove, Iowa.

On 12 April 1943 the first official meeting of the new co-op was held at City Hall in Eagle Grove. "Thirteen cooperatives agreed to pledge \$1,000 for membership in the regional cooperative, created for the purpose of processing soybeans for their members. The name they adopted was Boone Valley Cooperative Processing Association." Eagle Grove had several advantages over other locations. The power rates and railroad facilities were both favorable, the business community and the entire town were anxious to cooperate in the new venture, and a large, well-maintained building was available—a key factor during the war when construction materials were very hard to obtain. Some 25 years earlier the Chicago and Great Northwest Railroad had constructed a warehouse at Eagle Grove; it had cost nearly \$34,000. Now they offered the empty building to the new co-op to serve as a processing plant for only \$1,500. A 99-year lease on the land was thrown in, and the deal was completed on 17 June 1943.

The next day Ed Olsen, formerly the co-op's president, accepted the job of general manager. Albert Koolhoff became the new president, M.K. Frey (who first chaired the exploratory committee), served as vice-president, and Glenn Pogeler (manager of the Farmers Elevator Co. in Badger, Iowa), became the secretary-treasurer.

The number of cooperatives soon grew to 25 and they were asked one more to subscribe for more stock. The original goal of \$50,000 soon passed \$100,000. The key driving force was still the farmers, who were desperate for protein from their soybeans to feed their cattle. Given the hurry-up and wait nature of most wartime projects, this one got off to a good start and there were high hopes that the plant would be in operation by the fall of 1943. Unfortunately it didn't actually open until March 1944.

The one Expeller was designed to process 40 tons/day of soybeans. The following Monday, at a meeting of the Eagle Grove Chamber of Commerce, manager Ed Olsen explained that the plant was officially open and that it would buy 9% of the farmers' beans and provide 70% of their meal.

In 1945, as the war was coming to an end, Boone Valley expanded by adding a second floor to the plant to store ingredients for feed. As a service to members, they began to mix and sell bagged feeds. They worked to keep the trucks loaded, with soybeans as they went from the local member elevators to the processing plant, and with feed as they returned to the elevator. Then Ed Olsen arranged with Farmland Industries of Kansas City, Missouri, to produce

formula feeds for them under their well-know Coop Feeds brand. Boone Valley, of course, used soybean meal from their processing plant as the main ingredient; the venture was very successful, but the mixing was very labor intensive, being done entirely by hand using ingredients in bags. The financing came from a combination of stock purchase by member cooperatives, sale of preferred stock, and a loan from the Omaha Bank for Cooperatives.

By the end of fiscal year 1945 Boone Valley could report \$65,336.27 in savings to their 36 member co-ops. "A year later there was enough surplus that preferred stock was paid back to the members, with 4% interest.

Then in late August 1947 a fire burned the plant to the ground. On Aug. 29 the full board met to discuss emergency arrangements. They voted unanimously to rebuild the plant immediately—making it as fire-resistant as possible. A committee was appointed to investigate ways of continue processing while the plant was under construction. In December it was learned that a co-op soybean plant was for sale in neighboring Hardin County. In Jan. 1948 the plant, located in Hubbard, was purchased for \$67,500, plus the beans it had in control. Unfortunately, the project showed a net loss after 8 months. Rebuilding the original plant cost more than the insurance covered. Increased outlay for labor and materials meant another \$175,000 charged to the members. Fortunately, the Farmers Elevator Mutual Insurance Co. settled promptly.

On 8 Oct. 1948 the plant at Eagle Grove reopened. "Despite the fact that the losses were finally figured at over \$425,000 to members, additional co-ops continued to join," bringing the total to 47.

By 1951 the Association began to prosper again. The plant at Hubbard was closed and its two Expellers moved to Eagle Grove. After the building and other equipment was sold, the Hubbard operation had been profitable.

In 1952 ground was broken at Eagle Grove for a new and expanded solvent extraction plant—which opened on 10 Nov. 1953. Less than 6 months later, additional equipment was added to double the capacity of the feed department.

In the late 1950s Boone Valley expanded again by opening an egg division. In May 1959 Ed Olsen died; Boone Valley lost its earliest backer and strongest proponent. In June 1959 Keith M. Voigt became the new manager; he led the company through almost 23 years of prosperity.

In 1973 the bean dryer was destroyed by fire, but 1974 saw record sales that first topped \$1 million. By the mid-1970s Boone Valley was considered one of the world's premier soybean processing plants. Visitors who came from overseas "were dazzled by the size and complexity of the operation."

In the fall of 1976 ground was broken for a new \$4.5 million feed mill, which opened in June 1977. In 1979 expanded soybean storage, a 2nd bean dump, a remodeled dryer system, and a standby fuel system were added.

In the early 1980s, after years of prosperity, Boone Valley ran into financial troubles as they began an aggressive building program. They bought a large plant to generate steam power, then began to build a new soybean plant. By 1982 there were huge cost overruns, with actual costs nearing \$54 million. Keith Voigt, who had previously done such a good job, resigned. Chairman Ralph Olsen died in 1982. Appointing an interim manager to replace Voigt was an immediate necessity. On 17 Jan. 1982, Bill Lester, manager at Farmland Industries' plant at Sergeant Bluff (near Sioux City), was asked to fill the post. He turned the company around, and on 1 May 1982, with Farmland's blessing, went to work for Boone Valley.

Photos show: (1) Aerial view in 1991 of Eagle Grove soybean processing plant, surrounded by rich Iowa farmland. (2) Ground level view of Boone Valley plant in 1953. (3) Boone Valley's Egg Division truck in the late 1950s. (4-5) Modern equipment inside the Eagle Grove plant. (6) Aerial view of the plant showing extensive railroad connections. (7) Boone Valley's management team under Keith Voigt, with Don Laurent, Morrie Sturtz, and Chuck Bartley. (8) The Boone Valley feed mill in 1966. (9) An employee loading bagged feed onto a truck at the service center. (10) Aerial view of the Eagle Grove complex from another direction. (11) The Boone Valley logo and the CoOp double circle logo, displayed together to show the close working relationship between the two co-ops. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001.

648. Finnerty, Margaret. 1992. Soybeans, cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. Illust. Index. 28 cm.

• **Summary:** This book has big strengths and big weaknesses. Strengths: (1) It contains by far the best history to date of AGP and of each of soybean processing companies that comprised AGP in 1992. This was in part because the book was commissioned by AGP and the author interviewed most of the key players. (2) It contains a wealth of excellent photos and facsimile reprints of articles. Weaknesses: (1) Many key dates are missing, including the dates of articles that were reprinted, and key dates in the history individual companies. (2) In several chapters, the author tells the story of a company without adhering to chronological order; this is most confusing in Part III, "Ag Processing Inc." For example the explanation of "tax credits" (p. 157) comes 3 pages after they were used (p. 154), (2) Truth is sometimes sacrificed for cooperative politics or to make individuals look good. For example, we are not told why it was so important to have the AGP deal closed by 31 Aug. 1931 (p. 161). For the real story, see 2005 interview with Bill Lester.

Contents: Acknowledgment. Introduction. Part I: A long history. Soybeans. Cooperatives (brief history of each, incl. origins of Land O'Lakes in Minnesota Cooperative Creamer-

ies, established in 1921; John Brandt became its president in 1923). Part II: Soybean processing and vegetable oil refining. The roots of Ag Processing Inc. Sheldon, Iowa (1943, Big 4). Fort Dodge, Iowa (1939-1943?, Plymouth Processing Mills). Dawson, Minnesota. Van Buren, Arkansas. Sergeant Bluff, Iowa. St. Joseph, Missouri. Manning, Iowa. Mason City, Iowa. Denison, Texas. Eagle Grove, Iowa. Part III: Ag Processing Inc. AGP—Continuing to survive, adapting to change.

Sheldon, Iowa: Started in 1943 by Big 4 Cooperative, a regional cooperative with 2 new expellers bought from French Oil Mill Machinery Co. in Piqua, Ohio. Made Felco Feeds under franchise agreement. Slow to get into solvent extracting. Big 4 was a member of a cooperative named Soy-Cot (headquartered in Chicago, Illinois), which handled the sales of soybean oil from each of the cooperative processing plants to the big vegetable oil refiners such as Kraft, Procter & Gamble, Hunt-Wesson, Safeway, Honeyamead, etc. In 1965, Ken McQueen was elected general manager at Sheldon. In late 1965 the Farmers Elevator Service Co. (headquartered in Fort Dodge, Iowa, and known as Felco) merged with Statex (a service cooperative headquartered in Omaha, Nebraska). The new organization was named Farmers Regional Cooperative Co. On 1 Oct. 1967 Big 4 merged into Farmers Regional Cooperative Co., Ken McQueen moved from Sheldon to Fort Dodge, as vice-president of Felco, with the Sheldon plant now one of his many responsibilities. Bill Lester [who had started work for Big 4 Cooperative at Sheldon on 15 Aug. 1965] then became the manager of the Sheldon soybean crushing plant. In 1970 [on Jan. 1] Farmers Regional Cooperative Co. (Felco) merged with Land O'Lakes, a Minnesota regional cooperative. Big 4 then became a division of Land O'Lakes. In 1979 the Big 4 name was dropped; the Sheldon facility became the Oilseed Crushing and Grain Marketing Division of Land O' Lakes. By 1983 the Sheldon plant was processing 34,000 bushels/day and employing 90 people. Photos show: (1) Towering concrete silos overlooking the original wooden buildings of the Sheldon processing plant; on the side of one is written: "Big 4 Co-op Processing Assn. Soybean processing. (2) The original expellers at work inside the plant. (3) The Big 4 Feed Plant in Sheldon; it made livestock and poultry feed for Felco. (4) The Big 4 fleet of delivery trucks. (5) Close-up of 5 expellers in a row. (6) Aerial view of the Big 4 soybean processing plant and feed mill. (7) Old buildings and new. (8) Diagrams of the expeller and solvent plants. (9) Ground view of the plant with railroad tracks and cars. (10) The four original managers of the Big 4 plant at Sheldon: Kenneth McQueen, Charles Hanson, Morel Stientjes, and Lee Parmentier. (11-12) Aerial views of the facility in 1991.

Fort Dodge, Iowa. Plymouth Processing Mills began processing soybeans in about 1939-1941, starting with a pair of French expellers. "Soybeans were a lifesaver to the town's

economy and to the surrounding countryside." They took the place of oats, when had been grown to feed horses; but then horses were replaced by tractors and cars. On 13 Oct. 1943 this plant (75 tons/day of soybean capacity) was sold to Cargill. On 19 May 1944 a huge tornado destroyed Cargill's 3-story brick soybean processing plant. In 1946 Cargill installed solvent extraction equipment (125 tons/day capacity); the new technology worked side by side with the expellers for more than a decade. In the 1950s the solvent plant was expanded to 250 tons/day and the expellers were retired. In about 1960 Cargill discontinued the feed operations. In 1962 a Rotocel extractor (20 feet in diameter, originally belonging to General Mills in Rossford, Ohio) was installed; it added 400 tons/day of soybean processing capacity. By the mid-1960s the plant capacity was 600 tons/day. In Oct. 1967 the Felco cooperative (headquarters in Fort Dodge, Iowa) merged with Big 4 in Sheldon, Iowa. Felco eventually changed its name to Farmers' Regional Company, headquartered in Fort Dodge. On 1 April 1970 FGDA (a huge co-op headquartered in Des Moines, Iowa) and Land O'Lakes Creameries merged to form Land O'Lakes, Inc. In 1971 Land O'Lakes acquired the soybean processing plant in Fort Dodge from Cargill. In June 1982 [or perhaps Sept. 1983] the Fort Dodge was shut down—permanently.

Photos show: (1) The original factory, H.R. Heath & Sons' Yankee Cereal Mills, later acquired by Quaker Oats. (2-3) Two aerial views of the Fort Dodge plant while owned by Land O'Lakes. (4) Ground view of the plant, railroad tracks, and empty rail cars. (5) Aerial view of the facility in 1991, used to store and load out crude soybean oil. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001. Phone: (602) 526-1129.

649. Finnerty, Margaret. 1992. Soybean processing: Van Buren, Arkansas. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 69-75.

• **Summary:** On 1 Jan. 1959 construction began on the new plant in the Arkansas River Valley in western Arkansas. Arkansas farmers from five local cooperatives worked with a Kansas-city [Missouri] based regional cooperative, the Consumer Cooperative Association (CCA, which bought 53% of the stock), to create the new plant, which they named the Consumers Processing Association. The plant, which opened on 27 Oct. 1959, cost \$1 million and could transform 8,300 bushels/day of soybeans into oil and meal, employ 25 people, and operate 24 hours a day for 200 days/year. The town proclaimed it "Soybean Day." The celebration drew over 3,000 people. Tells the story of Howard Cowden, a pioneer in the farm cooperative movement and founder of CCA, which owned a feed-mixing plant nearby. They used the soybean meal from Van Buren, packaged in 50-lb bags, and sold under the popular double-circle Co-Op brand. In



1966 CCA's name was changed again to Farmland Industries, Inc. The Van Buren plant was Farmland's first venture in soybean processing. Eventually Farmland operated 3 soybean processing plants: Van Buren, Sergeant Bluff (Iowa), and St. Joseph, Missouri [started in about 1938 by Dannen Mills, then sold in Sept. 1963 to the Farmers Union Cooperative Marketing Association (CMA)]. A wholly owned subsidiary was formed, Farmland Soy Processing; it was "eventually sold to Boone Valley in the 1983 reconfiguration."

Photos show: (1) Soybean storage facilities at the Van Buren plant. (2) Aerial view of the Van Buren plant in 1991. (3) Aerial view of the plant when it was owned by Farmland Industries Cooperative. (4) Ground level view of the plant. (5) AGP employee Tom Ames loads soybean oil into a rail car. (6) Soybean storage facilities. (7) New equipment: complex, specialized and efficient. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001. Phone: (602) 526-1129.

650. Finnerty, Margaret. 1992. Ag Processing Inc: AGP—Continuing to service; adapting to change. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 152-72.

• **Summary:** The story of the origin (in 1982-83) and development of AGP. Photos show: (1) The terminal elevator at Lincoln, Nebraska. (2) The board of directors of AGP—Kenneth Nielsen, Urban Knobbe, Ralph Hofstad, Eldon Peterson, James Bauler, Robert Merkle, Larry Wright, and James Higgs. (3) Terry Branstad (Governor of Iowa) talks with Jim Lindsay (CEO of AGP). (4) Secretary of Agriculture Clayton Yeuter greets CEO Jim Lindsay. (5) An AGP hopper rail car used for soybean meal, soybeans, and soybean hulls. (6) One of the diesel engines used to move railcars. (7) AGP's new corporate headquarters on Burt Street, Omaha, Nebraska; they moved here in July 1987. (8) AGP's corporate logo, adopted in 1984. (9) A 1990 display of soy products made by AGP. (10) Traders talking on phones in the grain merchandising department. (11) AGP's corporate office at 11235 Davenport St., Omaha, Nebraska (from 1984 to 1987). (12) CEO Jim Lindsay and Senator Edward Zorinsky in 1986 in Washington, DC. (13) The First National Bank Building, Omaha, Nebraska. AGP's first corporate office consisted of a few rooms rented near the top of this building. (14) Front of the Omaha Bank for Cooperatives. As part of the Farm Credit Banks, it proved invaluable in providing capital for AGP. (15) AGP's management staff in 1991. Patrick A. Reisner, Anthony L. Porter, William C. Lester, Daryl D. Dahl, Gordon V. Dorff, James B. Yeates, Tim E. Witty, Joseph L. Meyer, Kenneth S. Grubbe, James W. Lindsay, and Kenneth J. McQueen. (16) AGP's 191 board of directors: Eldon Peterson, manager; Lowell Wilson, farmer. Urban Knobbe, manager. Denis Leiting, manager.

Tom Collins, manager. Robert Lathrop, manager. William Ahrenholtz, farmer. James Bauler, farmer. Ron Ross, farmer.

An illustration (architect's drawing) shows the new AGP office building currently under construction at 12700 West Dodge Road, Omaha, Nebraska; it is scheduled for completion in early 1993. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001.

651. Finnerty, Margaret. 1992. Soybean processing: Dawson, Minnesota. In: Margaret Finnerty. 1992. Soybeans, Cooperatives and Ag Processing Inc. Flagstaff, Arizona: Heritage Publishers, Inc. 178 p. See p. 51-66.

• **Summary:** On 9 Nov. 1950 a meeting of local farmers was called, and resulted in the formation of the "Tri-County Cooperative Soybean Processing Association." At the initial meeting at the Carnegie Library, local businessmen pledged \$20,000. On 9 Feb. 1951 ground was broken for the building. Joe Givens tells the story of how he became manager (for almost 30 years) of Tri-County. Two of his friends from the early 1940s knew about soybeans, and they wrote theses on soybeans and had a special process developed at Iowa State College in Ames. Givens, intrigued with the mechanics and chemistry of soybean processing, went to work for Crown Iron Works Co., which had acquired a patent on the Iowa State process. DuPont also had some patents on the process. Givens went to Dawson and worked from September to mid-December to install equipment and get the plant up and running. But the equipment was crude and very poorly designed, mostly by students at Iowa State. The plant began full-time operation on 26 Nov. 1951. AGP employee Bernice Oellien has written an unpublished history of Dawson Mills. There were big problems from the beginning. It was found that meal extracted with the solvent being used, trichlorethylene [trichloroethylene], killed the ruminants (cattle or sheep) it was fed to. They developed anemia and bled to death over 4 terrible weeks. Joe Givens became manager on 20 Jan. 1952. He found that it was the steam pressure in the toaster that caused the meal to become toxic. So he switched to a non-pressure toaster and that solved the problem. However meal treated with trichlorethylene had quickly gotten a bad name in the feed industry. Even if it was clearly labeled "Not for ruminants," farmers shied away from feeding it to pigs or poultry. The company survived by selling their soybean meal, made with the same solvent, to a company that made plywood glue. Then in December 1952, about a year after its bumpy start, Tri-County was closed by order of the Minnesota Dep. of Agriculture; further sales of trichlorethylene-extracted soybean meal were prohibited. The doors closed on Dec. 24, Christmas Eve. Dawson Mills planned a lawsuit against DuPont, Iowa State College, and Crown Ironworks, with Rudy Saltness as their excellent attorney. Dawson was one of 6 clients suing. Crown settled out of court. In an agreement with DuPont and Iowa State,

they agreed to pay for changing the 6 plants from trichlorethylene to hexane solvent. Dawson's new plant opened without problems on 1 May 1953—but was near bankruptcy. The next three years were very tight financially. Then Dawson increased capacity by buying a new extractor. After the first 5 difficult years, the company began to grow and thrive. The town's first annual Soybean Day was held in the spring of 1959. In 1969 the company name was changed to Dawson Mills. In 1977 the site for an isolate plant was acquired a mile outside Dawson. The plant began producing meat substitutes just as the market for them disappeared. The company began losing more than 1 million dollars a quarter. On 1 March 1980 Dawson Mills merged with Land O'Lakes. "Together with plants at Sheldon and Fort Dodge, Iowa, the plant at Dawson now constituted the Soybean Division of Land O'Lakes." In May 1981 the soy isolate facility closed.

Photos show: (1) Aerial view of the Dawson plant in winter with snow on the ground. (2) A truck platform lift which raises the front of a loaded truck so that the soybeans pour out the back into a hopper. (3-4) Two aerial views of the Dawson plant which show its location in the middle of town; therefore it had trouble expanding. (5) Joe Givens with part of the Crown solvent extraction equipment before its installation. (6) Dawson employees outside the office in 1964. (7) Crown Ironworks solvent extraction equipment at work inside the Dawson plant. Crown used this plant as a working model for many innovations to its machinery. (8) Joe Givens cooking soybean pancakes on a revolving griddle in 1960 (photo from *Soybean Digest*). (9) Soybean oil loaded on rail tanker cars. (10) An employee grading soybeans in 1969. (11). Two employees bagging Dawson 44% Protein Soybean Meal in 1969. (12) An aerial view of Dawson Mills' plant for making edible soy protein isolate and related products. (13) Rail cars at the Dawson plant. (14) Aerial view of the Dawson plant, which proudly displays its AGP logo in 1984. (15) Aerial view of the Dawson plant in 1991. Continued. Address: Author, Heritage Publishers, Inc., 2700 Woodlands Village Blvd., Suite 300-200, Flagstaff, Arizona 86001. Phone: (602) 526-1129.

652. Green, Cindy. 1993. Preference, a soy-based herbicide carrier. *Ag Innovation News (AURI—Agricultural Utilization Research Inst., Crookston, Minnesota)* 2(1):8. Jan.

• **Summary:** Cenex/Land O'Lakes Agronomy in Winona, Minnesota, sold over 100,000 gallons of Preference this season. Sales quadrupled over original projections, and are projected at 250,000 gallons next season.

653. AGP—Ag Processing Inc a cooperative. 1993. Presentation to [Alternative] Agricultural Research & Commercialization Center, for biodiesel commercialization. Omaha, Nebraska: AGP. 8 p. 28 cm.

• **Summary:** Contents: Introduction: Biodiesel overview, economic viability, engine manufacturers, supply. Technol-

ogy: Chemistry and engineering, the commercialization program. Capabilities and qualifications: Ag Processing Inc. Conclusions. Appendices: National Soy Fuels Advisory Committee data. Comprehensive National Energy Policy Act, summary of final motor vehicle fleet and fuel provisions of H.R. 776, Title III: Alternative Fuels, Federal Programs. Soy diesel as a replacement for diesel fuel, project update, Dep. of Agricultural Engineering, Univ. of Missouri-Columbia. Biodiesel Alert, Vol. 1, No. 1, Dec. 1992. Biodiesel, an alternative fuel for short-term introduction report, Connecticut Transit. Diester, the European biofuel for Engines, F. Staat. Catalytic conversion of vegetable oils to diesel additives, Saskatchewan Research Council Report. Biodiesel—A challenge for the '90s: From agriculture to environmental protection, C. Rocchietta.

New technology: "Today, research and development is focused primarily on fuels derived through the transesterification of vegetable oils and tallows. Transesterification is a process whereby the heavy glycerin portion of the oil is separated out." Address: 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047.

654. Burton, Thomas M. 1993. Farmland Industries hopes to become household name: Huge cooperative makes a push into the consumer food business. *Wall Street Journal*. Feb. 16. p. B4.

• **Summary:** Located in Kansas City, Missouri, Farmland is the nation's largest farm cooperative, with about 8,000 employees and 1992 sales of \$4.5 billion—yet it remains virtually unknown to most Americans. But that may soon cease to be, for Farmland is now making a bold—and risky—move to become a household name in the food business. It sells mostly meat and grain products.

655. *Biodiesel Alert (Arlington, Virginia)*. 1993. Congress soybean caucus learns about biodiesel. 1(5):3-4. April.

• **Summary:** "Biodiesel was the subject of the Congressional Soybean Caucus meeting on April 26, 1993 in Washington, D.C. In attendance were Senators Tom Daschle (D-SD) and Charles Grassley (R-IA) as well as House and Senate staff aides, officials from federal agencies, and representatives from environmental and farm groups. Sen. Daschle restated his commitment to Biodiesel and commented on its impact as an economic, agricultural, environmental, and energy issue.

"A panel of experts on Biodiesel made presentations. Larry Diedrich, farmer and President-Elect of the American Soybean Association (ASA) chaired the panel and made introductory remarks."

"Kenlon Johannes, Executive Director of the NSDB [National SoyDiesel Development Board], provided a broad overview of the history of technical, research, and educational issues for SoyDiesel.

"John Campbell from AgP, Inc. [AGP] covered the

technical issues, focusing on how “policy, product, process, and promotion were the keys to developing the Biodiesel Industry. Dr. Davis Clements, Director of Agricultural Materials, USDA-CSRS covered possible markets for Biodiesel, the economics of feedstock production,... James Peeples of Information Resources, Inc. (IRI) discussed regulatory issues for Biodiesel, including the effect of the Clear Air Act, Energy Policy Act, and various federal regulations.

656. Campbell, John. 1993. Re: Tax law and its implications for biodiesel. Letter to Bill Holmberg (ABA) and John Gordley (ASA), May 3. 5 p. Typed.

• **Summary:** A concise discussion of six issues. For each Campbell gives the background, pros, cons, and his recommendation. They are: (1) Inclusion of excise tax exemptions in the legislative package (Tax credits vs. excise tax exemption vs. BTU tax exemption). (2) Construction of a new, free standing biodiesel section in the tax code (Senator Tom Daschle, D-ND). (3) Should producers or blenders receive tax credits?. (4) Small producer credit (for biodiesel). (5) Subsidies for non fuel use (of biodiesel, such as asphalt release agents, hydraulic fluid, lubricants, etc.). (6) Lowering the blend threshold from 85% to 30% for purpose of favorable depreciation treatment of alternative fuel property (for fuels from biomass other than alcohol).

Copies of this letter were also sent to Jim Peoples (IRI) and Alvin Geske. Address: [AGP, Omaha, Nebraska].

657. Meyer, Edwin W. 1993. Historical notes on textured soy flour (Interview). *SoyaScan Notes*. May 10. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** The Glidden Co. sold a textured soybean meal mainly to John Morrell & Co. for use in pet (especially dog) foods—but also to some other dog food companies. Morrell was a big meat processing firm with headquarters in Chicago and a big plant in Ottumwa, Iowa. At that time all dog food was canned (no dry or semi-moist) and this textured soy flour kept a certain amount of its integrity during retorting—so the dog-food people liked it.

The solvent defatted soybean meal was run through an expeller (also called a screw press) to give it texture, then the resulting cake was broken up into bits or grits. No die was used. Glidden’s early texturizing process, dating from the late 1930s, was covered by a 1939 patent issued to Arthur Levinson and James Dickinson. These two inventors never got much credit for their invention (in part because they unfortunately did not use the term “texturize”) and it played no role in the subsequent technology based on extrusion. If Levinson and Dickinson had used the key term “texturize,” their patent would have been “prior art” making it more difficult for people to subsequently be issued patents on extruded materials or texturizing. An expeller, which was designed to press the oil from oilseeds, is less well suited to

texturization than an extruder—which has no openings along the barrel and which gives more sheer working and alignment of the protein to create that meatlike texture.

Many people think (incorrectly) that William Atkinson was the original inventor of textured soy flour, but the Atkinson patent (issued Jan. 1970; No. 3,488,770) does not dominate the industry—even though Atkinson’s patent was a very early, creative, and important one, and ADM did a very good job getting TVP on the market early. Ed is quite sure that Atkinson developed his patent independently and with no knowledge of Flier’s work. However the dominant U.S. patent now is the one issued to Flier (pronounced FLEER) of Ralston Purina Co. on 24 Feb. 1976 (No. 3,940,495). There was a long time between application date and issuance date for the Flier patent. The Flier patent expires in 1993.

Part of the following is based on Ed’s first-hand knowledge and part on second-hand knowledge (hearsay). After the Flier patent was issued, Ralston Purina filed a lawsuit against ADM in a federal court in southern Illinois. Swift (who was also extruding soy flour) may have been included in the suit. Sometime after the filing of the suit, Ralston Purina and ADM settled out of court. Ed thinks that as part of the settlement, they cross-licensed each other (so that each could use the best parts of the other’s patent). After the ADM settlement, Ralston Purina went after all others in the industry who were extruding to take licenses. If they didn’t take a license, Ralston could charge them with infringement, and the cost of the infringement can be very high. So Cargill and A.E. Staley each took a license. Then Ralston Purina sued Far-Mar-Co. Wenger supported Far-Mar-Co because Wenger felt that patent would curtail the sale of their machinery. Ed was subpoenaed by Far-Mar-Co to give testimony under oath. Far-Mar-Co people learned, via Wenger, that there was a man in Decatur, Indiana, who was using a Sprout-Waldron extruder in the early 1960s to produce mixed, extruded feeds. Ed and his coworkers (Steve Frank and Bud Campbell) examined that extruded material in their lab at Central Soya. After some time that case was decided in court and Far-Mar-Co lost it [in mid-1984].

Then Ralston Purina went after Central Soya—which had its own patent issued to Gabor Pusski in 1976. Ed Armstrong, an internal attorney, suggested that Ed Meyer and Art Konwinski (Central Soya’s extrusion man), take a very close look at the process by gathering detailed data. Based on that the attorneys concluded that Central Soya was infringing on Ralston Purina’s patent. So Joe Gillespe, a vice president at Central Soya, made a deal with Ralston, that Central would sell Ralston several feed operations they had in Brazil at a very attractive price, plus several patents on industrial proteins. In exchange, Central Soya got a non-exclusive royalty-free license in perpetuity.

Ed has long wondered why the patent examiner didn’t cite an “interference,” which applies when two inventors make claims that overlap or are on the same subject. Then the



patent office must conduct an investigation to see who has priority. This story does not appear in the history books and Ed is not sure that it should be.

“Over the years I have learned to be very skeptical of what I read because so much is said in an advertising mode rather than in a definitive or factual mode.” People say that their products are used in various applications when they are not—which is wishful thinking in the hope that new customers will try the product. Address: 1701 N. Sayre Ave., Chicago, Illinois 60635. Phone: 312-637-0936.

658. Leiss, Richard S. 1993. History of the use of spun soy protein fibers at Worthington Foods (Interview). *SoyaScan Notes*. June 30. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Richard (whose last name is pronounced like “lease,” as in “to lease a house”) has worked for Worthington Foods in R&D for 28 years, from Aug. 1962 to 1968, then from 1971 to the present. He thinks that small amounts of the first commercial Worthington product to contain spun soy protein fibers were probably sold by late 1962 and definitely by 1963. These meatlike products were probably frozen at first, and then canned later. The first such product may have been the Minute Entree Fried Chicken Style in frozen form. Fri-Chik, which was canned and widely sold to Seventh-day Adventist food outlets, came a little later. The next 3 products that contained spun fibers (White-Chik, Beef Like, and Prosage) were all frozen and were introduced at about the same time (by Oct. 1963), but many Adventist food outlets did not have a frozen food case in those days so Worthington had to supply them with one. Following these, some additional products were made under the Worthington label, including Smoked Beef Style, Wham.

“When I first came to Worthington in 1962 there was a small R&D lab attached to the main food processing building; we didn’t have a research facility like we have now. I recall that a new R&D building was completed in October 1964. Prior to Oct. 1964, I recall seeing a Fried Chicken Style product, containing spun fibers, being canned. After Oct. 1964 time, we began to spin our own soy protein for the first time using a pilot plant line in this building. Full-scale spinning of Worthington’s Fibroprotein soy fibers probably began in about 1965. Prior to that time my recollection is that Worthington purchased most of its spun protein from Ralston Purina Co.; it was manufactured in their Louisville [Kentucky] plant. But Worthington also purchased some spun soy fiber from General Mills; it was made at their James Ford Bell Research Center and was very experimental. I don’t recall the name of that product.

“In the early 1960s, about 95% of Worthington’s sales were through either the church or through stores in communities where there were heavy concentrations of Adventists. So it really wasn’t a very big thing. One very big thing for the company was the first IFT meeting it attended in Kansas

City [Missouri] in about 1963 or 1964. It was the first time that Worthington had demonstrated products at a national convention, and there was a lot of interest in these products.

In 1974 the first 3 Morningstar Farms products were introduced: Breakfast Patties, Breakfast Links, and Breakfast Slices. He is quite sure that initially they all contained spun soy protein fibers. However several years after they were launched, the decision was made to remove the spun soy fibers for two main reasons: (1) Making the fibers was an expensive, high-tech process which added too much to the price of each product; (2) Worthington was concerned that if, as anticipated, the Morningstar Farms line became very popular in mainstream national markets, their one spinning line would not be able to produce enough fibers to meet the demand. The “wet spun fiber” was replaced by textured soy concentrates and vital wheat gluten to give similar textures. In 1979 four more Morningstar Farms products were launched: Grillers (meatless burgers), Breakfast Strips (meatless bacon), Luncheon Slices (a new version of the 1974 Breakfast Slices), and Leanies (meatless hot dogs). None of these 4 products contained spun soy protein fibers. Thus, for most of their commercial lives, the Morningstar Farms products have not contained spun soy protein fibers.

Worthington has always had only one line for spinning soy protein fibers—located at their plant in Worthington, Ohio. This line was set it so that a second spinning table could be added to increase its capacity, but that has never been done. Even during the years when the company had a second plant at Schaumburg, Illinois (after Miles Laboratories took over Worthington in 1970), that plant never had its own spinning line.

At one point Worthington sold its Fibroprotein spun soy protein fiber to an Adventist company outside the USA. Worthington never sold it to Loma Linda Foods. Initially Loma Linda may have purchased it from Ralston Purina or General Mills; then they got their own spinning line later, in the 1970s; they bought the equipment from Dawson Mills.

Concerning the total amount of spun soy protein fiber used in Worthington food products, it increased rapidly from 1965 to about 1975, then it fell somewhat after the first three Morningstar Farms products were reformulated in the mid-1970s—but it did not fall dramatically because the 3 products were still at the introductory stage. After the amount then stabilized, and remained fairly constant until recent years when the demand for vegetarian products has increased, and with it production of spun soy protein fibers. Today, about 15-20% of Worthington’s meat alternatives contain spun soy protein fibers.

In Richard’s opinion, the legacy that Henry Ford and his researchers left in terms of food uses of soybeans is mainly in the areas of soy protein isolates (especially functional isolates; the work done by Frank Calvert and Bob Boyer at Ralston Purina) and textured soy flour (the work done by William Atkinson at ADM). While spinning was certainly

the most novel of the technologies, spun soy protein fibers are not nearly as important commercially as food-grade isolates and textured soy flour.

Richard remembers fondly the pioneering days when Bob Boyer had a lab next to his office at Worthington Foods. Boyer told Richard many anecdotes about the times he worked for Henry Ford and Richard wrote them down in his journal. "Bob Boyer was truly a gentleman. I really enjoyed him a lot."

Richard does not recall any commercial product containing spun soy protein fibers that Ralston Purina launched during that time. They sold all their spun fibers as such to Worthington Foods.

"I'm kind of the keeper of the archives and unfortunately a lot of material has gotten out because during the years that Worthington was owned by Miles Laboratories past history was not considered to be very important." Perhaps a record might have appeared in the *Chopletter* (an internal newsletter published by Worthington Foods). Address: Director, R&D, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

659. O'Connell, Paul F. 1993. Re: Cooperative agreement on "Biodiesel Best Available Technology Search." Letter to Mr. William Lester, Ag Processing, Inc., 11717 Burt St., Omaha, Nebraska 68154-1581, July 1. 1 + [5] + 15 p. Typed, with signature on letterhead.

• **Summary:** This agreement has been awarded to AGP for the amount of \$36,000. "This document is as negotiated between you and Joe Roetheli" of the AARC Center. Address: Director, Alternative Agricultural Research and Commercialization (AARC) Center, 14th & Independence Ave., SW, 2nd Floor Mezzanine, Cotton Annex Bldg., Washington, DC 20250-0400. Phone: 202-401-4860.

660. McDermott, Ron. 1993. History of the use of spun soy protein fibers by Loma Linda Foods (Interview). *SoyaScan Notes*. July 6. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Note: In about 1968 Loma Linda Foods started making meatlike products containing spun soy protein fibers. The first products were canned meatless slices (chicken-like, beef-like, turkey-like, or luncheon-like slices).

Ron started to work for Loma Linda Foods in 1973 as Director of Quality Assurance at the company's plant in Mt. Vernon, Ohio. In 1975 he left Mt. Vernon and went to Loma Linda's plant at Riverside, California. He thinks that Loma Linda got its first spun soy protein fibers from General Mills. Robert Boyer had licensed General Mills the rights to spin soy protein fibers, and they used these primarily to make their original line of Bontrae Products. At one point after 1973 Ron thinks that Loma Linda was purchasing spun fibers from three sources: Ralston Purina, General Mills, and Miles Laboratories—but the bulk of it came from General

Mills. In about 1975-77 General Mills shut down their soy fiber spinning line and sold it to Dawson Mills. During this transition period, Loma Linda purchased a large inventory of frozen, neutralized (neutral pH) fiber from General Mills. The spun soy fiber sold by Miles Laboratories (Worthington) was called "acid tow"; it was refrigerated rather than frozen and the acidic pH prevented spoilage. Loma Linda would then adjust the pH to neutral shortly before use.

In early 1984 (according to documents Ron has in front of him), Loma Linda Foods bought a soy protein fiber spinning line from Dawson Mills. In mid-1984 the equipment was transferred to Loma Linda. Loma Linda probably started spinning their own fibers in California in late 1984 or early 1985. Loma Linda continued to spin their own fibers until the company was sold to Worthington Foods in Jan. 1990. Worthington still owns that line of spinning equipment, which is now dismantled and unused in storage. It could be re-activated if Worthington had a place to put it and a need to make more spun soy protein fibers.

Note: A brief chronology of spinning by General Mills, Dawson Mills, and Ralston Purina Co. 1959—General Mills starts research on textured soy proteins. 1962 Oct.—Ralston Purina Co. begins to make Textured Edi-Pro, a spun soy protein fiber, at its plant in Louisville, Kentucky. 1963 Nov.—The first of many patents for spinning soy protein are issued to General Mills. 1965 Dec.—General Mills introduces the Bontrae line of spun soy protein fiber products, starting with Bac-O\*s (bacon-like bits). 1967—Ralston Purina stops spinning soy protein. 1969 June—General Mills breaks ground for major fiber spinning plant at Cedar Rapids, Iowa; It begins operation by late 1970. 1975—General Mills stops spinning, and sells its spinning technology and equipment to Dawson Mills. 1976—Central Soya now owns the Bontrae trademark, formerly owned by General Mills. 1979—Dawson Food Ingredients, a subsidiary of Dawson Mills, starts spinning soy protein fibers; Anaprime is on the market by March 1980. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

661. Lindsay, James W. 1993. Re: John Campbell to replace Bill Lester as principal investigator. Letter to Dr. Joseph C. Roetheli, Director, Alternative Agricultural Research and Commercialization (AARC) Center, 14th & Independence Ave., SW, Cotton Annex—2nd Floor Mezzanine, Washington, DC 20250-0400, July 13. 1 p. Typed, with signature on letterhead.

• **Summary:** "I am writing to inform you of our need to change the 'principal investigator' of our biodiesel project due to the recent retirement of Mr. William Lester.

"With your concurrence, I would like to appoint Mr. John Campbell, Assistant Vice President for Corporate Relations, as the principal investigator to replace Mr. Lester. Sincerely," Address: General Manager and Chief Executive Officer,

AGP Ag Processing Inc a cooperative, P.O. Box 2047, Omaha, Nebraska 68103-2047. Phone: 402-496-7809.

662. Brown, Linda D. 1993. Re: Thanks for your call regarding the 20-year anniversary book. Letter to Mr. Glenn Pogeler, 12611 Bendito Drive, San Diego, California 92128, Oct. 30. 1 p. Typed, with signature on letterhead.

• **Summary:** "We have enclosed the four books you requested. If possible, could you jot down any information on the Badger Co-op, or jot down some memories of your years there? And, who is the gentleman pictured on the cover with you? We thought we might do an article for our monthly newsletter. If you have a current picture of you..., please enclose that too."

Note: Attached to this letter are 3 pages of handwritten notes by Glenn Pogeler. He was with USDA from 1970 to 1977 and a broker from 1977 to 1984. On April 19 he talked to Danney Janssen at New Co-op, Fort Dodge. "Told him I would see him Tuesday, May 31... to visit" by airplane. \$31 each way. There follow two pages of handwritten notes about his years in Badger, Iowa. Graduated "from Manson High School in 1932—the bottom of the Depression. I was 17 at the time. I thought I would like to be a mechanical engineer but no money was available and no loan programs were available."

"On July 25th 1932 I went to work as a 2nd man in the Farmers Elevator at Richards, Iowa, Chas. Weidemann [Charlie Weideman] took over as the new manager. He was 78 at the time and feared that the hardware and implement business in which his son and son-in-law were partners might go broke. He had about 18 years experience in running grain elevators. He said he would furnish the brains and I would furnish a strong back. All of this for \$10.00 a month and room and board. (No extras. Hours 7 a.m. to 6 p.m., No overtime and at harvest [work] until 8 or 9 p.m.). I was also elected to eat the dust. We used a Fairbanks Morse Type N gasoline engine (match starter) to lift the grain to the bins. I pledged to myself I would eat the dust and dirt for 10 years and then I would be the manager in the office or else I would be out of the grain handling business. We had \$127.00 in the bank plus \$4,000 debt on the property when we took over. Mr. Weidemann stayed on as manager until 1935 when he resigned. He told the Board of Directors to hire me. He said I knew as much as he did about the grain business. I was the youngest grain elevator manager in the U.S. at that time (1940). Handling margins 1 cent per bushel. Competition." Address: Senior Accounting Clerk, NEW Cooperative Inc., 2626 1st Ave. South, P.O. Bix 818, Ft. Dodge, Iowa 50501. Phone: 515-955-2040.

663. AGP—Ag Processing Inc a cooperative. 1993. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 20 p. 28 cm.

• **Summary:** Net sales for 1993 (year ended Aug. 31) were \$1,218.614 million, up 8.2% from \$1,126.667 million in 1992. Earnings before income taxes: \$44.659 million, up 3.3% from the \$43.236 million in 1992. Contains a 10-year summary of consolidated operating and financial statistics.

On the inside front cover is a historical summary of the most important events each fiscal year from 1983 to 1993. In 1993 Omaha corporate headquarters staff moved into their new building at 12700 West Dodge Road in Omaha; it has 85,000 square feet and is located on more than 14 acres in Omaha. A color photo shows the building. Another color photo shows a truck tanker with the Soyasign and "Soyoil: America's #1 vegetable oil" on the side and back.

AGP also acquired a vegetable oil refinery in Sherman, Texas (formerly owned by Kraft) and a grain terminal in Atchison, Texas—"which will provide better access to barge transportation and improve arbitrage." The refinery acquisition enabled "AGP to shift a substantial portion of refined vegetable oil production from St. Joseph to the new facility and to Denison, Texas."

AGP now has five primary businesses, each of which was profitable in 1993: (1) Soy processing continues as AGP's core business; it includes the milling of soybean flour [Soy Flour Division], and AGP trucking. Reduced shipments of soybean meal to the former Soviet Union has a negative impact. (2) Refined oils [Vegetable Oil Division], with three vegetable oil refineries at St. Joseph, Missouri, and at Denison and Sherman, Texas. (3) "Grain. The primary activities are grain elevator operations and grain merchandising, which include marketing agreements with local cooperatives. Exports and profits from them are growing." (4) "Feed. Comprised primarily of Supersweet feeds in the United States and Masterfeeds in Canada," including "Agri Center operations in the United States and poultry operations in Canada." In 1937, Supersweet Feeds started making feed in Redwood, Minnesota. Today the company has 18 manufacturing plants. Masterfeeds started more than 65 years ago in Canada. (5) "Pet Foods [Division]. This business area manufactures and markets pet foods through private labels (AGP specialists develop the formulas), co-packing arrangements (the customer develops the formulas), and our own branded products."

"AGP is a young company. The first five years were dedicated to survival and to competing against the market influences of large, private grain and processing firms in the soybean and soybean meal markets. We believe that producers [farmers] must be represented by their cooperative in market-making areas in order to maximize their returns [profits]. AGP is dedicated to this goal."

The horrendous 1993 floods shut down rail shipments for a long time. The AGP transportation "fleet now includes 1,625 rail cars, 86 semi-tractors [semitrailers], and 101 trailers of all sizes.

In October 1992 "the Chicago Board of Trade [Illinois]



changed the soybean meal contract from a low protein contract to a high protein contract.” This was an historical development and “a learning experience because historical soybean meal basis levels became obsolete and new contracts moved toward actual delivery levels that have evolved over the last decade.” The required some internal accounting changes, which will benefit AGP.

“Export sales: The Ag Products Division has continued to increase direct sales of feed ingredients into foreign countries. During the past year 250,000 tons of soybean meal were exported to more than 14 countries.” However, “export sales have not regained the level that existed before the breakup of the Soviet Union.”

Soybean hulls are now “pelleted in Sergeant Bluff and Eagle Grove, Iowa. They are marketed domestically and for export.”

Page 16, titled “AGP businesses.” Shows the location of every AGP business, organized by business type (such as Soybean processing, Vegetable oil refining, Feed manufacturing, Grain elevators, etc.). Address: Omaha, Nebraska.

664. Campbell, John. 1993. Biodiesel: Legislative and regulatory agenda. Omaha, Nebraska: AGP. 16 + [12] p. Dec. 23. 28 cm.

• **Summary:** The report begins: “The purpose of any legislative agenda for biodiesel should be to increase use. There are only three ways for the government to increase the use of biodiesel. They are: (A) Reduce the price of biodiesel relative to its competitors through subsidies. (B) Create a set of rules that favor the use of biodiesel, regardless of price, relative to its competitors. (C) Fund research that leads to lower priced feedstocks, more efficient processing and higher value uses for biodiesel and its coproducts.

“Government has inadvertently opened opportunities for biodiesel through legislation consistent with avenue (B) above. A brief examination of each of these avenues, with heavy emphasis on option (B), is attached.” Signed John Campbell.

Following this 14-page analysis are 12 pages of tables, graphs, and maps. The maps are: (1) 22 non-attainment areas covered by the clean fuel fleet program. (2) Significant number of federal & postal service vehicles located in metropolitan areas covered by the National Energy Policy Act of 1992. (3) Highlighted non-attainment areas with significant numbers of federal and postal vehicle fleets. Source of maps: DOE Alternative Fuels Data Center, 7 June 1993. Address: [AGP, Omaha, Nebraska].

665. Wittenburg, Bonnie. 1993. Archer Daniels Midland Company: NYSE-ADM. Minneapolis, Minnesota: Dain Bosworth. 36 p. 28 cm.

• **Summary:** Contents: Summary and recommendation: Valuation. Company profile. Operating review. Corn refining: High fructose corn syrup (HFCS), ethanol,

bioproducts. Oilseed processing (soybeans, soy meal, soy oil): Edible soy proteins (soy protein concentrates, isolates, soy flour, and textured soy flour). Wheat milling. Other products and businesses. International trade: NAFTA and GATT. Financials. Recent results. Outlook and conclusion.

Index of exhibits. ADM sales by segment in 1988 and 1993 (p. 5; In 1993: Oilseed processing 50%, corn refining 28%, wheat milling 13%, other 9%). U.S. oilseed processing capacity (p. 20; ADM 28% of U.S. capacity, Cargill 25%, Bunge 16%, Ag Processors 14%, Central Soya 10%, Other 7%). World oilseed production by crop (p. 20; Soybeans account for 52% of the 227.3 million metric tons [tonnes] total). World soybean production by country (p. 20; Total 116.9 million tonnes, of which the U.S. produces 51%, Brazil 19%, Argentina 10%, China 9%, Other 11%). World vegetable oil consumption 1992 by crop (p. 21; Total 584. million tonnes, of which soybean is 30%, palm 21%, rapeseed 15%, sunseed [sunflowerseed] 14%, peanut 6%, cottonseed 6%, other 3%). Soybean meal use by livestock (p. 20; Poultry 51%, swine 27%, beef 8%, dairy cows 7%, other 7%). Largest exporters of soybean meal: 1990-1994 (tonnes in 1993/94 EC-12 8,830, Brazil 6,550. USA 4,944). Largest importers of soybean meal: 1990-1994 (tonnes in 1993/94 EC-12 13,630, Asia and Oceania 4,936, Middle East and North Africa 2,443).

This “Dain Bosworth Research Report” is “A fundamental appraisal of investment value.” “ADM is so big and efficient, and its product lines are so diverse, that it can benefit from almost any positive trend impacting agriculture worldwide. ADM is believed to be the largest corn refiner, oilseed processor and flour miller in the United States... We recommend purchase of ADM shares based on our expectations of improved earnings momentum beginning in the fourth fiscal quarter of fiscal 1994.”

Concerning edible soy proteins (p. 23-24): The entire U.S. meat substitute market is estimated at \$50-100 million annually today, and growing at 5-8% a year. The Green Giant Division of Pillsbury is marketing ADM’s burgers under the name Green Giant Harvest Burger. Worthington Foods of Ohio is the leader in the meat substitute category. Their Morningstar Farms burgers are precooked whereas ADM’s burgers require cooking. ADM sold 70 million veggie burgers in fiscal 1993 and is now building capacity to triple production. A company named Aton, said to be one of the largest private enterprises in the Ukraine, has an agreement with ADM whereby ADM will be shipping \$100 million of soy-based food ingredients to the Ukraine by the summer of 1994.

Toepfer, which was started in Germany in 1919, handles approximately 9% of the total world grain trade and about 35% of the world trade in feedstuffs. ADM owns 50% of Toepfer; the other half is owned by 14 cooperatives from 7 countries including Gold Kist, Agway, Harvest States, AGP, etc. in the USA.

"We continue to believe that the long-term story for ADM is among the best of the companies we follow." "In our opinion, ADM is among the best positioned, best managed, and financially sound ag processing companies around" (p. 35). Address: 60 South Sixth St., Minneapolis, Minnesota 55402-4422. Phone: (612) 371-2728.

666. National SoyDiesel Development Board. 1994. Board of directors and related documents. Jefferson City, Missouri. 11 p. Unpublished typescript. Feb. 28.

• **Summary:** (1) The states represented are: Indiana, Iowa, Illinois, Missouri, Nebraska, Ohio, South Dakota, Michigan, Minnesota, SC/GA/FL/TN [South Carolina, Georgia, Florida, Tennessee, combined as one], Wisconsin. For each state is given: One farmer representative and one staff rep. (the latter from the state soybean board). Staff are listed at the end.

(2) NSDB affiliates and associate members: NOPA, AGP (John Campbell), USB (Industry information, research, and staff). American Soybean Association (Research).

(3) Consultants (4) and subcontractors (6). Observers and advisors (47).

(4) Goals. Organizational chart. FY94 Funded projects: Research program (17 projects). Industry information (30 projects).

(5) Committees and lists for conference calls: Executive. Board of Directors. Research committee. Industry information committee. Monday morning contractor call. QSSB [Qualified State Soybean Boards] executives (as of 4 Nov. 1994). Address: Jefferson City, Missouri.

667. Hoeldtke, Deborah. 1994. A soy-based success story. *Ag Innovation News (AURI-Agricultural Utilization Research Inst., Crookston, Minnesota)* 3(2):11. April.

• **Summary:** The story of Preference, a soy-based non-ionic surfactant that is mixed with pesticides and made by Cenex/Land O'Lakes. A new formula will use soybean oil soapstock instead of soy oil. The new product is already patented.

668. Duggan, David. 1994. Problems with the Flier patent assigned to Ralston Purina (Interview). *SoyaScan Notes*. June 13. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** David is an anti-trust attorney, not a patent attorney. On 5 July 1990 the federal circuit court of appeals, which hears appeals concerning patent cases in the United States, ruled that Ralston Purina Company had procured the famous Flier patent (No. 3,940,495. Feb. 24, 1976. Application filed 17 Jan. 1973) by fraud on the patent office. The case is number 909 F.2D 1494 (Staley vs. Ralston Purina).

Price Heneveld (a law firm of patent lawyers in Grand Rapids, Michigan) apparently represented Ralston Purina on both the original application and in subsequent litigation.

There was apparently earlier litigation involving Far-Mar-Co, Staley, Cargill, etc. The first case was apparently Ralston Purina vs. Far-Mar-Co of Kansas. He believes that Ralston Purina filed the lawsuit in Oct. 1976. The judgment was in or about 1981—showing the slow pace of federal litigation. The case was tried in the 10th federal judicial circuit (district of Kansas), which is statistically the worst, in the sense that more cases are later overturned from that circuit by the U.S. Supreme Court. He finds it interesting that Ralston chose to file its first case in that circuit. There is law to the effect that if you engage in fraud on the patent office and then use that fraud in an attempt to control or monopolize the relevant market, that is illegal, and may be the basis for a anti-trust lawsuit.

In 1976, after Ralston Purina won the case against Far-Mar-Co in Kansas, Ralston started sending demand letters to many other companies that were supposedly infringing this patent—including Staley, Cargill, Central Soya, Griffith Laboratories, Miles Laboratories, Nabisco, Anderson Clayton, General Mills, Nestle, Riceland Foods, Dawson Mills, General Foods, Grain Processing Corp., etc. Ralston was protecting its rights.

In 1985 the Far-Mar-Co case was upheld, saying that Ralston Purina indeed had the rights to the Flier patent (Case no. 772 F.2D 1570). However Far-Mar-Co did not raise the issue of fraud. So it took another 5 years for the court to reach that question—which it decided in 1990.

David's main questions are: (1) Is textured vegetable protein [actually textured soy flour] a distinct segment of some relevant market? (2) Did Ralston Purina try to exclude other competitors from that market. (3) Were there substitutes for the product on which Ralston Purina had a patent? David's firm is in the process of representing a former player in the industry, a major trading company; they may represent a consortium of companies that were effected by the Ralston Purina's "ill gotten gains."

Update: Talk with David Duggan. 1996. April 26. His firm was representing the Lauhoff Residuary Trust in a case against Ralston Purina Co. Lauhoff is a grain company in Danville, Illinois. They were sued by Ralston, which claimed that they had infringed the patent without paying royalties. Lauhoff initially disregard the demand letter threatening a suit. Then they sold the company, but did not properly disclose to the buyers that a lawsuit was pending or had been threatened. Lauhoff then lost the case against Ralston in about 1986 or 1987. So the new owners sued the formers owners for failure to disclose. David argued that the amount paid by Lauhoff to settle the lawsuit was fraudulently paid. The case, which was very complex and convoluted, was thrown out of court by the judge because the statute of limitations had expired—they brought the case too late. Moreover, the patent was nearing its expiration date, or had expired. David believes that there was some pretty serious frauds on the courts in litigation to enforce the patent. David

tried to present a RICO (Racketeering Influenced and Corrupt Organizations) Act argument. It provides for triple damages. David tried to approach some of the smaller players like Far-Mar-Co but he did not approach ADM. The patent law was recently changed to 20 years from the point of application; formerly it was 17 years from the point of grant. Address: 321 S. Plymouth Court, Suite 800, Chicago, Illinois 60604. Phone: 312-663-0670.

669. Thompson, Keith. 1994. Breeding soybeans for use in making soy oil or natto at Jacob Hartz Seed Co. (Interview). *SoyaScan Notes*. Oct. 11-12. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Hartz is making more progress in fatty acid modification for the oils industry than they are in Oriental soyfoods, in two areas: (1) Increasing saturated fatty acids to about 30% so that the oil need not be hydrogenated in applications where hydrogenation (which creates *trans* fatty acids) was traditionally used; (2) Reducing saturated fatty acids to the level of canola oil; Hartz already has a "low-saturate soybean" with only 7.5% saturated fatty acids (as opposed to 6% in canola oil) but none of the oil companies are interested. They run strictly on cost and are not willing to pay a premium. Moreover, a specialty oil would require that the beans be "identity preserved" yet even a small solvent extraction plant (such as Riceland Foods in Stuttgart) has a capacity of 50,000 bushels/day. The oil companies say it will cost a lot of money to put a low-saturate soy oil on the shelf and they do not think they can gain market share. Keith hopes that Hartz can pursue this more to find a company interested in a niche market, such as an all-natural oil that is low in saturated fatty acids. The industry seems more interested in (1) than in (2). Monsanto has concluded that it is too costly to make these changes using genetic engineering, but not too costly (and worth doing) using classical breeding.

Hartz has hired a food scientist, Dr. Keshun Liu, who is actively involved in Hartz's mutation breeding program for fatty acids. He does a lot of analysis of the oil content of these soybean mutants, using a gas chromatograph. He also does quite a lot of analysis on natto beans and a little on soybeans for tofu.

In terms of Oriental soyfoods, Hartz has for many years sold a large quantity of specialty soybeans to natto makers in Japan. They have worked closely with natto makers to breed in several characteristics that they require, such as small seed size. Hartz's Japanese partner [Yaichiro Mogi of Asahi Shokuhin] was very scientifically oriented and had good analytical capabilities. They came to Hartz and said "Here's what we want in a natto bean." Hartz bred to their specifications and it worked. Keith thinks that Hartz may have the world's biggest program for breeding soybeans for natto. Hartz's sales of natto beans constitute about 50% of the company's total sales. Hartz's soybean breeders continue to

communicate with natto makers (more than does Hart's food scientist) but there doesn't seem to be a lot of change in terms of what they are looking for in a good natto soybean.

Natto makers are willing to pay a good premium for their soybeans because natto beans are inherently lower yielding and have many special characteristics that are difficult to breed and select for. The breeder must get high yield and disease resistance for the farmer plus 3-4 characteristics desired by the natto makers. Address: Food and Export Manager, Jacob Hartz Seed Co., P.O. Box 946, Stuttgart, Arkansas 72160. Phone: 800-932-7333.

670. AGP—Ag Processing Inc a cooperative. 1994. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 20 p. 28 cm.

• **Summary:** Net sales for 1994 (year ended Aug. 31) were \$1,377.370 million, up 13.0% from \$1,218.614 million in 1993. Earnings before income taxes: \$42.727 million, down 4.4% from the \$44.659 million in 1993. On the inside front cover is a brief essay about the "150th anniversary of the Co-operative Movement 1844-1894." AGP is owned by 380,000 farmers and 351 local cooperatives. "Today 700 million people around the world share the cooperative form of business. In the U.S., 120 million people are members of over 47,000 cooperatives."

This year AGP's board of directors "declared a patronage payment of \$35,786,000. Additionally the board declared a revolvment of stockholders' equity of \$14,280,000, bringing AGP current into the 1989 equity balances."

"The combined capacity of our seven [soybean] processing plants ranks AGP fourth in the U.S. in terms of soybean processing capacity." The plants purchase the equivalent of 250,000 acres of soybeans each month for processing. Each day, AGP merchandisers sell 8,000 tons of soybean meal to cooperatives and other companies for the manufacture of feeds."

"In August 1994 AGP purchased all of Maple Leaf Foods Inc.'s Western Canadian deed plants" in Alberta, Canada.

In Nov. 1994, AGP and ADM formed a new company named Consolidated Nutrition, L.C., owned 50-50 by AGP and ADM. It consists of the combined assets of AGP, L.P. and Master Mix Feeds (which was founded in 1935 by Central Soya Inc.) "In July 1994, ADM purchased most of Central Soya's feed and nutrition operations, including Master Mix Feeds."

A color map (p. 18), with 9 symbols, shows all of AGP's business locations in the United States, Canada, and the Caribbean. Another color map (p. 20) show where all of AGP's shareholders are located. Color portrait photos show (1) Knobbe and Lindsay. (2) The towering desolventizer-toaster at the Mason City, Iowa, plant. (3) Aerial view of the St. Joseph, Missouri, plant. (4) The towering 1.7 million bushel capacity grain storage terminal at Lincoln, Nebraska,



now leased by AGP. (5) A barge leaving AGP Grain's 4.2 million bushel grain terminal at Duluth, Minnesota. (6) A man holding a small pink pig. (7) The Farmers Cooperative Elevator Co. at Everly, Iowa. (8) Each of the nine members of the board of directors. Address: Omaha, Nebraska. Phone: (402) 496-7809.

671. Frazeur, Andrea. 1994. Destiny comes of age at Cenex/Land O'Lakes. *Ag Innovation News (AURI-Agricultural Utilization Research Inst., Crookston, Minnesota)* 3(4):2, 6. Oct.

• **Summary:** Destiny is the name of a methylated soy surfactant product developed by AURI oil scientist Dr. Hemendra Basu.

672. Egerstrom, Lee. 1994. Make no small plans: A cooperative revival for rural America. Rochester, Minnesota: Lone Oak Press, Ltd. 294 p. Illust. Index. 23 cm. [200\* + 242 footnotes]

• **Summary:** Journalist Egerstrom argues for a "new generation" of farmer-owned cooperatives based on value-added processing. A quotation on the rear cover by reviewer Michael Boehlje of Purdue Univ. summarizes it well: "Agriculture is changing from a way of life to a business, and a business that manufactures food products rather than raises commodities. Egerstrom has documented this change... His fundamental theme, that farmers through collective activities and specifically through cooperatives can shape this transformation of the food system and rural communities is not only interesting and enjoyable reading, but should stimulate and challenge farm leaders to become more pro-active in guiding and directing the industrialization of agriculture." An appendix (p. 245-48) lists 50 "New Generation" cooperatives.

Contents: Foreword, by Bob Bergland (U.S. Secretary of Agriculture, 1977-1981; Congressman from Minnesota 1971-1977). Preface. 1. Agrarian myths & the Northwest culture. 2. Reviving the "good old days" after everything's changed. 3. Observing change. 4. The Netherlands experience. 5. American experience. 6. Technology & knowledge transfer. 7. The more things change. 8. The need for a new approach to development. 9. Cooperatives: The new wave movement for community development. Afterword, by C.T. (Terry) Frederickson. Acknowledgments.

At the end of many chapters are "Notes," for example (p. 248-49) "The top ten basic questions you should ask before you [a local or state government] approve or are involved in an economic development project." A good project brings real, durable benefits to the community; it must offer more than the single goal of creating jobs.

The title of this book is based on "Howard Cowden's business motto for building Farmland Industries [headquartered in Kansas City] into a modern agribusiness and petroleum giant." Engraved in the cooperative's boardroom

wall, it reads: "Make no little plans; they have not the power to stir men's souls" (p. 10-11).

"Governments have lost both the legal authority to intervene in farm markets and arbitrarily raise farm incomes by raising prices, and the budgetary means to do so. International trade agreements [e.g., WTO, NAFTA] ban the former; political support and government budget priorities limit the latter." In Feb. 1994 U.S. Secretary of Agriculture said: "I have seen the handwriting on the wall... U.S. budget support for agriculture will continue to decline" (p. 11-12). There is now bipartisan consensus on this key point.

The following (mostly soybean crushing cooperatives) are mentioned or discussed: AGRI Industries, Inc. (p. 237). Cenex (89-91, 128, 141-43, 138, 150, 173, 193, 219, 222, 234-36, 257). ConAgra Inc. (p. 129, 131, 133, 144). Dean Foods (p. 131). Farmers Union Grain Terminal Association (GTA) (p. 133, 170). Farmland Industries (13, 52, 115, 128-30, 134, 136, 173, 229, 235, 258). Far-Mar-Co (p. 130). Gold Kist, Inc. (p. 51, 134). Honeymead (p. 133-34). Land O'Lakes (p. 115, 128, 130, 134, 138-40, 150, 154, 165, 169, 190, 219, 222, 235). Monsanto (p. 165). Address: Maplewood, Minnesota.

673. NEW Cooperative Inc. 1994? Proud past, promising future: 1973-1993. Fort Dodge, Iowa. 53 p. Undated. 28 cm.

• **Summary:** NEW (Northeast Webster) Cooperative, Inc. was born on 30 June 1973 when the coops of Badger and Vincent, Iowa, merged. An excellent, detailed history of the Badger Cooperative Elevator (p. 2-6) states: "The Badger Cooperative Elevator was created in June 1940, when members of the Farmer's Elevator Company of Badger—which had been in operation since 1902—voted to reorganize.

"The first board of officers of the reorganized cooperative were S.E. Hovey, president; T.A. Chantland, vice president; and C.C. Knudson, secretary. Glenn Pogeler was hired to manage the company, for \$125 a month. In addition to his salary, Pogeler was furnished with a house. In July, the board passed a resolution requiring Pogeler to furnish a bond of \$5,000. On August 21, he was authorized to handle sealed corn.

"Later in the year, the board agreed to install a furnace in Pogeler's house and okayed opening a small account with the Badger bank." On 14 Feb. 1941 Harrold Peterson was hired as assistant manager. Later in the year Pogeler's salary was raised to \$160 per month. "Both the manager and board president were given the authority to hedge grain as they thought necessary. The company continued to update equipment, and Pogeler purchased a pickup truck in January 1942 for \$715." In July 1942 Pogeler's salary was increased to \$200/month. "In 1943 the Badger Cooperative Elevator was authorized to invest up to \$2,500 in the Boone Valley Soybean Processing Cooperative at Eagle Grove, Iowa. That May, following a successful year, a four percent dividend was declared to be paid on preferred stock."

"A major event took place on August 10, 1943—the first annual meeting of the Badger Cooperative Elevator Company was held at the Badger Community Hall. Manager Glenn Pogeler announced that the company had realized a net savings of \$17,491.99 for the year, and had 189 voting members

"The company's second manager was hired in August 1943. C.R. Rosling took over for Pogeler, who had been the manager since the company's inception in 1940."

In April 1953 the company sent out its first newsletter. An aerial photo shows the Badger elevator complex in about 1993. On the cover is a large photo of two wooden buildings of the Farmers Elevator Co., with two men standing in the left foreground. A small inset photo shows an aerial view of the complex today. There is no copyright page. The Introduction (p. 1), by Paul Pingel—NEW's president since 1986—explains that this book is not about history, which is past, but is about heritage, "which is much more personal, because it is largely our heritage that led us to what we are today. Heritage is what parents hand on to their children. It is a set of ideals and beliefs that help guide the present and the future. It's a foundation on which each new generation grows and builds." The last numbered page (p. 53) is titled "1993 full-time employees." About 125 names are listed in alphabetical order. The rear cover is blank except for the NCI logo. Contains many photos. Address: Fort Dodge, Iowa.

674. *Biodiesel Report (NBB, Jefferson City, Missouri)*. 1995. Trucking group to study biodiesel in year-long field test. Jan. p. 3.

• **Summary:** "Omaha-based Ag Processing Inc (AGP) will use a blend of 35% soy-based biodiesel / 65% petroleum diesel in a fleet of nine trucks operating from its facility in Sheldon, Iowa, for a full year. Data on driveability, mileage, emissions, maintenance and repair will be analyzed by the Trucking Research Institute, a branch of the American Trucking Association.

"The project is sponsored by the National Renewable Energy Laboratory, a division of the U.S. Department of Energy, with support from the Iowa Soybean Promotion Board."

675. Liu, KeShun; Brown, E.A.; Orthoefer, F. 1995. Fatty acid composition within each structural part and section of a soybean seed. *J. of Agricultural and Food Chemistry* 43(2):381-83. Feb. [11 ref]

• **Summary:** Using gas chromatography, seed coat, axis, sections of cotyledons, and the whole seed of six Hartz soybean genotypes were analyzed. The nutritional value of soybeans is determined by both the quantity and quality of the oil they contain. There is increasing evidence of the relationship between consumption of saturated fat and elevated blood serum cholesterol levels, and of the "relation-

ship between linolenic acid content and the oxidative rancidity or loss of flavor stability in a food system." This, there is a growing demand for specialty soybeans with either low saturated fat or low linolenic acid content. Address: 1-2. Jacob Hartz Seed Co. Inc.; 3. Riceland Foods, Inc. All: Stuttgart, Arkansas 72160.

676. Campbell, John. 1995. Corporate corner [Four reasons why the U.S. soybean industry does not like GATT]. *ASA Today (St. Louis, Missouri)* 1(4):4. Feb.

• **Summary:** (1) Export assistance for the U.S. oilseed industry was reduced more than any other country and other commodity. (2) Many countries will still not have to open their markets to U.S. imports. (3) In many cases, existing import barriers were converted to very high tariff equivalents that, even after their reduction, will leave markets protected from U.S. exports. (4) The U.S. is skeptical that the GATT provisions will be enforced. Address: Vice President, Corporate & Government Relations, Ag Processing Inc.

677. Campbell, John. 1995. Attachment "A": History of AGP involvement in soy methyl esters. Omaha, Nebraska: AGP. p. 8-9. March. 28 cm.

• **Summary:** 1992 early—"AGP [Ag Processing Inc a cooperative] donates 750 gallons of soyoil to the Missouri Soybean Association for the first large scale test of soy methyl esters (\$1,500). Testing was done on vehicles operated by the St. Louis Airport Authority. Interchem, N.A. conducts the transesterification in Kansas City.

1992 April—"Discussions begin with Interchem and Procter and Gamble about long term business arrangements. Procter discourages AGP but wants any glycerine we might produce.

1992 Dec. 28—Note: AgP is listed as a supporter of the National SoyDiesel Development Board (NSDB) in the latter's newsletter.

"AGP enters into an information sharing agreement with Interchem (\$40,000) to review our relationship. (No subsequent agreements were signed.)

1993 Sept. 18—"State Soybean Associations form the National SoyDiesel Development Board (NSDB) which was subsequently [12-13 Sept. 1994] renamed the National Biodiesel Board (NBB). Since formation of the Board, State Associations and the United Soybean Board (USB) have expended over \$9 million in farmer dollars for research and promotion of biodiesel. John Campbell is a NBB Board Member.

1992 Oct.—"AGP decides to pursue a plant construction grant through the USDA Alternative Agriculture Research and Commercialization (AARC) program.

1993 March—"Campbell gives biodiesel presentation to National Oilseed Processors Board.

1993 May—"AGP drafts biodiesel tax incentive legislation for Federal effort."

1993 June—"AGP does not receive AARC plant construction grant but does receive \$36,000 for a global production technology search. AGP contracts with C.F. Nofsinger to conduct the global study. AGP contribution was \$26,307."

1993 July—"AGP sponsors biodiesel powered buses for the American Soybean Association (ASA) meeting (\$3,500).

1993 Nov.—"AGP proposes legislative and regulatory strategy to the National Biodiesel Board, American Soybean Association and State Soybean Associations."

1993 Nov.—"American Trucking Association proposes a heavy duty truck fleet demonstration with AGP."

"Procter & Gamble raises soy methyl ester prices \$0.08/lb and begins shutdown of Kansas City plant. AGP marketed about 10 million pounds of salad oil annually to the Kansas City plant."

1994 Feb. 28—Note: Affiliates and associate members of the National SoyDiesel Development Board (NSDB) include John Campbell of AGP. Only the qualified state soybean boards (who collected soybean checkoff funds) were allowed to be full members at that time.

1994 Aug.—"AGP proposes an Agreement in Principle to Midwest Biofuels (a subsidiary of Interchem N.A.). Midwest did not respond. Agreement withdrawn in September."

1994 Oct.—"AGP enters into consulting agreement with Ag Environmental Products (AEP Inc.) for \$10,000 per month. Expenses for the contract through Feb. 1995 have been \$47,000."

1994 Nov.—AGP receives \$85,000 grant to conduct a heavy duty truck fleet demonstration for the American Trucking Association (subcontractor to the U.S. Department of Energy)."

1994 Nov.—"AGP receives \$15,000 grant from the Iowa Soybean Association to help with the Heavy Duty Demonstration."

1994 Nov.—"AGP is offered supply from Calgene Chemical for up to 7 million pounds at \$0.115/lb processing charge" [on soybean oil produced by AGP].

1995 Jan.—"Calgene management change results in offered supply dropping to 2 million pounds at processing charges as high as \$0.15/lb.

"Total cash expenses (not including staff time and travel): \$118,707.

"Total cash income (grants): \$136,000." Note: The two lines above seem to imply that AGP's strategy and generosity actually resulted in a net income of \$17,300 over these three years.

Letter (e-mail) from John Campbell to William Shurtleff of Soyinfo Center—in response to questions. 2007. July 12. John was hired by AGP in Nov. 1991. Before that time, he had served as Undersecretary for International Affairs and Commodity Programs, under Clayton K. Yeutter during the first two Years of the Bush (Sr.) Administration and also under Edward Madigan when he became secretary of Agriculture in March 1991, after Yeutter resigned to become

chairman of the Republican National Committee (RNC).

John's initial title was Assistant Vice President of Corporate and Member Relations—approximately. John did not step into Bill Lester's job when Bill retired; rather he ended up reporting to Group Vice President Joe Meyer when AGP got involved with ethanol and biodiesel. John's title eventually changed to Vice President for Industrial Products and Government Affairs. In short, AGP split member and government relations and created a new "Industrial Products Division." John wrote this chronology at the request of Joe Meyer as an attachment to a proprietary document justifying AGP's investment in a new biodiesel plant.

John Campbell is not the same person as John R. Campbell, who was dean of the College of Agriculture, University of Illinois, and an early leader in the New Uses Movement. Address: [AGP, Omaha, Nebraska].

678. Liu, Keshun; Orthoefer, Frank; Thompson, Keith. 1995. The case for food-grade soybean varieties. *INFORM (AOCS)* 6(5):593-96, 598-99. May. [10 ref]

• **Summary:** Contents: Introduction. Food beans vs. oil beans. Traditional soyfoods: Soymilk, tofu, toasted full-fat soy flour [kinako], soy sprouts, soy sauce, miso, tempeh, natto. Soy protein ingredients: Soy grits and flour, soy protein concentrates, soy protein isolates. Soyfood nutrition. Current size of food bean market. Breeding of food beans. Conclusions.

"Oil/meal beans include all the commonly produced soybeans." The oil is typically used for food and the meal for livestock feed. However the "new varieties of food soybeans" are generally exported to countries in East Asia for preparation of Oriental soyfoods. Table 3 compares food and oil beans. Seed size: Large vs. small to large. Seed uniformity: High vs. no preference. Hull color: White-yellow vs. yellow. Hull quality: Thin, firm vs. no preference. Hilum color: Clear to buff vs. clear to blank. Protein content: High vs. medium to high. Oil content: Low to high vs. high. Cleanliness: U.S. Grade 1 or better vs. any grade. Major applications: Tofu, soymilk vs. oil, defatted meal.

In addition to their use in making traditional soyfoods, the "new food-grade varieties," especially those with high protein content, have been marketed for preparation of toasted full-fat soy flour, defatted soy flour, and soy protein concentrates and isolates.

Photos show: (1) Keshun Liu, Frank Orthoefer, and Keith Thompson. (2) Color and size comparison of soybeans for food use and those intended for crushing (color). The "food beans" are larger than the "oil beans."

Note: This is the earliest English-language document seen (July 2001) that contains the term "oil beans" or the term "oil/meal beans," both used in contrast to "food beans" or "food soybeans." This is also the earliest English-language document seen (July 2001) with the term "food-grade" (or "food grade") used in the title to refer to soybeans or



soybean varieties. Address: 1. Project Leader, Soyfood Lab., Jacob Hartz Seed Co. Inc., 901 N. Park Ave., Stuttgart, Arkansas 72160; 2. Vice President for research and development, Riceland Foods Inc., P.O. Box 927, Stuttgart, AR 72160; 3. Vice president, International Soyfood Sales, Jacob Hartz Seed Co.

679. *Ag Innovation News (AURI—Agricultural Utilization Research Inst., Crookston, Minnesota)*. 1995. Minnesota milestones: Preference [soy-based herbicide surfactant] has evolved into an entire product line for Cenex/Land O'Lakes. 4(3):2. July.

• **Summary:** During 3 years on the market, Preference has been applied to 27 million acres. A soy-based adjuvant named Destiny has just been launched and is expected to be applied to more than 100,000 acres this summer. Three more non-soy products have been added to the line: two nitrogen premixes and a corn-based product named Class Act. Bob Herzfield of Land O'Lakes says the company is developing more new products using these technologies.

680. Orthoefer, Frank T.; Liu, Keshun. 1995. Soybeans for food uses. *International Food Marketing & Technology (Germany)* 9(4):4-8. Aug. [5 ref]

• **Summary:** Contents: Introduction. Traditional soy foods: Soy milk, tofu, toasted whole soybeans and full-fat soy flour, soybean sprouts, yuba, soy sauce, tempeh, natto, miso. Soy protein ingredients: Soy grits and flour, soy protein concentrates, soy protein isolates. Soy nutrition: Soy protein, fat and calories, phytochemicals. Food bean market. Summary.

Two "different types of soybeans have emerged: oil beans and food beans. This is particularly true in the US soy market..."

Of the fourteen phytochemicals, seven are present in soybeans. These seven are phytates, isoflavones, carotenoids, coumarins, triterpenes, lignans, and phenolic acids. Phytochemicals have been shown to affect human health as much as vitamins and minerals, and many of them have anti-cancer properties. The discovery of phytochemicals may change how the nutritional value of food is assessed.

The world market for soybeans for food use is estimated at about 1 million metric tons (tonnes). In Japan alone about 830,000 tonnes are made into soyfoods as shown in a pie chart as follows: Tofu (552,000 tonnes, 63.4%), miso (180,000 tonnes, 21.5%), natto (90,000 tonnes, 10.7%), soymilk (10,000 tonnes, 1.2%), soy sauce (5,000 tonnes, 0.6%), and others (22,000 tonnes, 2.6%). In the USA the food bean market is estimated at 50,000 tonnes. Other major markets for food beans are in Korea, China, Taiwan, Hong Kong, Singapore, Malaysia, and Thailand. Food-grade soybeans can be sold by that the growers at a premium of 5-20% above the base price. The demand for food beans is increasing steadily. Address: 1. Vice President, R&D, Riceland Foods, Stuttgart, Arkansas; 2. Project Leader, Soy

Food Lab., Jacob Hartz Seed Co., Stuttgart, Arkansas.

681. Minnesota Soybean Research & Promotion Council. 1995. Welcome to Minnesota, the land of 10,000 lakes and 35,000 soybean producers! Where agriculture is the leading industry and soybeans are the number one cash crop! (Leaflet). North Mankato, Minnesota. 1 p. Single sided. Aug. 28 cm.

• **Summary:** This 1-page leaflet signed by Donald Nickel (Chair of the Minnesota Soybean Research & Promotion Council) and Kevin Paap (President of the Minnesota Soybean Growers Association) begins: "Minnesota has had a long and prosperous history of producing soybeans, which many people refer to as 'The Miracle Crop.' Soybeans first came to Minnesota back in the early 1930s as a 'plow down' crop to add nitrogen to the soil for other crops. Since that time, Minnesota has continued to increase its soybean production from a mere 30,000 bushels in 1934 to 230,000,000 bushels in 1994. The 1994 harvest was valued at just over 1 billion dollars. Minnesota is third in the nation in soybean production." Note: Soybeans were actually first being grown in Minnesota by January 1900 (See W.H. Stoddard, 1900).

"More interesting facts: Soybeans are grown in 75 of Minnesota's 87 counties. Over 40% of the soybeans grown in Minnesota are exported throughout the world... Mankato, Minnesota, home of two major soybean processors [Honeyamead Products Co. and Archer Daniels Midland Co.—ADM] with an overall crushing capacity of nearly 180,000 bushels per day, is the largest soybean processing city in all of North America... Minnesota ranks 2nd in the nation in turkey production, 4th in the production of pork, 5th in milk production, and 6th in overall red meat production... We're also proud to report that 96 percent of Minnesota's newspapers are printed with soy ink." Address: 360 Pierce Ave., Suite 110, North Mankato, Minnesota 56003. Phone: 507-388-1635.

682. Campbell, John. 1995. Corporate corner: U.S. soybean crop projected to be third largest in history. *ASA Today (St. Louis, Missouri)* 1(10):6. Sept.

• **Summary:** The USDA projected on Aug. 11 that the 1995 U.S. soybean crop would be 2.246 billion bushels. The only two larger crops were the 2.558 billion bushels harvested in 1994 and the 2.26 billion bushels harvested in 1979. The projected yield would also be the third highest in history after the 41.9 bu/acre record set in 1994 and the 1982 yield of 37.6 bu/acre.

Nevertheless the current U.S. demand will exceed the 1995 crop by nearly 150 million bushels; thus 4 million more acres will need to be planted. Coincidentally there are 4.1 million acres of land previously devoted to soybean production now in the Conservation Reserve Program (CRP). "Bringing this land back into production would mean

more income for American farmers, workers, agribusiness, and others in rural America.”

“Rapid growth of U.S. pork and poultry exports has contributed greatly to record domestic soybean meal demand. The U.S. will have to substantially increase its soybean production if it is to participate in supplying the world’s burgeoning demand for meat, poultry, milk, and eggs... Much of the land currently enrolled in the Conservation Reserve Program could be returned to production of soybeans and other crops. Of the 36.4 million acres [of all crops] enrolled in the CRP, it is believed that at least half can be farmed sustainably if returned to production.” Address: Vice President, Corporate & Government Relations, Ag Processing Inc.

683. Kilman, Scott; Ingersoll, B.; Abramson, J. 1995. Risk averse. How Dwayne Andreas rules Archer-Daniels by hedging his bets: CEO works with rivals, gives to both parties and invests in the media. Soy meatballs on the menu. *Wall Street Journal*. Oct. 27. p. 1, A8.

• **Summary:** very well researched and written profile of Dwayne Andreas and how he applies the concept of hedging to every aspect of ADM’s business life. Andreas was born on 4 March 1918 in Worthington, Minnesota, the son of a Mennonite farmer. From 1936 to 1938 he attended Wheaton College in Illinois. From 1938 to 1945 he was executive officer of Honeyamead Products, a family-owned company. From 1945 to 1952 he was vice president of Cargill.

In 1947, when ADM Chairman Shreve Archer died after choking on a chicken bone, Dwayne Andreas was age 29 and vice president of a rival firm. For the next 18 years, Mr. Andreas built a name for himself in the grain industry and became a millionaire in the process. He left Cargill and returned to Honeyamead, where from 1953 to 1960 he was an executive and the chief shareholder. From 1960 to 1966 he was executive vice president of Farmers Union Grain Terminal Association, a cooperative. By 1965 ADM was foundering (it had never quite recovered from the loss of its leader) and the founding families were ready to sell a sizeable share to Mr. Andreas, to make him a director, and to groom him for the top job. So in 1966 Andreas accepted the offer, joining ADM as a director and member of the executive committee. He spent the rest of his career leaving as little as possible to chance. Now age 77 and a diminutive 5 feet four inches tall, he “runs the giant publicly-trade grain-processing company like a private family concern. Secrecy is so tight that ADM doesn’t even release quarterly revenues. Mr. Andreas once proudly told analysts, “Getting information from me is like frisking a seal.” In 1970 Andreas was named ADM chief executive officer, and in 1972 he was elected chairman of the board.

ADM is now America’s largest commodity processor, with annual revenues of \$12.7 billion. Including stock dividends, ADM’s stock value has climbed at an average annual rate of

17% over the past decade—outpacing the stock market’s annual return of roughly 15%, as measured by the Wilshire 5000 Equity Index. ADM earnings soared 64% during the last fiscal year to a record \$795.9 million.

Notwithstanding criticism that ADM’s board is dominated by Mr. Andreas plus his family and friends, Wall Street sees no possibility of a serious battle for corporate control, and little chance that any other company could pay at least \$8.7 billion (ADM’s market capitalization) to buy the company.

ADM is a major beneficiary of federal price supports for sugar (they make ADM’s high-fructose corn sugar an economical product) and of the 54-cent-a-gallon excise tax break on ethanol (since ADM is the dominant producer of the corn-based fuel additive). Mr. Andreas helps preserve these twin towers of legislative largesse by hedging. ADM leads corporate America in contributing to both political parties. “Since 1981, the company has given more than \$800,000 to the Democratic Party and more than 1.5 million to the GOP” (Republican Party).

ADM dominates four major U.S. markets, controlling an estimated 35% of all corn refining (followed by Staley, Cargill, and CPC International), 31% of high-fructose corn syrup (again followed by Staley, Cargill, and CPC), 28% of oilseed processing (followed by Cargill 25%, Bunge 16%, Ag Processors 14%, Central Soya 10%, and others 7%), and wheat milling (followed by ConAgra 25%, Cargill 12%, Cereal Processors 6%, and others 31%).

Doing business with competitors has long been one of Mr. Andreas’s hallmarks. As he likes to say, “Keep your friends close and your enemies closer.” In 1992 ADM built a 3.5-mile pipeline to neighboring A.E. Staley Mfg. Co., one of its biggest rivals in the high-fructose corn syrup business. (Together the two companies control half of the \$3 billion market.) The pipeline allows either company to call on its neighbor in an emergency for raw material, thus reducing risk.

Four ADM board members are Andreases, and an additional six of the 17 directors are ADM executives, retired executives, or relatives of senior managers. At ADM major decisions are made at the very top, mainly by three men: Dwayne Andreas, his son Michael Andreas (who is in charge of many day-to-day operations), and James R. Randall, who has been president of ADM for 20 years. Top managers operate without budgets or much paperwork. “Decisions are often made in the executive dining room over a lunch of Archer-Daniels soybean cuisine.”

“Once Mr. Whitacre helped arrange a luncheon between Mr. Andreas and visiting executives of a company participating in the lysine meetings in hopes of taping them discussing price fixing. But Mr. Andreas spent the entire lunch talking to his bewildered guests about his favorite product, soy-based meat substitute, then sent them off with a big bag of the stuff.

In August 1994 he told this story concerning his views on

competition: "The gazelle must run faster than the fastest lion or be eaten. And the lion must outrun the slowest gazelle or starve. It doesn't matter whether you are a lion or a gazelle; when the sun comes up, you'd better be running."

"He delights in being the most powerful man in American agriculture, regaling his guests over soy meatballs and catfish with stories of his back-channel diplomacy for American presidents... But Mr. Andreas's enjoyment of *Realpolitik* shouldn't be confused with a lack of conviction friends and associates say. He is passionate about the virtue of spreading soy-based food around the world.—albeit generally at a tidy profit—and about the perils of soil erosion. His uncle was an evangelist and young Dwayne spent hours in revivalist tents listening to the preachers. Mr. Andreas preserves some of that fervor in his own speeches about government and business policy."

In recent years ADM has been sued by Ralston Purina Co. for alleged technology theft. Ralston claimed patent infringement and misappropriation of trade secrets involving a soy protein product. This case is now entering the pretrial discovery phase.

Mr. Whitacre has alleged that ADM pays some top executives through illegal channels. ADM in turn has accused Mr. Whitacre of stealing more than \$9 million from the company.

Meanwhile ADM has continued its upbeat institutional ads that have blanketed the television networks and many publications for years. In a sort of ratings hedge, the company also spent millions advertising on ABC's "This Week with David Brinkley," NBC's "Meet the Press," and CBS's "Face the Nation." From Jan. 1994 to April 1995 ADM spent \$4.7 million advertising on "Meet the Press" and \$4.3 million on "Face the Nation." ADM is also the leading corporate underwriter for the PBS MacNeil/Lehrer Newshour, providing \$6.8 million or 27% of the program's annual budget. Address: 1. Decatur, Illinois; 2-3. Washington, DC.

684. AGP—Ag Processing Inc a cooperative. 1995. Annual report. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 28 + 20 p. 31 cm.

• **Summary:** This annual report is larger in size (30.5 cm) and number of pages than any previous report. Net sales for 1995 (year ended Aug. 31) were \$2,132.295 million, up 15.7% from \$1,842.293 million in 1994. Earnings before income taxes: a record \$95.151 million, up a whopping 122.4% from the \$42.792 million in 1994.

"The year of 1995 will be regarded as unique and profound in the business." "Soybean processing and vegetable oil refining have been the most profitable divisions of your cooperative." "Soy diesel (methyl ester) is an emerging market and AGP, through its affiliate Ag Environmental Products, has become a leader in the marketing of this important, value-added product (p. 5).

Denis E. Leiting has replaced Urban J. Knobbe as Chairman of the Board. Pet Food production is now part of Consolidated Nutrition.

"In May, Ag Environmental Products, LLC was formed to research, develop and market industrial soybean oil-derived products, such as biodiesel. Much credit goes to the American Soybean Association state soybean associations, check-off boards and the United Soybean Board for providing seed money to support soy industrial product efforts" (p. 10).

Adding value: "Production of bypass soybean meal began early in 1995 at [AGP's] Sergeant Bluff and Mason City, Iowa, plants."

"AGP is one of five major producers of soy flour and grits. Soy flour is produced at the St. Joseph, Missouri, facility and marketed into multiple food and feed applications."

AGP now produces nearly 2.3 million tons of formula feeds. Consolidated Nutrition is the 3rd largest commercial feed manufacturer in North America.

Four pie charts (p. 25) show which kinds of animals consume Consolidated Nutrition feeds (swine 28%, dairy 23%), Master Mix feeds (dairy 37%, beef 23%, swine 23%), Masterfeeds (poultry 50%, swine 18%), and Supersweet feeds (swine 42%, beef 21%, dairy 20%).

The "Financial review and analysis" is a separate insert on pages F1 to F20; it contains many bar graphs for the years 1991-1995.

Photos show: (1) A grain trader talking on the phone and the grain trading room. (2) Leiting and Lindsay. (3) A combine harvesting soybeans. (4) members of the board of directors. Address: Omaha, Nebraska. Phone: (402) 496-7809.

685. Richardson, Ralph M.; Adams, C.C.; DeVille, K.C.; Penn, J.E.; Kraenzle, C.A. 1995. Farmer cooperative statistics, 1994. *USDA Rural Business/Cooperative Service, RBS Service Report No. 49*. vi + 44 p. Nov. 28 cm.

• **Summary:** The Cooperative Marketing Act of 1926 authorized the federal government to acquire, analyze, and disseminate statistics about farmer cooperatives.

Contents: Highlights. 1. Definition of a farmer cooperative: Classification of cooperatives, organizational membership structures. 2. 1995 statistics: Number of cooperatives (4,174), memberships, cooperative size, business volume, net income, balance sheet, selected financial ratios. 3. Cooperative trends, 1985-94: Number of cooperatives, memberships, employees, business volume, net income, balance sheet. 4. Other service cooperatives: Farm credit system, rural telephone cooperatives, rural electric cooperatives, rural credit unions, dairy herd improvement associations.

Contains 19 tables, 13 figures (mostly graphs and pie charts), and 10 Appendix figures.

USDA's "Cooperative Services (CS) considers four major



criteria in identifying an organization as a farmer cooperative: (1) Membership is limited to persons producing agricultural and aquacultural products and to associations of such producers; (2) cooperative members are limited to one vote despite the amount of stock or membership capital owned, or the cooperative does not pay dividends on stock or membership capital in excess of 8 percent a year, or the legal rate in the State, whichever is higher; (3) business conducted with nonmembers may not exceed the value of business with members; and (4) the cooperative operates for the mutual interest of members by providing benefits on the basis of patronage.

Cooperatives are doing well. Record net income of \$1.96 billion was up 44.5% from the \$1.36 billion reported in 1993. A pie chart titled "Relative importance of farm products marketed by cooperatives, 1994" (fig. 4, p. 8) shows that dairy products have the largest share (32.8%) of the \$65.5 billion sales, while grains and oilseeds are in second place (26.8%). A graph titled "Cooperatives' sales of selected commodities" (Fig. 10, p. 17) shows that sales of grains and oilseeds have risen steadily from \$10 billion in 1987 to about \$17.5 billion in 1994. No statistics are given for individual cooperatives. Address: Statistics and Technical Services Staff, Cooperative Services, Rural Economic and Community Development, USDA.

686. Liu, KeShun; Orthoefer, F.; Brown, E.A. 1995. Association of seed size with genotypic variation in the chemical constituents of soybeans. *J. of the American Oil Chemists' Soc.* 72(2):189-92. [13 ref]

• **Summary:** Ten soybean genotypes were grown in 1992 with seed size ranging from 7.6 to 30.3 gm per 100 seeds. Significant correlations were found between seed size and individual unsaturated fatty acids—positive with oleic acid, and negative with linoleic and linolenic fatty acids. Address: 1&3. Jacob Hartz Seed Co., Inc., 910 N. Park Ave.; 2. Riceland Foods, Inc. Both: Stuttgart, Arkansas 72160.

687. Young, Raymond A. 1995. Cultivating cooperation: A history of the Missouri Farmers Association. Columbia, Missouri: Univ. of Missouri Press. xiv + 246 p. Illust. Index. 24 cm. [29 endnotes]

• **Summary:** Contents: Foreword, by Bud Frew. Preface: What is MFA? (Founded 10 March 1914). Acknowledgments. Introduction, by Michael L. Cook. Prologue: The Post-Civil War era in Missouri, 1885-1910. Part I: The Hirth era, 1914-1940. 1. William Hirth and the farm club movement. 2. The creation of a statewide organization. 3. Continued growth: The early 1920s. 4. Politics and conflict. 5. MFA in the 1930s. 6. The end of an era.

Part II: The Heinkel era, 1940-1979. 7. Expanding business ventures: The 1940s. 8. MFA in the 1950s. 9. Reorganization: The 1960s. 10. MFA, a good neighbor. 11. MFA in the 1970s. 12. Heinkel defeated by Thompson, 1979.

Epilogue. Appendixes. 1. MFA Oil Company: A brief history. 2. MFA Livestock Association: A brief history. 3. Members of the Board of Directors, Missouri Farmers Association, 1917-1994.

"William Hirth, the powerful farm leader, and his magazine, *The Missouri Farmer*, provided the glue that held the farm clubs and businesses together. Each MFA agency elected its own board of directors, which, in turn, chose the agency's manager." MFA's goal was to improve the economic status of each of its members. Hirth died in 1940.

The work of the co-op's soybean processing plant at Mexico, Missouri, is discussed on pages 6, 142-43, 147, 154, 163, 167, 190, 192, and 208-09.

In 1943 MFA bought the Pollack Feed Mill in Mexico, Missouri, with the intention of converting it into a soybean processing plant. Also in 1943, Maurice Maze, who had managed farmers exchanges at Sullivan and Washington, became manager of the Mexico, Missouri, operation. After delays caused by a shortage of materials during World War II and a fire in 1944, "the plant finally started operation in late 1946" with a capacity of 1,800 bushels/day (p. 147).

Note: *Soybean Digest* (Oct. 1945, p. 15) says the plant began operation in early 1944, but was soon shut down by a fire in March 1944; it had resumed operations by Oct. 1945 with two expellers.

In 1962 a new solvent extraction soybean plant began operation in Mexico, Missouri, under the management of Kermit Head. This new plant had a capacity of 15,000 bushels/day; the previous expeller plant had crushed 3,000 bushels/day (p. 167).

In the early 1980s MFA suffered major financial losses; the soybean processing plant in Mexico, Missouri, was sold (p. 208-09).

A graph (p. 167) gives the growth of all MFA agencies from 1939 to 1961. Assets grew from \$6.8 million to \$99.5 million (14.6 fold). Net worth grew from \$4.6 million to 46.3 million. Sales grew from \$49.0 million to 352.6 million (7.2 fold). Savings [profit] grew from \$0.835 million to \$6.4 million. And members grew from 26,659 to 160,717 (6.0 fold). Savings for the entire period totaled \$104 million for all agencies. Elevators at 165 locations had 24 million bushels of storage capacity.

Heinkel was narrowly defeated by Governor Orville Freeman of Minnesota to be Secretary of Agriculture during the Kennedy Administration; neither man sought the job (p. 165-66).

Contains at least 35 photos, mostly portrait photos of key people in MFA's history, and related buildings. Raymond Young lived 1912-1993. Address: President emeritus MFA Oil Company.

688. *Soybean Quarterly* (Nebraska Soybean Board, Lincoln, Nebraska). 1996. Baking with soy: Variety reference guide. 2(2):6. Insert.

• **Summary:** A full-page table shows products used in baking that are now on the market from the following companies: ADM (6 products), AGP (4 types of Agsoy flour and grits), Cargill (5), Central Soya (4), and Protein Technologies International (5).

689. Lang, Paul. 1996. St. Peter Creamery and Agronico (Interview). *SoyaScan Notes*. May 3. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Paul does not know what happened to St. Peter Creamery. Note: St. Peter Creamery of St. Peter, Minnesota, introduced Soy Supreme Spray-Dried Soymilk Powder in Dec. 1984 and Soy Supreme Spray-Dried Tofu Powder in July 1985.

Paul tried phoning the company several years ago but there was no answer. He tried to figure out what happened but with no results. Try contacting Allan Routh (rhymes with "south") who is the brains behind SunRich, which is mainly a marketing group. Allan is on the board of the Soyfoods Association, and has an ad in the 1995 Soya Bluebook Plus (p. 59, 134). Paul is almost certain that SunRich gets its spray-drying done by Zumbro. Paul does not know who makes SunRich's soymilk.

Agronico (run by Mike Vincent) is basically out of business. Paul has heard (within the last week) that Agronico is being taken over by Honeymead, and they plan to make TVP. Address: Natural Products, Inc., 798 Hwy 6, Grinnell, Iowa 50112. Phone: 515-236-0852.

690. National Biodiesel Board. 1996. Board of directors and related documents. Jefferson City, Missouri. 15 p. Unpublished typescript. July 3.

• **Summary:** (1) The states represented are: Indiana, Iowa checkoff, Iowa association, Illinois checkoff, Missouri, Nebraska, Ohio, South Dakota, Michigan, Minnesota, SC/TN [South Carolina and Tennessee, combined as one], Wisconsin. For each state is given: One farmer representative and one staff rep. Staff (incl. Kenlon Johannes, executive director, and Jeffrey Horvath, Program director) and the executive committee are listed at the end.

(2) NSDB associate members: Cargill, TRT (Twin Rivers Technology), OSGMB (Ontario Soybean Growers' Marketing Board), FPRF (Fats & Proteins Research Foundation, Inc.), NOPA / AGP (John Campbell), AEP (Ag Environmental Products, Doug Pickering), NOPEC.

(3) USB and the American Soybean Association staff. (4) Cooperators. (5) Potential members and other QSSB's.

(6) Consultants (7) Sub-contractors. (8) Agricultural and related organizations.

(9) Observers and advisors (government). (10) Observers and advisors (industry). (11) Observers and advisors (information & research services). Address: Jefferson City, Missouri.

691. Thompson, Kate. 1996. Sergeant Bluff will get new AGP facility. *Sioux City Journal (Iowa)*. Aug. 24. p. A3.

• **Summary:** Ag Processing Inc. (AGP) plans to build a \$6 million plant to make methyl esters and crude glycerin from soybean oil at Sergeant Bluff, where the cooperative already has a soybean crushing plant. Last month, the company was granted a tax abatement for the new facility by the Woodbury County Board of Supervisors. The new plant is expected to be completed by the end of this year and to add 7 new jobs at Sergeant Bluff. "Methyl esters are used in biodiesel fuels, industrial cleaning solvents and [as an adjuvant in] an agricultural spray that improves herbicide performance." Biodiesel is a soy-based additive for diesel fuel just as ethanol is a corn-based additive for gasoline. The plant is expected to use 3½ million bushels of soybeans each year (about 90,000 acres). Address: Journal staff writer.

692. Campbell, John. 1996. Corporate corner: Getting to know AGP [Ag Processing Inc.]. *ASA Today (St. Louis, Missouri)* 2(9):4. July/Aug.

• **Summary:** Ag Processing Inc. is "headquartered in Omaha, Nebraska. We are regionally federated cooperative, meaning that our stockholders are local and regional cooperatives, who in turn are owned by farmers. Geographically, our membership is concentrated in Iowa, Minnesota, Nebraska, South Dakota, Kansas and Missouri. The AGP core business is soybean processing with six plants in Iowa (one under construction) and one each in Minnesota and Missouri. Since our formation in 1983, we have added soybean oil refining as another value-added investment in farmers' beans.

"Brand names such as Supersweet Feeds, Master Mix and Tindle Mills are operated by the partnership. AGP is also one of the nation's leading manufacturers and developers of private label pet foods. Most of our pet food business is private label but a growing share is for our own brands such as Sir John's, Bow Wow, Gainer and others." Address: Vice President, Corporate Affairs & Industrial Products, AGP, Omaha, Nebraska. Phone: 1-800-247-1345.

693. Campbell, John. 1996. Corporate corner: It's official! AGP is building a soydiesel plant which will be online by year-end. *ASA Today (St. Louis, Missouri)* 2(10):4. Sept.

• **Summary:** The AGP Board approved the new plant as part of the cooperative's strategic plan to develop new value-added uses for soybean oil. The six million gallon plant will be located at Sergeant Bluff, Iowa, next to AGP's existing soybean crushing plant. "The facility will receive some financial support from the State of Iowa and Woodbury County. However without the past and present support from soybean farmers through the ASA [American Soybean Association], the United Soybean Board and state associations and boards, AGP would not have proceeded with this project.

"In addition to Soydiesel, AGP and its marketing partner-

ship, Ag Environmental Products (AEP), will manufacture and market industrial cleaning solvents and agricultural spray adjuvants made from soybean oil methyl esters.

Many soybean producers have expressed skepticism about the viability of a fuel that costs 3 times the price of regular diesel fuel. Moreover, biodiesel does not have a tax incentive like ethanol to bring it down to street fuel prices. But Soydiesel has a bright future in niche markets. Remember that a small fuel market is a big soybean oil market. A tiny one tenth of one percent of the U.S. diesel fuel market would require 440 million pounds of soybean oil—more than the capacity of the new plant. Address: Vice president, corporate affairs & industrial products, Ag Processing Corp.

694. *Soybean Digest*. 1996. Land O'Lakes marks 75th anniversary. Oct.

• **Summary:** Based in Arden Hills, Minnesota, Land O'Lakes is an agricultural supply, dairy processing, and food marketing cooperative. With annual sales of more than \$3 billion and net earnings of \$120 million, the co-op employs more than 5,000 people and operates more than 75 processing, manufacturing, warehousing, and distribution centers.

695. AGP—Ag Processing Inc a cooperative. 1996. Annual report. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 28 + 20 p. 28 cm.

• **Summary:** Net sales for 1996 (year ended Aug. 31) were \$2,764.549 million, up 28.6% from \$2,150.422 million in 1995. Earnings before income taxes: \$56.221 million, down 41.1% from the record \$95.151 million in 1995.

“Strong returns were again posted by the soybean processing group, primarily the result of continuing growth in meal demand... Also, AGP began construction of a new soybean crushing plant at Emmetsburg, Iowa.” It is the first new soybean processing plant built in the Company's history. It is slated for opening by the harvest of 1997.

“Continuing our value-added efforts, a processing plant to manufacture methyl esters from soybean oil is being constructed at Sergeant Bluff, Iowa. While known primarily as soydiesel, methyl esters have many other uses in addition to motor fuel, and we plan to capitalize on these opportunities. AGP is the second processor in the U.S. to build this type of plant and, despite being medium risk, we believe that this market will continue to expand” (p. 4).

AGP finished constructing a corn processing and ethanol plant at Hastings, Nebraska. It began operating in Nov. 1995, and is already making money. Pelleting projects were completed in Dawson, Minnesota, and St. Joseph, Missouri.

“ProAgro, a Venezuelan food and feed business in which Ag Processing has a substantial investment, is doing as well as expected.”

“AGP began manufacturing high bypass soybean meal, Amino Plus [brand name; renamed AminoPlus in 2001], at Mason City as well as Sergeant Bluff, Iowa. Amino Plus,

developed through AGP research, has been shown to increase milk production up to ten percent in lactating dairy cattle. The patent for this process is pending.”

“Nine hundred hopper cars were added to the rail fleet...”

New directions: “Methyl ester is the product remaining after glycerin (a food and cosmetic ingredient) is removed from soybean oil. AGP's methyl ester products are marketed by Ag Environmental Products, LLC.” Discusses methyl ester applications at length (p. 22-23). Photos show: (1) The board of directors. (2) Top management. Address: Omaha, Nebraska. Phone: (402) 496-7809.

696. Richardson, Ralph M.; Adams, C.C.; DeVille, K.C.; Penn, J.E.; Kraenzle, C.A. 1996. Farmer cooperative statistics, 1995. *USDA Rural Business/Cooperative Service, RBS Service Report No. 52*. vii+ 54 p. Nov. 28 cm.

• **Summary:** The contents is the same as last year. Contains 25 tables, 16 figures (mostly graphs and pie charts), and 10 Appendix figures.

Cooperatives are thriving, with 1995 being a record year nationwide for net income (\$2.36 billion, up 20.1% over 1994), and gross and net business volumes. Minnesota is the leading state in number of cooperatives (389), while California has the most memberships (329,241).

The major types of cooperatives in the USA are marketing co-ops (2,074), farm supply co-ops (1,458), and service co-ops (474).

The four commodities most widely sold by co-ops are milk, grains (incl. seeds), fruits and vegetables, and live-stock. Address: Statistics and Technical Services Staff, Rural Business-Cooperative Service, Rural Development, U.S. Dep. of Agriculture, STOP 3256, Washington, DC 20250-3256.

697. Campbell, John. 1996. Corporate corner: Two things farmers can do to promote biodiesel. *ASA Today (St. Louis, Missouri)* 3(1):6. Oct/Nov.

• **Summary:** For more than 10 years, farmers have had to fight the battle for renewable fuels (biodiesel and ethanol) on the grounds of environmental benefit, budget savings, and agricultural well-being. But a Senate hearing on 2 Oct. 1996 changed all that. High ranking military and intelligence experts testified, for the first time, about the national security implications of the growing U.S. dependence on foreign oil.

Farmers should do two things now: (1) Contact “your local fuel supplier and ask what percent of soydiesel is in their premium diesel. When they say zero, ask them to” please consider adding some for better lubricity and performance. (2) Let the person or company that applies your post-emergence herbicides know that you want metholated seed oil (MSO) in your herbicides next season. Address: Vice president, corporate affairs & industrial products, Ag Processing Corp.



698. Tucker, Jim. 1996. Producers create first South Dakota soybean processing plant. *Farmland System News (Kansas City, Missouri)* 64(11):1, 4. Dec.

• **Summary:** The South Dakota Soybean Processors is a new producer-owned plant located six miles west of Brookings at Volga, South Dakota. Twenty-one hundred soybean producers combined their resources to create the \$32.5 million facility, which has a capacity of 16 million bushels/year and is the state's first soybean processing plant. A color photo shows an aerial view of the plant. Address: Corporate Communication.

699. **Product Name:** Amino Plus (Rumen Bypass Soy Protein). Renamed AminoPlus in 2001.

**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Mason City and Sergeant Bluff, Iowa.

**Date of Introduction:** 1996.

**Ingredients:** Soybean meal.

**How Stored:** Shelf stable.

**New Product–Documentation:** AGP Annual report. 1996. "AGP began manufacturing high bypass soybean meal, Amino Plus [brand name], at Mason City as well as Sergeant Bluff, Iowa. Amino Plus, developed through AGP research, has been shown to increase milk production up to ten percent in lactating dairy cattle. The patent for this process is pending" (p. 6). AGP Annual Report. 2001. AminoPlus is "AGP's high performance dairy supplement."

AGP Annual Report. 2005. "AminoPlus milestones: New status as number one product in the U.S. rumen bypass protein market." "A unique, all-natural dairy feed ingredient made entirely from AGP soybean meal,..." (p. 5, 13).

700. Harvest States Cooperatives. 1996. Yesterday, today & tomorrow. St. Paul, Minnesota. 21 p. 28 cm.

• **Summary:** Contents: Our mission. Forward. The beginnings. The 1930s. The 1940s. The 1950s. The 1960s. The 1970s. The 1980s. The 1990s. And beyond. "When the best leader's work is done, the people say, 'We did it ourselves!'"

The page titled "The Beginnings" notes that at the turn of the 20th century, "after years of battling grain merchants, bankers, and railroads, farmers in the Midwest and Pacific Northwest took important organizational steps in their quest for fair prices for their commodities and more control over how they were marketed."

In 1908, farmers came together in Minneapolis, Minnesota, to form the Equity Cooperative Exchange as a grain terminal marketing agency. The Exchange, whose headquarters were later moved to St. Paul, had but a short life." In 1923, after a series of operating losses, its directors voted to place the cooperative in receivership.

"From the Exchange's ashes in 1926 rose the Farmers Union Terminal Association (FUTA)..." It survived until the

hard years of the Great Depression in the 1930s. The Farmers Union Grain Terminal Association (also called GTA) was incorporated by FUTA in anticipation of the demise of Farmers National Grain Corporation, a nationwide cooperative. GTA officially opened for business on 1 June 1938 at 1923 University Avenue in St. Paul, Minnesota. "Headed by M. W. Thatcher as general manager, the new organization listed 121 local associations as members. Its facilities consisted of one terminal elevator (Elevator 1 in St. Paul) and two branch offices." Photos show Elevator 1 and GTA's original headquarters in St. Paul.

The sections titled "The 1940s" and "The 1950s" describe the growth and expansion of GTA. "In 1942, GTA made its entry into the value-added arena by purchasing Amber Milling (see photo) in Rush City, Minnesota, a maker of durum wheat flour and semolina." a

The page, titled "The 1960s, begins: "GTA opened the new decade on a fast track The 1960 purchase of the Honeymead soybean processing plant at Mankato, Minnesota, and the ADM Commander elevator line in Southern Minnesota marked a major expansion for the cooperative. The acquisition of the Honeymead facility was just the start of what has proved to be an almost continuous expansion of the cooperative's presence in value-added operations.

"Also in 1960, GTA Feeds began building feed plants to increase service to patrons in North and South Dakota and opened its research farm and main office in Sioux Falls, South Dakota.

"Installation of the first electronic computer at GTA's headquarters was another important addition to the organization as the decade began.

"In 1961, GTA purchased the Minnesota Linseed Oil Co. at Fridley. Later made part of the Honeymead operation, the plant processed flaxseed into linseed oil and sunflower seed into sun oil.

"For NPGG, the early part of the decade brought a new member investment program aimed at financing the cooperative's expanded presence in grain exports. The 1962 dedication of the new export terminal at Kalama, Washington, on the lower Columbia River, culminated years of effort to give Northwest producers more marketing strength by providing a farmer-owned gateway to the rapidly expanding Pacific Rim market."

"With the decade's emphasis on exports, GTA joined with six other regionals to begin construction on a five million bushel export elevator at the port of New Orleans [Louisiana] on the lower Mississippi River. The operation, known as Farmers Export Co. (FEC), provided an important new export artery to its farmer-owners in time for the Fall 1968 harvest." One photo shows an oil tanker on wheels. On the side is written, in large letters, Honeymead Products Company: Mankato, Minnesota.

"The 1980s." "June 1, 1983, marked a major milestone in the history of cooperative grain marketing in the United

States with the combination of GTA and NPGG [Northern Pacific Grain Growers] in Harvest States Cooperatives.” Address: [Mankato, Minnesota].

701. El-Hai, Jack. 1996. Celebrating tradition, building the future: Seventy-five years of Land O’Lakes. Minneapolis, Minnesota: Land O’Lakes, Inc. 132 p. Illust. No index. 26 x 26 cm.

• **Summary:** Land O’Lakes is a cooperative, created by cooperative creameries in 1921 in order to solve 3 specific problems concerning butter: (1) its high transport costs, especially to New York City; (2), its erratic, often poor quality when made from soured milk; and (3) the lack of a marketing plan and vision for the future.

The cooperative first became widely known as a pioneer in making America’s best sweet-cream butter, and for its colorful package featuring a kneeling Indian maiden holding a carton of the organization’s butter. The cooperative was based in Minnesota, “the land of 10,000 lakes.”

This is a beautiful book, artistically designed, filled with superb old photos and illustrations (many in color), printed on glossy paper with a hardcover binding. The chronology of milestones is well done and very helpful. By the 1890s, dairying had become firmly established in the upper Midwest.

1891–Minnesota governor John Pillsbury attracts Theophilus Levi Haecker, an expert in the science of buttermaking, to the Univ. of Minnesota. Haecker tours Minnesota’s dairy plants and encourages the formation of co-op creameries. 1896–The Minnesota Dairy and Food Department reports that the unsanitary methods used to produce butter often result in a product that “smells bad, tastes worse and does not keep at all.” 1899–Less than a decade after his arrival in Minnesota, Haecker’s efforts paid off. The number of co-op creameries in the state skyrocketed from two in 1891 to 438 by the end of the decade.

1901–The invention of the hand-operated cream separator enables dairy farmers to more easily skim the butterfat from their own milk, but also attracts large-scale butter makers (or “centralizers”) to the Midwest. 1920–John Brandt, a dairy farmer from Litchfield, Minnesota, is elected president of the Meeker County Creamery Association, a federation of co-op creameries interested in reducing shipping costs and improving the quality of their butter. 1921 June 7–“Representatives of 320 of the state’s co-op creameries meet in St. Paul to form the Minnesota Cooperative Creameries Association. John Brandt is elected to the board of directors. 1924 March–The association–in need of a catchy trade name to use in marketing the members’ butter–holds a contest to name the brand. The judges select ‘Land O’Lakes’ from among nearly 100,000 entries... 1926–Positive response to the Land O’Lakes butter name prompts the membership to change the name of the Minnesota Cooperative Creameries Association to Land O’Lakes Creameries, Inc.”

“1929–Land O’Lakes opens a feed department to sell feeds for cattle, hogs, and poultry. Using higher-grade feeds, farmers are able to produce higher-quality milk, eggs and poultry that bear the Land O’Lakes label.”

In the mid-1930s Land O’Lakes is a pioneer in introducing sophisticated, automated equipment for packing, labeling, and boxing sticks of butter in its “butter print room.”

1951–Land O’Lakes introduces Calf Milk Replacer, a revolutionary feed that substitutes for (and is better than) the increasingly valuable skim milk that dairy farmers had formerly fed to their calves. A scientific formula (non-soy), it was developed by Dr. Frank Crane of the Land O’Lakes Feed Department.

“1969–This is a peak year acquisitions and mergers, with 37 organizations becoming part of the Land O’Lakes family.

“1970–In a step that begins a tremendous growth in Ag Services, Land O’Lakes merges with Farmers Regional Cooperative (Felco) of Fort Dodge, Iowa.”

“1981–Land O’Lakes moves to a new corporate headquarters building in Arden Hills, Minnesota.”

“1982–Land O’Lakes merges with Midland Cooperatives, a Minneapolis-based ag supply co-op that markets feed, seed, agronomy products and petroleum.”

“1987–An innovative joint venture with Cenex results in shared ownership of the Cenex / Land O’Lakes Agronomy Co. and a marketing effort that unifies the Feed and Seed operations owned by Land O’Lakes with the petroleum operations owned by Cenex.”

“1996–The 75th Annual Meeting celebrates Land O’Lakes best year ever, with earnings in each core business exceeding plan.” Address: Minneapolis, Minnesota.

702. Varner, Elizabeth. 1996. Mills and elevators: Soybean Co-operative Company. Soybean fan mill. West of VioBin on Livingston (leaflet). Monticello, Illinois. 1 p. 28 cm. [3 ref]

• **Summary:** This 1-page typewritten chronology states: 1922–Soybean Co-Operative Company (Stock was practically all owned by farmers) (page 54-55, 1937 Centennial History; photo on p. 54).

1926–Soy bean plant on West Livingston, leased to E. Peter Dengler, manager of Industrial Research Laboratories of Chicago (p. 28, 1937 Centennial History) (building owned by William Lodge, Sr.).

1932–Soy bean plant leased to Ezra R. Levin of Chicago. Evert R. Worsham of Sullivan was placed in charge.

1933-1973–VioBin Corporation.

1973–A.H. Robbins Company, a drug firm, purchased VioBin.

1996–McShares Inc. purchased and operates VioBin USA.

At the bottom of the page is a photo of the old Soybean Co-operative Company taken in 1937, and the text describing it, both photocopied from pages 54-55 of the Centennial History of Monticello, Illinois, published in 1937.

Talk with Lynn Richardson, Allerton Public Library, Monticello, Illinois. 2005. Aug. 11. The original soybean building was torn down long ago; no trace of it exists. A few hundred feet away are 5-6 new buildings which house the VioBin plant, plus a modern office building. Address: Local historian, Monticello, Illinois.

703. *AGP News*. 1996—. Serial/periodical. Omaha, Nebraska: Ag Processing Inc a cooperative. Frequency: 5 or 6 times a year. 8 p.

• **Summary:** This newsletter (typically 8-12 pages, printed in color on glossy paper) provides current information to members.

Letter (e-mail) from Kathy Anliker, administrative assistant, corporate / member relations, AGP. 2007. March 16. Ed Woll said that AGP's newsletter started in the late 1980s and was known as the Beanery Bit; it later became AGP News. Address: Omaha, Nebraska.

704. Stoll, Kevin. 1997. CFA returns record patronage. *Farmland System News (Kansas City, Missouri)* 65(1):14. Jan.

• **Summary:** The Cooperative Finance Association, Inc. (CFA) "announced record pre-tax earnings of over \$4 million for the financial services cooperative. As a result of the strong earnings, CFA was able to return to its membership approximately \$1.6 million in the cash portion of the patronage refunds. The cash portion represented nearly 39 percent of the total patronage distribution for 1996." Note: The remaining 61% became "allocated retained patronage." The members of CFA pay their capital expenses (for projects requiring capital investment) through use of their retained patronage and retained earnings. Address: CFA.

705. Tucker, Jim. 1997. Tradigrain gives Co-op System a "window" on the world. *Farmland System News (Kansas City, Missouri)* 65(1):9, 11. Jan.

• **Summary:** "Three years ago [about 1994] Farmland bought Tradigrain, a grain marketing group headquartered in Geneva, Switzerland, in order to provide the Co-op System a 'window' to the world of international commerce.

"Tradigrain is a trading group that buys and sells grain globally to make a profit..." Its main business is also Farmland's strength: hard red winter wheat (HRW). Address: Corporate Communication.

706. *Biodiesel Report (NBB, Jefferson City, Missouri)*. 1997. Methyl ester plant becomes operational [AGP]. Feb. p. 6.

• **Summary:** A new methyl ester plant, opened by Ag Processing Inc. (AGP), became operational in November 1996 and will process soybean oil to make biodiesel and other methyl ester products. The biodiesel is being added to its soybean processing operation in Sergeant Bluff, Iowa. Soybeans processed at the existing plant will be used to

make biodiesel at the new plant.

"AGP is a regional cooperative based in Omaha and owned by more than 300 local cooperatives representing more than 350,000 farmers in 15 states.

"AGP is a leader in developing markets for soybean oil-based industrial products. In 1995, AGP formed Ag Environmental Products, L.L.C., to research, develop and market industrial soybean oil-derived products such as biodiesel... The plant will employ seven people and will use about 3.5 million bushels of soybeans each year when in full production.

"According to John Campbell, vice president of AGP's industrial products, the methyl ester produced by the new plant will go toward making biodiesel fuels, industrial cleaning solvents and agricultural spray adjuvants."

For more information: Bill Ayres, Ag Environmental Products, L.L.C. Phone: 913 / 599-6911, Fax: 913 / 599-2121.

707. Campbell, John. 1997. Re: Biodiesel. Letter to Trevor Gunthmiller, May 7. 1 + 8 + 8 + 5 p. Typed on "AGP Memorandum" letterhead.

• **Summary:** This 22-page letter consists of four parts: (1) A 1-page memorandum to Trevor Gunthmiller (with the American Coalition for Ethanol), dated 7 May 1997. (2) An 8-page news release from The White House, Office of the Press Secretary, titled "The President's program to encourage ethanol use in meeting the environmental goals of the Clean Air Act: Fact sheet," dated 1 Oct. 1992. (3) An 8-page draft of the "Biodiesel Fuels Incentives Act of 1993," dated 10 May 1993. (4) A copy of S.465, the Senate bill introduced by Tom Daschle "To Amend the Internal Revenue Code of 1986 to encourage the production of biodiesel and certain ethanol fuels, and for other purposes," dated 25 Feb. 1993.

Campbell's insights in the memorandum are very useful. "Trevor: Your call regarding Eric Washburn's biodiesel comments prompted me to rummage the files for the history of our legislative efforts with Senator Daschle [D-SD] and his staff." Note: Eric Washburn was the energy staffer in Tom Daschle's office.

"The enclosed 'Biodiesel Fuels Incentives Act of 1993' was our industry effort to answer the question 'What do you want?' The legislation was submitted to Daschle's staff. Our proposal was very specific about \$.77/gallon—which is the 'same as' ethanol on a BTU basis.

"What returned from the Congressional legislative drafting mill was S.465. This legislation proposed changes in the ethanol program as well as to initiate a biodiesel program. As you can see, S.465 looks little like the 'Biodiesel Fuels Incentives Act of 1993.'

"In addition to uncertainty in how the program would work, the authors of S.465 decided to skirt the issue of how much the biodiesel incentive would be and instead chose to use the words '... treated in the same manner as alcohol...'



"All this is not to complain because any assistance from Congress for alternative renewable fuels is appreciated. However we do have some history on this with Senator Daschle and it is disconcerting to hear the same questions being repeated after all the effort we and his staff put forth.

"As an interesting historical note, in the closing days of the Bush [Sr.] Administration they put forth an ethanol / renewables program that included support for biodiesel incentives.

"Both the Daschle legislation and the Bush Administration proposals went nowhere. However, as you are well aware, just getting these ideas to the official proposal stage was no small piece of work.

"Let's compare notes on this when you get a chance."  
Address: [AGP, Omaha, Nebraska].

708. Hager, Stacey. 1997. Soydiesel gets on-farm debut. *Soybean Digest*. May/June. p. 5.

• **Summary:** "Soybean growers in seven states now can buy soydiesel at the pump and in bulk. Freeman (South Dakota) Co-op Oil / Fertilizer recently became the first retailer to offer diesel fuel containing SoyGold for farm and commercial use. On the first day, 50,000 gallons were contracted for on-farm use.

"Manufactured from 100% soybean oil, SoyGold is a low blend of soybean methyl esters" [made by AGP at Sergeant Bluff, Iowa]. "Making the low-blend biodiesel fuel available for farm use was an idea that came out of a National Biodiesel Board (NBB) research committee meeting." Until recently, soydiesel has been marketed only to "mass-transit bus systems, underground mines and for marine uses to reduce exhaust emissions."

SoyGold will be promoted and marketed through Farmland Industries fuel distributors in seven states, in cooperation with Ag Environmental Products and the NBB.

"SoyGold was developed five years ago" [sic] by Ag Processing Inc. of Omaha, Nebraska. Jeff Horvath is the chief executive officer of the (NBB).

Note: This is the earliest English-language document seen (June 2007) that contains the word "SoyGold," a brand name owned by AGP.

709. **Product Name:** SoyGold (Soy Methyl Ester; Biodiesel).

**Manufacturer's Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer's Address:** Sergeant Bluff, Iowa.

**Date of Introduction:** 1997. June.

**Ingredients:** Soybean oil.

**How Stored:** Shelf stable.

**New Product-Documentation:** Hager, Stacey. 1997.

"Soydiesel gets on-farm debut." *Soybean Digest*. May/June. p. 5. "Soybean growers in seven states now can buy soydiesel at the pump and in bulk. Freeman (South Dakota)

Co-op Oil / Fertilizer recently became the first retailer to offer diesel fuel containing SoyGold for farm and commercial use."

AGP Annual report. 1997. Industrial products: AGP now produces methyl ester at its soybean processing plant in Sergeant Bluff, Iowa; it is "the product remaining after glycerin (a food and cosmetic ingredient) is removed from soybean oil." "'SoyGold' is the flagship label [brand] of AGP's line of methyl ester products" (p. 26).

710. Haumann, Barbara Fitch. 1997. Soy protein foods gain store space. *INFORM (AOCS)* 8(6):588-596. June.

• **Summary:** Contents: Introduction. Nutritional drive. Meat alternatives. Soymilk and tofu markets. Soybeans as vegetables. Emerging products. Products consumers want. Hurdles. Possible health claim? School lunch opportunities (federal school lunch program). Product promotion. Nutraceuticals.

Soy protein foods sold in supermarkets are no longer targeted at only vegetarians; they're becoming mainstream products. Many U.S. consumers are decreasing their consumption of meat. USDA food intake surveys show that from 1977 to 1994 per capita beef consumption decreased 54% and pork consumption dropped 45%.

The leader in meat alternatives is Worthington Foods, which has seen sales rise approximately 20% in each of the past 3 years. Its Morningstar Farms brand, sold in frozen food sections in supermarkets and geared for mainstream consumers, represents 75% of the company's offerings.

PMS Foods, Inc. in Hutchinson, Kansas, is among the companies that make meat alternatives, including soy-based beef, chicken, ham, pepperoni, bacon, sausage-flavored crumble, sloppy joe mix, soy-based taco mix, and soy-based chili mix—which it sells wholesale, primarily to foodservice operations. Some of its products are used as ingredients in supermarket products—such as bacon bits and salad dressing mixes.

Steve Demos, founder and president of White Wave, jokes: "We're primarily a dairy without a cow. We 'milk' soybeans. Founded in 1977, the company now sells 54 retail products and produces about 125 tons a week of soy proteins via aqueous extraction. White Wave has up to 30 linear feet in the refrigerated sections in some natural food stores. White Wave has experienced 25-30% sales increases per year over the past decade.

The Soy Protein Council in Washington, DC, now has 3 members: ADM, Cargill Inc., and Central Soya; all produce soy protein concentrates, isolates, and soy flours. The council promotes the growth of the soy protein industry and works to broaden the acceptance of soy products in foods. The council's Web site is <http://www.spcouncil.org>.

Fourteen state soybean boards, the United Soybean Board, and the Soy Protein Council gave joined together to form the "Soy Protein Partnership," whose goal is to promote

domestic soy protein use in human foods. Seven members of the partnership—the state soybean boards from Indiana, Iowa, Kansas, Michigan, Nebraska, Ohio, and South Dakota—are providing \$270,000 to fund the partnership's first project, a "Food Manufacturer's Initiative." The group is using the slogan "New Food, New Uses: How soy protein can expand your business, to reach food marketing executives and food technologists and to increase their awareness of the demand for soy products and their use in food products.

Surveys by Wiese Research Associates have shown that consumer awareness concerning soy protein increased from 55% of consumers polled in 1991 to 79% in 1996. Likewise, those saying they were likely to purchase a product if they knew it contained soy protein increased from 20% in 1988 to 32% in 1996.

In addition, a national Gallup survey conducted in 1996 for the Nebraska Soybean Board showed that 56% of the 600 school foodservice directors polled currently use soy products. And studies by the National Restaurant Association indicate that 97% of colleges and universities and 80% of restaurants have incorporated meatless entrees into their daily menus.

Schouten USA Inc. of Minnesota, whose parent company is the Schouten Group in the Netherlands, manufactures SoyLife, a soybean [sprout] extract containing 25-30 mg of isoflavones per gram. According to Laurent Leduc, Schouten USA's international marketing manager, it is presently used as an ingredient by more than 40 different vitamin and supplement companies as a source of isoflavones in their products, and is being incorporated into "functional foods" around the world. Leduc notes that research has indicated that consuming 60-80 mg of isoflavones a day may provide health benefits. He adds: "The only other way to get that much is by eating 8-9 ounces of tofu or drinking two-thirds of a liter of soymilk a day. The average American is not going to do that."

William Shurtleff of Soyfoods Center "said it currently is no longer usual to field questions from consumers in Midwestern states who would like to know how to incorporate soy as part of their diets to lower cholesterol.

"I credit much of this to the state soybean checkoff boards that are promoting interest in soyfoods, particularly in the heartland. This is changing the demographics for the market throughout the United States. Within the past two years, these boards have collectively become the single biggest force promoting soyfoods in America." Address: Senior editor/writer for INFORM.

711. Campbell, John. 1997. Re: Biodiesel legislative history. Letter to Jeff Horvath (NBB), Russ Teal (NOPEC), Gene Gebolys (Twin Rivers Technology), July 11. 1 p. Typed on "AGP Memorandum" letterhead.

• **Summary:** This is a cover letter: "Per your request, I am forwarding copies of some biodiesel legislative history along

with a recent memo to Trevor Gunthmiller (with the American Coalition for Ethanol)" [dated 7 May 1997], which see. Address: [AGP, Omaha, Nebraska].

712. Ritchason, Shelly. 1997. SoyGold fuel additive adds value for soybean producers. *Farmland System News (Kansas City, Missouri)* 65(6):13. June/July.

• **Summary:** The Farmland Cooperative System is promoting a new industrial soy product—"SoyGold, a soybean-based lubricity additive for diesel fuel. SoyGold is a methyl-esters component of diesel fuel derived from 100 percent virgin soybean oil. Produced and marketed through AG Environmental Products (AEP), a subsidiary of AgProcessing, Inc. (AGP), SoyGold works with #1 and #2 diesel fuel to lubricate the engines of farm equipment and minimize costly repairs and down time."

"Freemen Cooperative Oil Company, Freeman, South Dakota, was the first cooperative in the System and in the US to offer SoyGold for on-farm and commercial use."

"The Firth Cooperative in Firth, Nebraska, also began offering SoyGold in March."

713. *Ontario Soybean Growers' Marketing Board Newsletter*. 1997. Profile: ADM. Sept. p. 15.

• **Summary:** In 1997 ADM was successful in acquiring up to 45% interest in United Grain Growers (UGG), Canada's largest farm co-op. Martin Andreas, Senior Vice President at ADM's headquarters in Decatur, Illinois, says that ADM plans further investments in Canada. The company already has 10 flour mills there, in addition to its soybean and canola business, and now its association with UGG.

Ontario soybean growers are most familiar with ADM through its Windsor elevator and crush complex, and through its elevators in the southwest, including elevators at Essex and Maidstone. While the company does not disclose its crush volumes, industry watchers estimate that ADM is processing approximately 25 million bushels of oilseeds a year at its recently expanded and modernized plant in Windsor, Ontario.

"Windsor's two extraction plants can crush either soybeans or canola, and it makes little difference in terms of plant operation whether the soybeans are grown in Ontario or the U.S."

"ADM is more closely allied to farmers and elevators than its competitors. Andreas agrees. 'In the U.S. alone, we need 9.5 million bushels of grains and oilseeds a day to meet our processing and export requirements,' he explains. 'We must be closely allied with the people who are the producers of our raw materials.'"

"ADM's recent investment in Saskatchewan-based UGG reflects its policy around the world. ADM has agreements in place in the U.S. with the 175,000-member Growmark co-op, as well as with Countrymark and Riceland. It also has a one-third interest in the peanut co-op, Golden Peanut."

“Internationally, ADM has a 50 percent equity position in Europe’s A.C. Toepfer, which with 2.5 million members, is the largest farm cooperative in the world.” Address: Box 1199, Chatham, ONT, Canada N7M 5L8. Phone: 519-352-7730.

714. Ritchason, Shelly. 1997. History of Farmland Industries and its work with soybeans (Interview). *SoyaScan Notes*. Oct. 4. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Shelly is a relative newcomer to Farmland so she does not know much about its history. Farmland’s “historian” is Bernie Sanders (Phone: 816-459-6282) who is also Senior Vice President. The expert on the history of Farmland’s involvement with soybeans is Ed Connor (Phone 816-459-4064). Ed says that Farmland first got involved with soybeans in 1992—when there was a major diversification. Ed is now commodity manager, but he used to deal exclusively with soybeans. Farmland’s primary soybean market is Mexico—where exports have been growing rapidly. His office is in the nearby Grain Building, in Kansas City, Missouri. “He invited you to call.”

For a good book on the history of Farmland see “Beyond the Fence Rows: A History of Farmland Industries, Inc., 1929-78,” by Gilbert C. Fite (Published in 1978 by University of Missouri Press, Columbia and London). Address: Corporate Communications, Farmland Industries Inc., P.O. Box 7305, Kansas City, Missouri 64108. Phone: 1-800-821-8000 X-5182.

715. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer’s Address:** Emmetsburg, Iowa.

**Date of Introduction:** 1997. October.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** AGP Annual report. 1996.

“Also, AGP began construction of a new soybean crushing plant at Emmetsburg, Iowa.” It is the first new soybean processing plant built in the Company’s history. It is slated for opening by the harvest of 1997 (p. 4, 8).

AGP Annual report. 1997. The new soybean processing plant at Emmetsburg, Iowa, began operating in Oct. 1997 (p. 4).

716. Magruder, Marti. 1997. 75 years of the cooperative spirit. *Farmland System News (Kansas City, Missouri)* 65(10):9. Oct.

• **Summary:** 1997 marks the 75th Anniversary of the Capper-Volstead Act, the cornerstone of U.S. cooperative legislation. President Warren G. Harding signed the bill into law in 1922, creating new opportunities for the formation of cooperatives across America.

717. Richardson, Ralph M.; Adams, C.C.; DeVille, K.C.; Penn, J.E.; Kraenzle, C.A. 1997. Farmer cooperative statistics, 1996. *USDA Rural Business/Cooperative Service, RBS Service Report No. 53*. 51 p. Oct.

• **Summary:** The table of contents is the same as last year. Contains 23 tables, 2 Appendix tables, 16 figures (mostly graphs and pie charts), and 10 Appendix figures. Total net income of \$2.25 billion was down 4.7% from the record \$2.36 billion reported in 1995. The 1996 net income included intercooperative dividends and refunds of \$711.9 million—up 30.9% over 1995. The number of cooperatives decreased by 122 from 4,006 in 1995 to 3,884 in 1996. Memberships decreased by 103,711 from 3,767,295 in 1995 to 3,663,584 in 1996. Address: Statistics and Technical Services Staff, Rural Business-Cooperative Service, Rural Development, U.S. Dep. of Agriculture, STOP 3256, Washington, DC 20250-3256.

718. AGP—Ag Processing Inc a cooperative. 1997. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 32 + [4] p. 28 cm.

• **Summary:** Net sales for 1997 (year ended Aug. 31) were \$2,948.168 million, up 6.7% from \$2,764.549 million in 1996. Net earnings before income taxes: \$40.449 million, down 28.1% from the \$56.221 million in 1996.

“Business philosophy: AGP is a partner with the greatest people on earth.” The stockholders of AGP are its customers. Today the company: “Processes over 15,000 acres of soybeans every day. Is the largest cooperative soybean processing company in the world. Has a storage capacity of over 15 million bushels of grain. Is the third largest supplier of vegetable oil in the United States. Is the third largest commercial feed manufacturer [for livestock and poultry] in North America.”

AGP operates under strategic principles. “Among these principles are: Maintain a strong emphasis on the core business without risking survival on new ventures. Maintain profitable growth and competitive size, and operate under financially sound principles.

“Pursuit of AGP’s strategic direction requires substantial capital investment; this is the nature of our industry. You will notice... that capital expenditures were \$59.8 million in fiscal 1996 and another \$59.8 million in fiscal 1997. Often members ask... ‘Who is paying for AGP’s various capital projects?’ The answer is always the same. The members of AGP pay for everything through use of their retained patronage and retained earnings. The Board of Directors and Management are charged with investing this money wisely.”

“The new methyl ester refinery, located at the Sergeant Bluff, Iowa plant, represents a commitment to this opportunity for expanded uses of soybean oil” (p. 4).

The new soybean processing plant at Emmetsburg, Iowa, began operating in Oct. 1997. In addition, AGP began



“construction of a new soybean processing plant in Hastings, Nebraska,” and of “a new vegetable oil refinery at the Eagle Grove, Iowa, soybean plant.”

In fiscal year 1997 “AGP’s vegetable oil refineries processed 1.5 billion pounds of crude oil.”

Industrial products (p. 26): AGP now produces methyl ester at its soybean processing plant in Sergeant Bluff, Iowa; it is “the product remaining after glycerin (a food and cosmetic ingredient) is removed from soybean oil.”

“‘SoyGold’ is the flagship label [brand] of AGP’s line of methyl ester products.” “Five SoyGold Marine fuel docks were opened in the largest sailboating areas of California... SoyGold Marine may be blended with diesel fuel or used as a diesel fuel replacement, providing a cleaner-burning fuel for all types of diesel-powered vessels. It is nontoxic and biodegradable, it will not kill fish or wildlife, and it creates little smoke or odor.”

The “EPA has targeted chlorinated solvents for phase-out... The AGP challenge this fiscal year was to raise market awareness of SoyGold Multi-Purpose Industrial Solvents quickly enough to capture share.”

“Adjuvants. One of the biggest markets in the Midwest is for agricultural spray adjuvants.” Crop Oil is the generic name for a widely used adjuvant whose name is misleading; it is not made from a crop at all, but is petroleum based. Methylated Seed Oil (MSO) is the generic name for methyl ester adjuvants, which are derived from soybean oil—a fact that many farmers do not know. “Because soybean farmers have a vested interest in using soybean products, it is important that they understand the nature of their adjuvant choices.” AGP is working to educate farmers and retailers, and to create alliances with retailers to sell AGP’s branded products.

International business: AGP Hungary, Ltd., is a joint venture between AGP and eight Hungarian cooperatives, established in fiscal 1996. It “manufactures premixes, concentrates, and high-energy complete feeds... Hungary will continue to become a strong market for AGP soybean meal and feed products.” Color photos show: (1) A combine harvesting soybeans, with a huge soybean processing facility in the background under a big blue sky. (2) A spectacular field of soybeans. (3) Lindsay and Knobbe. Overhead view of chickens feeding at a round feeder. (4) A long, silvery tanker with the Soyasign and “Soyoil: America’s #1 vegetable oil” on one side. (5) Green AGP railcars. (6) The board of directors. (7). Top corporate management. Address: Omaha, Nebraska. Phone: (402) 496-7809.

719. Ritchason, Shelly. 1997. Farmland’s original mission rolls into the 21st century: Meeting producer-owner needs still tops the cooperative’s list. *Farmland System News* (Kansas City, Missouri) 65(10):8-9. Oct.

• **Summary:** Farmland Industries was founded in 1929 as the Union Oil Company (Cooperative) when six farmer-owned

cooperatives joined forces to buy and distribute petroleum products. The founder, Howard Cowden, wanted to increase producers’ bargaining and purchasing power in a rapidly-growing petroleum market. The first slogan was “Our profits are your dividends.” An old black-and-white photo shows the original location with large petroleum tanks. A color photo shows Farmland’s headquarters, with its sky, cloud, and land logo, below which is written “Proud to be farmer owned.” “Today, Farmland Industries Inc. is owned by more than 1,400 farmer-cooperative associations which, in turn are owned by about half a million farmers and ranchers across the United States, Canada, and Mexico, and 13,000 pork and beef producers who own the North American co-op directly.”

720. Upbin, Bruce. 1997. Vindication: A year ago the news was filled with scandal stories about Archer-Daniels-Midland. A classic case of media overreaction. *Forbes*. Nov. 17. p. 52-53, 56.

• **Summary:** A pie chart (p. 56) shows the market shares of major U.S. soybean crushers: ADM 31%, Cargill 24%, Bunge 13%, AGP 10%, Central Soya 7%, Others 15%. Other pie charts show that ADM is also the single largest cocoa processor, grain miller, and high fructose corn syrup maker in the U.S.

A graph, titled “ADM’s spending spree,” shows gross additions to plant from 1988-1997. Spending hit \$1 billion in 1997.

ADM is spending its money in the areas where its growth is greatest—in emerging markets—such as China, which will become the world’s 4th largest soybean importer by the end of next year, projected to import about 2.7 million tons of soybeans and 3.4 million tons of soybean meal. The more meat and poultry the Chinese consume, the more soybeans they will need. A color photo shows Allen Andreas, who notes that China has no chance of being self sufficient in soybeans.

In Sept. 1997, ADM swapped \$300 million of its stock for Moorman Manufacturing Co., a soybean processor in Quincy, Illinois, with \$1.2 billion in annual sales. This is ADM’s first soybean crushing plant on the Mississippi River. It costs only \$2 per tons to ship soybean meal by barge from Quincy to St. Louis versus \$6 per ton from ADM’s big plant in Decatur, Illinois, to St. Louis.

ADM stock has rebounded from a low of \$13 in mid-1995 to \$24 at present.

721. Knudsen, Natalie S. 1997. Biodiesel fueling. *Farm Industry News* 30(14):72-73, 76. Dec.

• **Summary:** A photo shows a sort of credit card on which is written: “Special offer... SoyGold available here. 100% soybean based diesel fuel lubricity additive.”

722. Duffey, Patrick. 1997. The power of cooperation:

Members and rural communities benefit from AGP operations. *Rural Cooperatives*. Nov/Dec. p. 22-25.

• **Summary:** AGP, a cooperative based in Omaha, Nebraska, “is helping to boost the overall economy in the rural Midwest. AGP has become a classic example of the power of cooperation, with sales that topped \$2.9 billion for fiscal 1997 and net earnings (before taxes) of \$40.4 million. That’s up from total sales of \$896 million and net earnings of \$4 million in its first year of operation [1983]. During its 14-year history, AGP has returned nearly \$240 million in cash patronage to its members.” In Oct. 1996 [sic, 1997] AGP’s new soybean crushing plant in Emmetsburg, Iowa, began operations, and now consumes 60,000 bushels of soybeans a day, the equivalent of 1,500 acres of soybeans daily. It has just completed a soy oil refinery in Eagle Grove, Iowa, and is in the design phase of a new soybean processing plant in Hastings, Nebraska. “Today, its membership includes 302 local and 12 regional cooperatives representing 300,000 farmers from 16 states and Canada. ‘Partners in food production,’ is AGP’s motto.” AGP also exports grain and soybean meal to 20 foreign nations. Address: Information Specialist, USDA Rural Development.

723. Farmland Industries Inc. 1997. The Farmland cooperative system (Leaflet). Kansas City, Missouri. 2 p. 28 cm.

• **Summary:** Contents: Our mission. Who we are. Why we exist. What we do: History, we specialize in high-quality ag production, we link farmers to their final customers (especially through pork, beef and grain processing), we deliver value to our customers and to our farmer owners.

History: “Farmland was founded in 1929 as the Union Oil Company (Cooperative) when six farmer-owned cooperatives joined forces to buy and distribute petroleum products. It expanded into other co-op products in the early 1930s, and, in 1936, changed its name to Consumer Cooperative Association (CCA). In 1938, CCA built its first refinery. By 1939, the Association had grown to include 259 owner-cooperatives and was producing more than 200 products. By the late 1950s, the company had become a powerful force in agriculture and responded to farmers’ demands for more herbicides, insecticides and other chemicals by purchasing a chemical company in St. Joseph, Missouri. On Sept. 1, 1966, the Association changed its name to Farmland Industries, Inc. By its 50th anniversary in 1979, it had become one of the nation’s largest farmer-owned cooperatives, with Farmland Foods (its pork processing subsidiary) emerging as one of the nation’s leading meat companies. In 1992, Farmland expanded its business into grain and beef and today continues to be a leading supplier of quality ag-based supply and consumer products. Its major business liners include Crop Production, Feed, Petroleum, Information, Grain, Pork and Beef.” Address: 3315 Farmland Trafficway (P.O. Box 7305), Kansas City, Missouri 64116-0005. Phone: 1-800-821-8000.

724. Thompson, Keith. 1998. Breeding food-grade soybeans at Hartz Seed Co. (Interview). *SoyaScan Notes*. March 19. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Hartz’s natto breeding program is one of the best models for developing food grade soybeans with what are increasingly called “quality traits.” Frank Orthoefer, a scientist with an MBA, is an expert in this field—especially in the area of proteins and oil. Frank used to work for Riceland Foods in Stuttgart, but now he works for Hartz / Monsanto. KeShun Liu was hired to work on tofu and natto. The work with tofu has not progressed well, but the work with natto has. From the Hartz viewpoint, Dr. Liu’s three most important areas of research are breeding soybeans: (1) for natto (which accounts for 30% of Hartz’s revenue), (2) that are high in saturated fat, allowing elimination or reduction of hydrogenation; and (3) that are high in total oil content. Address: Food and Export Manager, Hartz Seed, P.O. Box 946, Stuttgart, Arkansas 72160. Phone: 800-932-7333.

725. *Sioux City Journal (Iowa)*. 1998. Cooperatives announce merger. April 19. p. F6.

• **Summary:** Farmland Industries (based in Kansas City, Missouri) and Cenex Harvest States (based in St. Paul, Minnesota) “announced an agreement in principle to create a new energy alliance to serve the rural energy marketplace.”

“Farmland Industries Inc. is the largest farmer-owned cooperative in North America and one of the top 200 companies included in the Fortune 500.” In 1997 Farmland had sales of \$9.1 billion and was active in all 50 states and 80 nations.

“Founded in 1931, Cenex Inc. is a regional agricultural supply cooperative serving farmers, ranchers and rural communities in 16 states with a wide range of petroleum products and agricultural inputs.”

Note: Talk with Bell Lester (expert on AGP history) of Omaha, Nebraska. 2007. Nov. 6. Harvest States was originally named Farmers Union Grain Terminal Association (GTA). When Harvest States became a member of AGP in 1985, it did not merge with AGP; it kept its own identity and remained an independent regional cooperative, which sold soybeans to AGP and received a patronage refund from AGP. In 1998 when Harvest States merged with Cenex, Inc. to become Cenex Harvest States (CHS), the merged entity continued to be a member of AGP under the new name. Today, CHS is still a member of AGP; they still sell AGP their soybeans and they still get a patronage refund.

In addition AGP has a very, very good working relationship with the old Honeymead Products Co. (in Mankato, Minnesota), which is part of the “soy division” of CHS. The “Honeymead” name (as on hopper cars, etc.) has gradually been changed to “CHS.”

In April 2002 the Harvest States division of CHS Cooperatives broke ground at the construction site of its second

soybean crushing facility just outside Fairmont, Minnesota. Production began in the fall of 2003. This plant was able to crush more than 220,000 bushels/day of soybeans. This plant is a competitor of AGP.

Honeyhead has a big refinery in Mankato. There were two main reasons that CHS built a soybean crushing plant at Fairmont: (1) To ensure a steady supply of soybean oil to their refinery in Mankato. And (2) For political reasons.

726. *Biodiesel Report (NBB, Jefferson City, Missouri)*. 1998. Biodiesel stakes claim in premium diesel market. April. p. 2.

• **Summary:** "Soy Shield is marketed by Schaeffer Manufacturing Company, based in St. Louis [Missouri], through its 300 sales representatives nationwide. The company will target farmers with the product." "Soy Shield is attractive to farmers for two important reasons... First, it allows farmers to use a product they helped produce. Second, it will help extend the engine life of their expensive farm equipment."

"Schaeffer is promoting these product benefits for Soy Shield. It increases miles per gallon by 5 to 7 percent, cleans injectors, boosts cetane, provides superior soy lubricant and reduces exhaust emissions." For best results, mix 1 gallon of Soy Shield with 500 gallons of diesel fuel in the storage tank.

"Soy Guard, marketed by Archer Petroleum, Omaha, Nebraska, will also target the farm market." Although similar, the two biodiesel-based fuel additives are different. "The differences are found in the proprietary additives in each."

"These two new fuel additives were developed with funding from the Minnesota Soybean & Research Promotion Council, with marketing agreements made with Schaeffer and Archer." On behalf of NBB, Paul Nazzaro coordinated the development.

Last fall, AGP introduced SoyGold.

727. AGP—Ag Processing Inc a cooperative. 1998. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 32 + 19 p. 28 cm.

• **Summary:** Net sales for 1998 (year ended Aug. 31) were \$2,615.077 million, down 8.9% from \$2,948.168 million in 1997. Net earnings before income taxes: \$57.526 million, up 42.21% from the \$40.449 million in 1997.

This year is AGP's 15th anniversary; the annual report focuses on that big picture. Contents: Financial highlights. Philosophy. Letter to shareholders. Commitment. Expansion. Efficiency. Diversification. Innovation. Reliability. Processing food. Feed & swine. Grain. Value-added ventures. Quality. Business sites. Leadership. Ten-year financial summary. Financial review and analysis (p. F1 to F19).

Innovation: "Methyl ester is another venture on the cusp of becoming a profit center. Produced through further processing of soybean oil, it is an ideal additive or alterna-

tive to diesel fuel. AGP markets this biodiesel under the tradename SoyGold, and biodiesel promises to replace more and more diesel fuel in environmentally sensitive areas.

"Modified, methyl ester is also being used as a solvent, cleaner and agricultural spray adjuvant. Additional uses of methyl ester—in products as diverse as cosmetics and explosives, for example—continue to be discovered. As the world moves from the chemical age into the biological age, natural compounds such as methyl ester will grow in both importance and value" (p. 14-15).

Color photos show: (1) Lindsay and Leiting. (2) AGP Soy Flour being bagged in multiwall paper sacks. (3) Board of directors. (4) Top corporate management staff. Address: Omaha, Nebraska. Phone: (402) 496-7809.

728. Richardson, Ralph M.; Adams, C.C.; DeVille, K.C.; Penn, J.E.; Kraenzle, C.A. 1998. Farmer cooperative statistics, 1997. *USDA Rural Business/Cooperative Service, RBS Service Report No. 56*. v + 47 p. Dec. 28 cm.

• **Summary:** The table of contents is the same as last year. Contains 26 tables, 21 figures (mostly graphs and pie charts), and 10 Appendix figures.

"The Rural Business-Cooperative Service (RBS) of USDA's Rural Development considers four major criteria in identifying an organization as a farmer cooperative:" (See 1994 report) Total net income of \$2.31 billion was up 2.7% from \$2.25 billion in 1996. Gross and net business volumes were near record highs.

"The total number of marketing, farm supply, and related-service cooperatives declined 23.3% from 4,937 in 1988 to 3,791 in 1997 (p. 27-28).

Fig. 14 (p. 29) shows the number of cooperatives removed from RBS's list, 1988-1997. The four reasons for removal (in order of importance) are dissolution, merger and consolidation, acquisition, and other. The number of dissolutions was highest in 1990.

Fig. 21 (p. 36) shows Cooperatives' net worth and liabilities, 1988-97. Every year, liabilities are larger than net worth.

Appendix Fig. 3 shows U.S. farms and farmer cooperative memberships, 1973-97. Both have been decreasing throughout this period. Address: U.S. Dep. of Agriculture, Rural Development, Rural Business-Cooperative Service, STOP 3256, 1400 Independence Ave., S.W., Washington, DC 20250-3256.

729. Kennedy, Nicole; Scully, Patty. 1999. Gas explosion shakes plant: No injuries reported at Ag Processing Inc. *St. Joseph News-Press (Missouri)*. Jan. 1. p. 1B.

• **Summary:** "An explosion at the Ag Processing Inc. plant in St. Joseph caused some damage at the plant but did not force any evacuations and did not injure any employees. The blast, apparently triggered by natural gas, occurred about 12:25 p.m." Although it did not spark a fire, firefighters were on



standby at the scene for about 4 hours. The explosion took place at the No. 2 gas plant of the edible oil refinery; it damaged a piece of equipment called an economizer.

A map shows the location of the AGP plant on Lower Lake Road in St. Joseph. It is just south of the Missouri River and north of the stockyards. A large photo from ground level shows the site, with towering concrete silos in the foreground.

730. *Gleaner and Journal* (Henderson, Kentucky). 1999. Obituaries: Aloysius Ignatius Reisz Sr. Feb. 7. p. A2.

• **Summary:** Owensboro: Aloysius Ignatius Reisz Sr., died on 5 Feb. 1999 (Friday) in Lonoke, Arkansas, at age 84. "A retired soybean processing plant manager and farmer, he was a longtime manager of the Ohio Valley Soybean Cooperative in Henderson [Kentucky]. He was also a former Henderson County farmer and was manager of the Farmland Industries Soybean Processing Plant in Van Buren, Arkansas."

He is survived by his wife, Susan Ward Reisz, three daughters, eight sons, two sisters, 21 grandchildren, and eight great-grandchildren.

"Services will be at 10 a.m. Tuesday at St. Martin Catholic Church in Rome, Kentucky... Burial will be at Mater Dolorosa Cemetery in Owensboro." Friends may call at the "James H. Davis Funeral Home in Owensboro, where a rosary service will be held at 6:30 p.m. Monday."

731. Beyers, Jim. 1999. Work with ADM and Westward Industries, Inc. making textured soy protein (Interview). *SoyaScan Notes*. May 3. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** In 1969, when Jim graduated from Southern Illinois University, he was hired by ADM to work on extruding soy protein. He worked with Bill Atkinson, who was using an old vintage extruder to make TVP, which was used primarily for pet food. Jim was hired to do research on adding value to the pet food by making it fit for human consumption, and to diversify the product catalog to include meat analogs. They soon were testing beef, ham, and chicken flavors in different sizes, shapes, and colors. Before long they were experimenting with some "wild and crazy things" such as fruit replacements, vegetable replacement, and nut replacements—all with TVP. At the beginning, only Beyers and Atkinson were working on this project. This was before the settlement of the big patent dispute between ADM and Ralston Purina in 1970. That dispute grew out of the fact that Atkinson and Robert Boyer (both of whom once worked together for Henry Ford) both came up with the idea of extrusion at about the same time. Bill Atkinson was extruding 50% protein soy flour and Ralston apparently said they were extruding soy flour. Atkinson fortunately kept the little desktop extruder that he used to make his first trials; it made a little rope of TVP about the size of an ink pen refill [about one-eighth inch in diameter]. "We reenacted those early

experiments of his time and time again for the courts—to the point where we had miles of this little bitty TVP rope piled up." Each company thought that it had invented the extrusion process first. "So they went to war with each other. They spent at least several hundred thousand dollars on attorney's fees, until they finally resolved it out of court. Swift and Staley were just standing on the side lines in the last half of the battle waiting for the judge to tell them who to pay the royalty checks to. Finally, the process patent was awarded to Ralston Purina and the product patent to ADM—which is kind of ludicrous. How can you have a process without a product, or a product without a process." Ralston Purina went out to everyone they could find who was extruding a 50% soy protein product (for pet food or human food) and asked them to buy a license on the process; the license fees were quite high, because the life of the patent was half gone, so they decided to charge twice what they would have ordinarily charged. Ralston Purina made a great deal of money from PMS Foods in Hutchinson, Kansas. Swift paid the fees for a while, then stopped making the product. Cargill was a big manufacturer of a TVP-type product; they have a plant in Cedar Rapids, Iowa. Jim does not know anything about the fees they paid. Ralston Purina itself never made much extruded soy using its patented process. Ralston had two extrusion lines in Memphis, Tennessee, for several years, making mostly human foods—but they were never price competitive and the quality was not very good. ADM could have done the same thing, but they didn't. Jim does not know why ADM didn't pursue this.

Today ADM is by far the world's biggest manufacturer of extruded, textured soy flour. "ADM has an extrusion capacity to generate the entire world's supply of TVP. I know that for a fact because I put those extruders in place myself." ADM runs on high volume and low margins. They won't enter a field unless they can generate enough capacity to dominate. They streamline and automate the process until they are the low-cost producer. This has long been the philosophy of Jim Randall, the retired president. He was the engineer for ADM for many, many years. "The commodity mind-set has always been trainloads, truckloads, and shiploads. When I was at ADM we made one type of bacon bit, packed it in 50-pound boxes with ADM's labels on it, sold it at 20,000 pounds minimum order. That was it." Jim's present company works on smaller volumes and higher margins. "We don't want to compete with the commodity processors. We have a nice little specialty niche that ADM and Cargill can't mess with. Generic bacon bits are becoming a commodity, but it is private labeling that keeps some of them in the specialty field. The big processors won't put in a label room for 70 different private labels."

Jim worked for ADM in R&D for about ten years. He worked very closely with Bill Atkinson, a very bright man and an excellent inventor, but he also came on like a raging bull—a cantankerous man. "But he and I got along great! I

never knew for sure why. I used to enjoy listening to him talking about Henry Ford and his years of work there with soy. At once time Ford thought people were being gouged [paying too much] for eye glasses. So he set of a bank of grinding machines, to crank out glasses for a nickel each.” Ford and ADM both liked to operate on the principle of high volume, low margin. In his Later years, Atkinson began to suffer from Alzheimer’s disease. But until just before he retired, his memory was crystal clear, with 100% total recall. In Jan. 1979 he left ADM and went to work for Westward Industries, where for the next 18 years he made bacon bits. Ken Towers was the original owner of Westward Industries; he and his researchers developed a lot of new technology for flavoring systems in-house. When he went to and helped to start Westward Industries, it would take any order from 50 cases on up, and put the but the customer’s label on it if so desired. Initially Westward bought its TVP from ADM, then added its own flavoring system. Later, they bought a license to produce the TVP-type base then added their own unique flavors by their own system.

In Jan. 1979 Westward Industries started making standard textured soy protein products in Kansas at 1819 S. Meridian, Wichita. Westward didn’t sell any products under its own brand; it was either sold in bulk to foodservice or private labeled for all the glass-packers in the country like John R. Sexton, Durkee Foods, R.T. French, McCormick, Safeway, CFS-Continental, Ponderosa Steak Houses, Pizza Hut—any company that sold bacon-bits in jars. “We were the largest processor of imitation bacon bits in North America, probably for about ten years.” The company still makes and sells these products. At one point, they got rid of the extruders and made rice crispies for 15 years.

In about 1984 or 1985 Westward introduced the Soft and Chewy concept, with many of the old flavors, but a few new ones—such as Bacums. In late 1997 he bought Westward from its founder, Ken Towers, renamed it to Westwind Industries, and started his own production. He did not buy the corporate charter from Ken; rather he filed his own corporate charter, which required a new name. Westward Industries still exists, and Jim’s manufacturing plant is at a new location. The company makes two types of textured soy flour (crisp texture, and Soft and Chewy) and a line of nut replacements (Terra Nuts, which are pressure cooked, then dry roasted, and used to replace pecans and walnuts).

Greg Caton is an interesting guy. He’s exuberant, energetic, and very innovative. He needs to stop, settle down for about ten minutes, and think things through just a little bit. Jim think’s Greg will take his business worldwide “when he finally gets his focus on what he’s doing. This non-GMO is really a big thing in Europe these days; it’ll never make a splash here in the States. Greg believes that’s where his new-found wealth will be.” Jim believes that GMO foods will not become widely accepted in the USA during our lifetime. “World-wide it’s really catching on, and I think later on it

may be somewhat important. What’s more important now with soy is if you can process it hexane-free. Even though the residual hexane is in the parts per billion, there are enough folks around here that say ‘A little bit’s too much.’ I think that’ll get more mileage than whether it’s Roundup Ready or not. Anyway, those are foreign markets that Greg is looking at.” Address: Owner, Westwind Industries, Inc., 3930 W. 29th St. South, Suite 55, Wichita, Kansas 67217. Phone: 316-943-3212.

732. *Sioux City Journal (Iowa)*. 1999. Farmland, Cenex Harvest States pursue unification. May 7. p. A3.

• **Summary:** Farmland Industries (based in Kansas City, Missouri) and Cenex Harvest States (based in St. Paul, Minnesota), both cooperatives, announced that “they will pursue unification to achieve greater growth, efficiencies, and economic value for the farmers and ranchers who own them.”

733. Ag Processing Inc. (AGP). 1999. Soybean grower. Soybean processor (Ad). *Soybean Digest*. June. p. 26-27.

• **Summary:** At the center of each page of this two-page color ad is a portrait of a middle-aged farmer, wearing glasses and a hat, with a sunset in the background. Each photo has an orange border. Under the photo on the left is written “Soybean grower,” while under the one on the right is written “Soybean processor.” The background page on the left is all black, whereas that on the right is all white.

The text on the right page reads: “AGP is the largest farmer-owned soybean processing cooperative in the world. AGP is also one of the four largest soybean crushing systems and one of the three largest soybean oil refiners.

“AGP buys soybeans from its owners—over 280 cooperatives—and it processes over 15,000 acres of soybeans every day. AGP markets soybean meal, soy oil and value-added products around the world. AGP Grain Cooperative markets grains domestically and internationally.

“Ask your local cooperative about AGP or visit us at [www.agp.com](http://www.agp.com).”

734. **Product Name:** Soybean Oil, and Soybean Oil Meal.

**Manufacturer’s Name:** Ag Processing Inc a cooperative (AGP)

**Manufacturer’s Address:** Hastings, Nebraska.

**Date of Introduction:** 1999. June.

**Ingredients:** Soybeans.

**How Stored:** Shelf stable.

**New Product—Documentation:** AGP Annual report. 1997. AGP began “construction of a new soybean processing plant in Hastings, Nebraska,...” (p. 4).

AGP Annual report. 1999. AGP’s new soybean processing plant in Hastings, Nebraska, began operating “in June 1999. It is: The first farmer-owned soybean processing plant in Nebraska. The westernmost soybean processing plant in the

United States. AGP's ninth soybean processing plant" (p. 8).

735. Lane, Mick. 1999. Processor ponders oil premium: AGP moves toward NIRS to test incoming beans. *Soybean Digest*. Aug. p. 21.

• **Summary:** AGP has been studying the practicality of using near infrared reflectance spectroscopy (NIRS) to quickly analyze the composition (oil plus protein) of soybeans upon delivery at AGP's plant in Eagle Grove, Iowa. The premium is intended to encourage farmers to grow soybeans with potentially high oil content. If soybean oil sells for 25¢/lb, each 0.5% increase in oil content is worth about 7.5¢ to AGP. In the longer term, it might also encourage soybean breeders to breed soybeans with higher oil content.

A color photo shows Jim Cherry and Ray Choquette of AGP preparing a soybean sample for NIRS testing.

736. Soyatech, Inc. 1999. Advertiser index. *Soya Bluebook Plus* 2000. p. 431.

• **Summary:** Ag Processing Inc. Allocco S.A. American Health & Nutrition Inc. AMG Inc. Anderson International Corp. ADM Lecithin. Archer Daniels Midland Co. B.N.W. Industries. Baker Process. BAR N.A., Inc. Bean Machines, Inc. Behlen Mfg. Co., Biostar. Borton, Inc. Breitenbach GmbH, Leonhard. Brown Company, Charles. Buhler Inc. Campro International Inc. Cargill, Inc. Center for Crops Utilization Research. Ceval Alimentos S.A. Clarkson Grain Co., Inc. Cleary Products, Inc., W.A. Clofine Dairy & Food Products, Inc. Codema, Incorporated. Core Team, The. Damman-Croes N.V. De Smet SA/NV, Extraction. Divine Engineering, Inc. Edelsoja GmbH. Elementar Americas Inc. Europa Crown Ltd./Crown Iron Works Company. First Line Seeds. Frank, Fa. L.I. French Oil Mill Machinery Company, The. Fundiciones Balaguer, S.A. Genetic ID. Grain Systems. GTS Energy Inc. Guelph Food Technology Centre. H&H Company, Inc. HI Roller Enclosed Belt Conveyors. Identity Seed & Grain Company. Indiana Crop Improvement Association. INHSA. Innomach Inc. Insta-Pro International. International Soybean Program (INTSOY). InterSystems, Inc. Iowa Soy Specialties, LLC. Jeneil Biotech, Inc. Kice Industries, Inc. Klein Commodities. Krupp Extraktionstechnik GmbH. Laidig Industrial Systems. Louisville Drying Machinery. Lucas Meyer GmbH & Co. Mason Manufacturing. Metal Products International, Inc. Midwestern Soybeans International, Inc. Midwestern Soybeans International, Inc. Millbank Technology (N.Z.) Ltd. Miracle Exclusives, Inc. Monsanto Company. Montola Growers Inc. Moore & Associates, Inc., N. Hunt. Natural Products Inc. Norseman Inc. Northland Seed Corp./Northland Organic Foods. Nosawa & Company, Ltd. Oil Mill Gazetteer. Oil-Dri Corporation of America. OntarBio Organic Farmers' Co-operative Inc. Ontario Soybean Growers. Pacific International Distributors (PID). Prater Industries, Inc. ProSoya, Inc. R&D Equipment Sales

Company. Riceland Foods, Inc. Riley Equipment, Inc. Roskamp Champion. S. Howes Company, Inc. Sato & Company, Ltd. Schouten USA Inc. Separators, Inc. SK Food International. Soyatech, Inc. Specialty Proteins. Strayer & Associates, Dennis. SunRich Inc. Sweet Manufacturing Company. Tecno Moageira Ltda. Tetra Pak Inc. Texas A&M University. Thompson & Sons Ltd., W.G. Tobe Products. Tradin Organic Agriculture B.V. Tramco Inc. Turner Chilled Rolls Ltd. U.S. Soy. United Soybean Board. VIGAN Engineering S.A. Walzen Irle GmbH. Westfalia Separator, Inc. Westway Terminal Co., Inc. Woodson-Tenent Laboratories, Inc. Younglove Construction Company. Address: 7 Pleasant St., P.O. Box 84, Bar Harbor, Maine 04609. Web: [www.soyatech.com](http://www.soyatech.com). Phone: 207-288-4969.

737. Duffey, Patrick. 1999. The price is right: AGP sets pace for soybean industry with new oil pricing program. *Rural Cooperatives*. Sept.

• **Summary:** In 1983, its first year in business, AGP had sales of \$700 million. Its annual gross sales will soon top \$4 billion.

"AGP, owned by 285 local and 10 regional cooperatives, will take on another pioneering role for the industry this fall when it begins paying premium prices at its nine processing plants for soybeans that meet graduated level standards for oil content. The new program took effect Oct. 1." Jim Lindsay, AGP's chief executive officer, says the new oil premium program "represents another avenue to add value to soybeans for farmers throughout the cooperative processing system."

While this pricing program is new to the soybean industry, it is well established in other agricultural industries. "In grain, the protein content of wheat has been measured for decades to determine the price. The dairy industry calculates price to producers based on the protein content of milk, which is a critical factor for making cheese."

"AGP started building the foundation for the value-pricing system 18 months ago is cooperation with field testing by 14 Iowa local cooperatives, Charles Hurburgh at Iowa State University and the Iowa Soybean Promotion Board." Near-infrared transmission (NIT) technology is used to provide rapid and accurate analysis of the oil content of whole soybeans. Larry Burkett, AGP senior vice president for corporate and member relations, believes soybeans offer a bright future for farmers.

AGP began operating in 1983. Jim Lindsay, the co-op's first and only CEO "compiled a staff that attacked costs with a vengeance. "He had prior business experience with corn and soybean processing as an executive at ADM, and he was chairman of the National Oilseed Processors Association (NOPA) for four years.

There follows a question and answer session with Jim Lindsay: What is AGP's mission? How did AGP build its financial standing in its short 16-year history? What has



prompted AGP's extensive expansion in recent years? Where is the future in soybean exports? What is AGP's future direction? "Part of AGP's challenge is to help farmers identify with value-added products." AGP has added a new methyl ester plant at Sergeant Bluff, Iowa. "Soy methyl ester is used in solvents, cleaners, agricultural spray adjuvants, cosmetics, and soydiesel." At the AGP plant in Mason City, Iowa, storage has been boosted by 150%. AGP has begun making Amino Plus, a high-bypass soybean meal shown by AGP research to increase milk production by as much as 10% in lactating dairy cattle. AGP has purchased an interest in Protinal / Proagro in Venezuela, a broiler [chicken] production, processing and marketing company that also markets livestock feed and seed. And it has opened AGP Hungary, a premix and feed company owned by AGP and 12 farmer cooperatives in Hungary. Address: Information Specialist, USDA Rural Development.

738. Raffensperger, Terry. 1999. AGP continues expansive mood: Company building \$365,000 addition. *St. Joseph News-Press (Missouri)*. Oct. 29. p. 1C, 2C.

• **Summary:** Of the 7 soybean processing plants owned by AGP, the one at St. Joseph, Missouri, is the largest. Since purchasing the former Dannen Mills plant in 1983, AGP has funneled more than half of its total capital investment in soybean processing into the St. Joseph facility. The company has also doubled its work force and payroll at St Joseph since 1983; it presently employs about 160 workers with an annual payroll of about \$5.5 million.

In 1987 a hydrogenation unit cost \$773,000. In 1991 AGP expanded the hydrogenation plant and added more storage tanks.

AGP now buys about 25 million bushels of soybeans each year from area farmers, at a cost of about \$1.75 million. It buys an additional \$9 million locally buying industrial and office supplies and service.

"As a cooperative, AGP is owned by 382 local or regional cooperative associations, which represent about 290,000 soybean growers." The company accounts for about 10% of total U.S. soybean processing capacity.

739. AGP—Ag Processing Inc a cooperative. 1999. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 32 + 19 p. 28 cm.

• **Summary:** Net sales for 1999 (year ended Aug. 31) were \$2,094.504 million, down 20.0% from \$2,615.077 million in 1998. Net earnings before income taxes: \$18.167 million, down 68.5% from the \$57.526 million in 1998.

"Since its formation in 1983, AGP has been committed to the success of its owners. Today that is 278 local cooperatives and eight regional cooperatives, representing 300,000 farmers from 16 states throughout the United States and Canada" (p. 1).

AGP has expanded into "Soy-based methyl ester products, used primarily in the fuels, solvents, and agricultural chemicals business (as an adjuvant)." This is a growing new value-added market (p. 3).

"AGP's investment in a methyl ester plant at Sergeant Bluff, Iowa came at a time when companies could not use methyl esters because there was not a consistent supply. Now soybean oil in the form of biodiesel (SoyGold) is breaking into the diesel market as a lubricity agent in premium diesel offered by major fuel suppliers" (p. 5).

AGP works "intimately with the American Soybean Association. This year that relationship was able to produce legislation in Congress that allowed 20% biodiesel blends to be designated as alternative fuels country-wide" (p. 13).

"Methylated seed oil (MSO) adjuvants faced a difficult time this year primarily because MSO is not suitable for use with Roundup (c). AGP did, however, gain more MSO distributors this year" (p. 18).

AGP's new soybean processing plant in Hastings, Nebraska, began operating "in June 1999. It is: The first farmer-owned soybean processing plant in Nebraska. The westernmost soybean processing plant in the United States. AGP's ninth soybean processing plant. Once the plant is operating at capacity, an estimated 200+ trucks will be at the Hastings location daily, either inbound with soybeans, corn, or milo and/or outbound with soybean meal, soybean oil, ethanol, and other products such as hulls or distillers' dried grain with solubles."

Color photos show: (1) Leiting and Lindsay. (2) Marketing materials for AGP's "Soybean Value Pricing—Oil Premium Program." (4) The board of directors. (5) Management staff—including one woman for the first time. Address: Omaha, Nebraska. Phone: (402) 496-7809.

740. Kraenzle, Charles A.; Richardson, R.M.; Adams, C.C.; DeVille, K.C.; Penn, J.E. 1999. Farmer cooperative statistics, 1998. *USDA Rural Business/Cooperative Service, RBS Service Report No. 57*. vi + 56 p. Nov.

• **Summary:** Enclosed is a letter from Marc Warman, typed with signature on letterhead. Note: Talk with Marc Warman, Program Leader, USDA. New cooperative soybean processors which appear in the USDA Co-op Database include: Producers Cooperative Association (Girard, Kansas), South Dakota Soy Producers (Volga, South Dakota), West Bend Elevator Co. (West Bend, Iowa), and West Central Cooperative (Ralston, Iowa). Address: U.S. Dep. of Agriculture, Rural Development, Rural Business-Cooperative Service, STOP 3256, 1400 Independence Ave., S.W., Washington, DC 20250-3256.

741. *SoyaScan Notes*. 1999. Chronology of soy protein isolates for food use. Dec. 9. Compiled by William Shurtleff of Soyfoods Center.

• **Summary:** 1939—The Glidden Company in Chicago,

Illinois, becomes the world's first company to manufacture a soy protein isolate for use in food. Named Albusoy and called "soy albumen," it is an enzyme-modified isolate used as a whipping agent to replace egg whites. 1950—Gunther Products of Galesburg, Illinois, introduces an enzyme-modified soy protein isolate. By 1967 roughly 1 million lb/year of enzyme-modified soy protein isolates were being made in the USA.

1957—The Glidden Company in Chicago becomes the world's first company to start large-scale production of today's regular (non-enzyme modified) food grade soy protein isolate. Their \$4 million plant at Indianapolis, Indiana, makes Promine brand isolated soy protein.

1957 July—ADM purchases The Drackett Company (Evendale, Ohio), which makes commercial industrial soy protein isolates and is experimenting with edible isolates.

1958—The Glidden isolate plant at Indianapolis is purchased by Central Soya—which now enters the isolate business.

1958-1959—ADM starts to sell small amounts edible isolates to Consolidated Foods in Texas. William Atkinson developed the product, which was quite satisfactory and practical. But the patent was about to expire, so ADM turned its attention elsewhere.

1959 Oct.—Central Soya opens a huge new plant to produce their Promine brand of soy protein isolate. By 1966 Central Soya is making 30 million lb/year of soy protein isolates.

1962 Oct.—Ralston Purina starts making food grade soy protein isolates in Louisville, Kentucky, under the Edi-Pro brand, using technology largely developed by Frank Calvert and Robert Boyer when they worked as researchers for Henry Ford. Anderson Clayton and Carnation started to make soy protein isolates soon thereafter.

1964—The USDA allows the use of soy protein isolates in meat sausages at the 2% level by weight.

1965 Oct. Skippy Peanut Butter with Smoky Crisps introduced. The "Smoky Crisps" are bacon-like bits made by General Mills from spun soy protein fiber.

1965 Dec.—General Mills introduces Bac\*O's, meatless fried bacon bits made from spun soy protein fiber in several test markets.

1966 May—General Mills introduces its Bontrae line of meat analogs based on spun soy protein fibers, including Ground Beef Analog, Diced Ham Analog, and Diced Poultry Analog.

1969 Dec.—Bac\*Os, meatless bacon bits, are now available nationwide.

1970 Dec.—Bontrae spun soy protein fiber starts to be made at General Mills' new plant in Cedar Rapids, Iowa.

1973 March—Hamburger prices reach all-time highs. Hamburger extended with 25% Bontrae (spun soy protein fiber) goes on sales at Red Owl Stores in Minnesota.

1973 summer—Grain Processing Corp. of Muscatine,

Iowa, starts making soy protein isolates under the Pro-Fam brand.

1974 Oct.—General Mills introduces meatless Country Cuts, made from spun soy protein fiber, in ham or chicken flavors.

1976—Ralston Purina has become the world's leading manufacturer of edible soy protein isolates. Their flagship plant is still in Louisville. 1977 May—Dawson Foods buys (for about \$10 million) the Bontrae spinning line, plus exclusive rights to General Mills' soy isolate and patented spinning technology, equipment, and frozen spun products marketed to food processors and institutional customers. Dawson moved the equipment to Minnesota, and broke ground for a new plant in Feb. 1978

1979 March 31—Dawson Mills' soy protein isolate plant opens 1½ miles east of Dawson, Minnesota, on a 220-acre site.

1980 May—Dawson Mills introduces its Anaprime line of meat analogs based on spun soy protein fibers and technology purchased from General Mills; they are very similar to the Bontrae line.

1980 Aug.—Central Soya sells all of its soy protein isolate operations to Archer Daniels Midland Co. With this purchase, ADM enters the edible isolate business, and Central Soya gets out. ADM names its first four edible isolates Ardex D, Ardex DHV, Ardex F, and Ardex SP-6—simply replacing Central Soya's brand "Promine" by the brand "Ardex."

1985—ADM moves its soy isolate plant from Chicago to Decatur, Illinois.

1986—ADM doubles the size of its soy isolate plant in Decatur.

1987-1988—ADM builds a second isolate plant in Decatur.

1988 June 23—ADM buys from Grain Processing Corp. (GPC) their soy protein isolate technology, brand names (Pro-Fam), and customers—but not their equipment. ADM soon begins to produce the Pro-Fam line of isolates in Decatur, Illinois.

1988—The price of imported casein rises above the price of soy isolates—and stays there due to loss of subsidies by foreign governments.

1988—ADM starts to make industrial soy protein isolates in Decatur.

1995—ADM builds a third edible isolate plant in Decatur, adjacent to its other two plants.

1997—ADM sells its industrial isolate business in Decatur to PTI (Protein Technologies International).

1997 June—ADM starts producing soy protein isolates at its plant in Europoort, Netherlands.

742. *ASA Today* (St. Louis, Missouri). 1999. The American Soybean Industry Council—ASIC. 6(2):6. Dec.

• **Summary:** In December 1995 the leaders of the American Soybean Association formally launched a group named the

American Soybean Industry Council (ASIC), which provides a forum for discussion and action for all soybean industry sectors including crop protection and fertilizers, seeds, equipment, processors, exporters, end users, transportation and warehousing, insurance, finance and banking. Funding to operate the ASIC comes from dues paid by the industry members.

“ASA thanks the following members for their participation in ASIC: AgrEvo USA Company, AgriPro Seeds, Inc., AIA Insurance, American Cyanamid, Asgrow, BASF, Bayer Corporation, Burlington Northern, Dakota, Minnesota & Eastern Railroad, Doane Ag Services, Dow AgroSciences, DuPont Crop Protection, Golden Harvest, Illinois Soybean Promotion Board, Monsanto, New Holland North America, Novartis Crop Protection, Novartis Seeds, Riceland Foods, and Zeneca Ag Products.”

743. Farmland Industries Inc. 1999. Celebrating the Farmland tradition: Seventy years of cooperative success. Kansas City, Missouri. 32 p. 28 cm.

• **Summary:** This spiral-bound history of Farmland Industries, Inc., sent out with the 1999 annual report, also announces the merger of Farmland with Cenex Harvest States to create a “new, combined cooperative–United Country Brands.” Contents: Company profile. Historical photos. President’s letter. Chairman’s letter. 1999 board members. Inputs. Feed and grain processing. North American grain. Refrigerated foods and livestock production. Corporate information.

Profile (p. 1): Headquarters: Kansas City, Missouri. 1999 sales: \$10.7 billion. Owners: 1,700 local cooperatives; 600,000 North American producers and ranchers. Motto: Proud to be farmer owned. Assets: \$3.3 billion asset base includes: Fertilizer plants; petroleum refinery; grain elevators; feed mills; pork, beef and catfish processing plants; transportation fleet. Mission: To be a global, consumer-driven, producer-owned ‘farm-to-table’ cooperative system. Business lines: Crop production/crop protection, petroleum, grain, feed & grain processing, refrigerated foods & livestock production. History: Founded in 1929 as Union Oil Co., when six farmer-owned cooperatives joined forces to buy and distribute petroleum products; became Consumers Cooperative Association (CCA) in 1935 to reflect expansion into other products; in 1966 CCA became Farmland Industries, Inc.; today Farmland functions as a farm-to-table global agribusiness company, supplying its producer-owners with quality agricultural input products while processing and marketing their grain, pork, beef, and catfish to customers around the world. Address: P.O. Box 7305, Kansas City, Missouri 64116-0005. Phone: 1-800-821-8000.

744. Messer, Gayle. 1999. Audrain County, Missouri: Reflections of the past, 1945-2000. A pictorial history. Virginia Beach, Virginia: Donning Co. Publishers. 128 p.

Illust. Index. 29 cm. \*

745. Norris, Max. 2000. How to make candles from soy oil (Interview). *SoyaScan Notes*. May 1. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Most candles made from soy oil are made by hydrogenating the oil to achieve a desired melting point, hardness, and other characteristics. If you hydrogenated soy oil completely, you would get a completely saturated system, which was mostly stearic (pronounced stee-AIR-ik) acid, with the remaining 10% being palmitic acid; it would have a melting point of about 160°C. A small number of major fat and oil companies make and sell hydrogenated soy oil to particular specifications—if the order is large enough. This material is easiest to use in candles when sold in the form of flakes (made on a flaking roll), or small beads/granules, or powder (obtained by spray chilling). AURI is interested in working with entrepreneurs to replace petroleum products with renewable resources—such as soy oil—by doing the necessary R&D work. At the end of the process, AURI would have identified the desired composition and specifications for the client’s full candle. As a hypothetical example, 85% soybean oil hydrogenated to a melting point of 122°C, 12% fragrances and colors, and 3% Vibar (a well-known polymer which gives homogeneity of color, flavor, etc. over time—with no streaking). AURI gives the client the names of possible suppliers of the chemically modified soy oil, such as A.C. Humco, Lodgers, or Honeybead. One of the nice things about making candles from any vegetable oil is that no smoke is visible—regardless of the melting point of composition of the candle; paraffin candles always smoke. If a candle poured into and sold in a clear Mason or glass canning jar has the proper melting and solidification / contracting characteristics, it will adhere nicely to the internal surface of the jar, but if these characteristics are wrong, you would see breaks and fissures at the surface of the candle near the glass. Address: Senior Scientist and Director of Intellectual Property, AURI, 1501 State St., Marshall, Minnesota 56258. Phone: 507-537-7440.

746. Krohn, Tim. 2000. A cry over spilled oil. *Mankato Free Press (Minnesota)*. May 9. p. 1A, 4A.

• **Summary:** On the blistering cold morning of 23 Jan. 1963 about 3.5 million gallons of crude soybean oil burst out of a huge steel storage tank (40 feet tall, 100 feet in diameter) at the Honeybead Products Co. in Mankato and rushed into the nearby Blue Earth River. The resulting environmental disaster helped to ignite the environmental movement in Minnesota and lead to the creation of the Minnesota Pollution Control Agency (MPCA). It was a pivotal event in Minnesota environmental history, says Stephen Lee, who works at the MPCA and is writing a magazine article about the spill. The story will also appear in a book to be published by MPCA this summer. The environmental pollution and



wildlife disaster was so devastating that on April 1 Governor Carl Rolvaag declared a state of emergency as National Guardsmen and volunteers tried to save thousands of waterfowl that had been covered with the gooey oil. Before that time, there was no thought of water pollution except from disease such as typhoid. Some of the oil was eventually detected on the Mississippi River as far south as Illinois. Today, because of laws and regulations, a similar accident would have dramatically different results. For example, storage tanks have strict design and safeguard requirements, are inspected, and are required to have dike systems around them to contain spills.

Photos show: (1) The Honeymead plant today. (2) An aerial view of the plant taken shortly after the spill in Jan. 1963. (3) The crumpled remains of the tank that ruptured. (4) Soybean oil and strips of steel from the crumpled tank flooding into the Blue Earth River. (5) Drums loaded with oil by the river. (6) The square steel door, added to the round oil tank, was the prime suspect as to why the tank failed.

Address: Staff writer.

747. Wolf, Walter. 2000. Soy-related documents–Business records (Archival collection). Peoria, Illinois.

• **Summary:** In July 2000 Dr. Walter Wolf, as he was preparing to retire from the Northern Center for Agricultural Utilization Research in Peoria, Illinois, sent to Soyfoods Center many file folders of soy-related documents that he had collected between about 1968 and the present. Most are in the field of soy protein, and none are confidential / proprietary. Each one is neatly dated, and the documents are in reverse chronological order in each manila file folder.

Dr. Wolf earned his PhD degree at the University of Minnesota, where he studied soy proteins. He began work at NCAUR in 1956; at that time it was named the Northern Regional Research Center. He worked as a chemist in the Meal Products Research Group. He did mostly pure research, rather than applied. At the time there was little interest in food uses of soy protein. One of his main contributions was collecting and publishing statistics on the annual production and price of soy flour, soy protein isolates, soy protein concentrates, and textured soy protein products.

The following files (listed alphabetically) were received by Soyfoods Center. Unless otherwise stated, only one file on each company or subject was received. A thin file contains less than about 20 sheets of paper; a thick one contains more than 20 sheets: ADM (Archer Daniels Midland Co.; 2 thick files 1970-2000). Anderson Clayton (thin, 1971-81). Cargill (thin, 1970-2000). Central Soya (4 thick files, 1959-1999). Dawson Mills (thick, 1974-1983). Edible Soy Products, Inc. (Hudson, Iowa; Maker of Pronuts; thin, 1971-78). EMI Corp. (Des Plaines, Illinois, thin, 1971-74). Erie Casein Co. (thin, 1966-73). Fuji Oil Co. Ltd. and Fuji Purina Protein Ltd. (of Japan, thick, 1972-1993). Farmland Industries and Far-Mar-Co (thin, 1970-1993).

Food Ingredients–Dale Johnson (thick, 1964-1998). Garrison Products (extrusion, thin, 1977-78). General Foods (thin, 1974-1981). General Mills (thick, 1965-1976). Gerber Products (thin, 1969). Grain Processing Corp. (1968-1976). Griffith Laboratories (thick, 1968-1986). Gunther Products (purchased by A.E. Staley, thick, 1963-1975). Honeymead Products (Mankato, Minnesota, thin, 1978-1986). Industrial Grain Products (Montreal, Canada, thin, 1973-1975). Kikkoman (thick, 1972-1997). Kraft, Inc. (1965-1984). Lauhoff Grain (1 thin, 1973-86). Loma Linda Foods (thin, 1969-1986). Miles Laboratories (thick, 1970-83). Nabisco (1974-81). Meals for Millions Foundation (1 thin file, 1976). Protein Advisory Group of the United Nations, PAG Guidelines (thin, 1969-1978). Quaker Oats (thin, 1970-97). Joe Rakosky, consultant (1979-83). Ralston Purina Co. (4 files, very thick, 1962-1999). Soy protein products (2 files, thick, 1970-1986). Soy protein production statistics and estimates (two thick files, 1970-1996). Staley (A.E., 1 thick, 1969-1986). Swift & Co. (thin, 1961-1971). Takeda Chemical Industries (thin, 1970-1984). Textured soy proteins (1 thin, 1969-71). Tofu equipment (thin, 1970s). Tokuji Watanabe tofu studies at Peoria, Illinois (thick, 1960-61). United Nations Industrial Development Organization (UNIDO, thick, proceedings of Nov. 1969 meeting at Peoria, Illinois). Unilever (thin, 1974-79). Wenger Manufacturing Co. (thin, 1975-76). Worthington Foods (thick, 1965-1998). Address: NCAUR, Peoria, Illinois.

748. Ag Processing Inc. 2000. You own this plant. And you own this plant (Ad). *Soybean Digest*. Aug. p. 32-33.

• **Summary:** This is a striking, two-page color ad. The first plant is a young soybean plant (good color photo, inside an orange rectangle on a black page). The second is a soybean processing plant. “AGP is the largest farmer-owned soybean processing cooperative in the world.” AGP is also one of the four largest soybean crushers and one of the three largest soybean oil refiners.

“AGP buys soybeans from its owners—over 280 cooperatives—and it processes 15,000 acres of soybeans every day.” For more information: [www.agp.com](http://www.agp.com). Address: Omaha, Nebraska.

749. AGP–Ag Processing Inc a cooperative. 2000. Annual report: Partners in food production. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 56 p. 28 cm.

• **Summary:** Net sales for 2000 (year ended Aug. 31) were \$1,961.736 million, down 6.4% from \$2,094.504 million in 1999. Earnings before income taxes: \$20.908 million, up 15.1% from the \$18.167 million in 1999.

AGP has earned a profit for 17 consecutive years—“every year since its formation. This was no small task as depressed margins—plagued the soybean processing and refining business due to excess industry capacity.” “AGP’s innova-

tive Oil Premium Program rewards member-suppliers of soybeans that are of more value in the marketplace by paying a premium for higher oil content soybeans."

A full page (p. 30) is devoted to "AGP Chief Executive Officer Jim Lindsay retires." He retired effective 1 Nov. 2000. "Jim's career began in 1958 at Spencer Kellogg and progressed with a move to ADM in 1961. There he held various positions, including vice president of soy processing, vice president of corn sweeteners, and president of Brazilian operations." Jim has served on the boards of directors of various professional associations, including the National Oilseed Processing Association (chairman, 1986-1990), U.S. Bank, Associated Benefits Corporation, United Way, the Elkhorn, Nebraska School Foundation, and various other community agencies. "Married with four children, Jim is taking this opportunity to help his wife raise their 12 year old daughter." Photos show: (1) Jim Lindsay. (2) The James W. Lindsay Child Care Center, which "was dedicated on the AGP Campus in fiscal 2000 in lasting recognition of Jim's commitment to the welfare of AGP employees and their children."

The next page, "Leadership," shows that Martin P. Reagan was appointed CEO and General Manager on 1 Nov. 2000. The names of all group vice presidents, senior vice presidents, and vice presidents are given. Color photos of the management staff are shown on the next 4 pages.

A full page (p. 35), titled "Reagan succeeds Lindsay as CEO," gives a good bio. He was born in Austin, Minnesota, graduated in 1973 with a bachelor of science degree in agricultural economics from the University of Minnesota, then joined International Multifoods grain division. In 1989 he became president of trading and grain merchandising. In 1991 the operations were sold to AGP—where he continued in grain merchandising.

Also contains color photos of (1) Leiting and Lindsay. (2) Huge soybean processing plants and refineries. (4) The board of directors. (5) Management staff. Address: Omaha, Nebraska. Phone: (402) 496-7809.

750. Dike centennial, 1900-2000. 2000. Dike, Iowa: Centennial History Book Committee. 200 + [17] p. See p. 77-80. Illust. Index. 28 cm.

• **Summary:** The long entry for "Farmers Cooperative Company" states (p. 77-80) that the Association began very modestly as a cow testing association, which soon began buying feeds in car lots for its members, thus saving them money. The Farmers Elevator Cooperative was incorporated in June 1917. They bought (from George Billman) one of the two independent elevators at the time in Dike; Billman went to work for the coop as its first manager.

"The Dike Soybean Processing plant was completed in 1943. In 1949 the mill processed 400,000 bushels of soybeans. In 1946 the coop erected a huge concrete storage elevator, so that it now had a capacity of 310,000 bushels of

soybeans and grain." The cooperative is still active. Address: Dike, Iowa.

751. *Dawson Sentinel (Minnesota)*. 2001. Soybean plant celebrates 50 years of operation. Oct. 17. p. 7.

• **Summary:** A 50-year history of Dawson Mills. 1979 [sic, early 1981]—Joe Givens retired as president and general manager, after nearly 30 years of leadership. 1980 March 1—Dawson Mills merged with Land O'Lakes to become part of the latter's Soybean Division. 1981 May—The soy protein isolate plant was closed. It had cost \$20 million to complete, twice the original estimate. Most of its equipment sold at auction. The building was later acquired by Associated Milk Producers Inc. to house a cheese factory that is still in operation. 1983 June—Land O'Lakes merged with Boone Valley Coop and Farmland Industries. For three months the Dawson plant was known as Boone Valley Coop. 1983 May—The flour mill was closed. 1983 Sept. 1—Ag Processing Inc. (AGP) acquires the plant. Today the plant has 73 employees.

Photos show: (1) Tri-County Co-op soybean plant and office in 1951. (2) Aerial view of the plant in 1961. (3) Forming the foundations of 10 slip-form concrete storage tanks in 1971. (4) The completed tanks located near the Dawson Mills water tower. (5) New offices built in 1962. (6) The concrete storage tanks at the half way completed position.

752. Givens, Joe. 2001. Fiftieth anniversary of the Dawson soybean plant. Speech presented at the Dawson Golf Club in Dawson, Minnesota. 9 p. 13 x 16 cm. cards.

• **Summary:** Begins by focusing on how the Dawson community benefited from the presence of this cooperative soybean processing plant. Joe and his family lived in Dawson for nearly 30 years. Two of his daughters were born there and all three of his kids graduated from Dawson High School. Dawson Mills has been one of the most successful businesses in Western Minnesota. It has provided millions of dollars to the Dawson community in wages, taxes, and net savings (co-op language for earnings) distributed to member elevators. It has also meant millions of dollars in increased income to the farmers who grew the soybeans which were processed at the plant. Over the 28 years the Givens was manager, the plant's average earnings were \$1,250,000 a year. "Since the Dawson elevator was the largest Co-op patron, the Dawson community received a good share of this amount... The soybean plant was by far the largest tax payer in the school district."

On 26 Dec. 1951, right after Jim was offered the job of managing this plant, he called his wife, Mary, for her thoughts. She asked: "Will you be able to come home at nights?" When he said "yes," she said "Grab it!" "At that time we had been married a little more than 2 years, during which time I had started up 6 soybean processing plants and

has not spent many nights at home.”

The main problems during the early days were lack of working capital (they were restricted much of the time to owning only 2 days supply of soybeans), solvent problems (with trichloroethylene), specialty meal (developed for west coast plywood glue was critical in getting the company through its first year).

The plant was “shut down on Christmas Eve 1952 by order of the Minnesota Department of Dairy, Agriculture, and Food because of the dangers of using trichloroethylene. This was actually a good thing because we could then make claims against Crown Iron Works, the DuPont Co., and the Iowa State Foundation for a faulty process. These firms owned the patents and the process. An agreement was rapidly reached that they would pay all the costs to convert the plant to use conventional hexane as the oil solvent. The conversion was made and the plant started up again in May 1953—the time lost was only 5 months... Surprisingly, we ended fiscal 1952 with only a modest loss and in fiscal 1953 a small gain [profit] was made.” In 1955 they finished paying off the original construction bills. That same year a truck scale to weigh the incoming beans and outgoing meal was finally installed.

“We made processing history in 1959 with the addition of a newly designed oil extractor... I had ideas to use different principles in the design of an extractor that would allow manufacture of extractors of very large capacity. The Crown Iron Works agreed to build this new extractor for us at their cost.” The new extractor was installed in 1964, replacing the 1959 extractor. It “worked beautifully and our business grew rapidly the next few years.” “The new extractor had a bed of flakes 6 feet wide and 20 inches deep.” Its capacity of 600 tons/day of soybeans was twice the capacity of the old extractor. In 1971 a second extractor, having a capacity of 700 tons/day was installed, giving Dawson a total capacity of 1,300 tons/day—although it was operated occasionally at 1,500 tons/day. “The Crown Iron Works oil [solvent] extraction systems, the principles of which were developed at Dawson, are now the most preferred systems in the world. The newest ones have huge capacities.” “Development of this new design was a team effort—a Dawson team.”

The U.S. government had a program called Public Law 480, to help needy nations with their food supply. One of the foods was bulgur wheat fortified with high protein soy grits. Dawson Mills’ extraction plant could make these grits. “Dawson Mills was a successful bidder for some of this business for a number of years. It was a very lucrative business which paid for additional processing equipment in about 2 months time.” Unfortunately, with a change in the federal administration, the USDA under Orville Freeman cancelled the soy grit fortification of the bulgur wheat.

Several outside studies on the profitability of adding value to products by further processing concluded that manufacture of soy flour and textured soy flour would be very

profitable. The “Flour Tower” was built and its operation was successful. The fiscal years ending 1973, 1974, and 1975 were the most profitable years in Dawson Mills’ history.

Several more studies showed that the manufacture of non-meat ham, chicken, and beef based on the use of isolated soy protein would be very profitable. As a result, a soy isolate plant was built and a Food Products Division was formed. The resulting products were of excellent quality and were well accepted by institutional buyers, such as the U.S. Army, U.S. prison systems, university food systems, etc. But the retail market was too tough a nut to crack. Unfortunately, the price of meat fell below the cost of production of these specialty food products.

“Fiscal 1979 ending Aug. 31, the last year of operations as Dawson Mills, ended with positive net margins of \$2.4 million.” A few months later, in 1980, Dawson Mills merged with Land O’Lakes. Joe retired in early 1981. “I have not seen any reports to show the results of the operations of the Dawson soybean plant since it was acquired by AGP.” “Thank you for your kind attention.” Address: Dawson, Minnesota and Naples, Florida.

753. Business Trend Analysts, Inc. 2001. The market for fats and oils: Past performance, current trends, and strategies for growth. 2171 Jericho Turnpike, Commack, NY 11725. 549 p. Price: \$1,495. \*

• **Summary:** Contents: 1. The overall report. 2. The market for vegetable oil: The overall market, the market for soybean oil, for corn oil, cottonseed oil, sunflowerseed oil, peanut oil, canola oil, olive oil, other vegetable oils (incl. linseed oil, coconut oil, palm oil and palm kernel oil, tall oil, tung oil, castor oil, sesame oil, cuphea, hemp oil, argan oil). 3. The market for animal fats and oils. 4. Edible end-use markets for fats and oils. 5. Inedible end-use markets for fats and oils. 6. The impact of fat substitutes. 7. Industry structure and economics. 8. Competitor profiles: Archer Daniels Midland, Cargill, Cenex Harvest States Cooperatives, ConAgra Foods, Philip Morris Companies, Procter & Gamble, Unilever.

In Chapter 2, “The market for vegetable oil,” is a long section titled “The market for soybean oil.” Contents: Market overview (1990-2000, 2001E, 2002E, 2010P). Sales and consumption. Production trends. Foreign trade activity. Polymer coatings for seeds. Statistical tables: (1) U.S. manufacturers’ sales of soybean oil. (2) Total U.S. consumption of soybean oil. (3) Consumption of soybean oil: Edible vs. inedible end-uses. (4) Consumption of soybean oil in selected edible products: Salad and cooking oils, baking and frying oils, margarine, other edible products. (5) Consumption of soybean oil in selected inedible products: Resins and plastics, paint and varnish, other inedible products. Soybean oil production, prices, and supply. Soybeans: Supply, crushings, production, prices, and acreage planted and harvested. Worldwide production of soybean oil. Exports,



imports, and U.S. apparent consumption. Exports as a percentage of U.S. manufacturers' sales. U.S. exports and imports by country. Average dollar prices for exports and imports. Address: Commack, New York.

754. AGP—Ag Processing Inc a cooperative. 2001. Annual report. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 28 + 20 p. 28 cm.

• **Summary:** Net sales for 2001 (year ended Aug. 31) were \$1,788.716 million, up 9.0% from \$1,640,838 million (revised downward from \$1,961,736 million) in 2000. Earnings from continuing operations (before income taxes): \$46.038 million, up 2.70 fold from the \$17.069 million (revised downward from \$20.908 million) in 2000.

This year AGP has a new CEO, Martin P. Reagan. "In fiscal 2001, AGP began to divest its U.S. and Caribbean feed operations, its swine business, and its Sherman, Texas, refinery, ending its relationship with Archer Daniels Midland (ADM) in these businesses." "Through a transaction with ADM in fiscal 2001, AGP divested itself of Consolidated Nutrition which was jointly (50-50) owned by the two companies. In a related transaction, AGP acquired ADM's share of Masterfeeds, the Canadian feed operation that had been equally owned by the two companies." Also an "expansion of the Soybean Component Premium Program [to include protein], and an increase in bio-fuel visibility and growth." AminoPlus is "AGP's high performance dairy supplement" [bypass soy protein].

Contains color photos of (1) Leiting and Lindsay. (4) The board of directors. (5) Management staff. Contains many color photos. AGP now has a website listed on the rear cover: [www.agp.com](http://www.agp.com). Address: Omaha, Nebraska. Phone: (402) 496-7809.

755. Jordan, Joe. 2002. U.S. agribusinesses take first steps in Cuba. *Bluebook Update (Bar Harbor, Maine)* 9(1):1, 7. Jan/March.

• **Summary:** In Nov. 2001 Hurricane Michelle devastated parts of Cuba, severely damaging crops and killing five people. While continuing to enforce its 38 year old embargo, the U.S. government responded by easing some sanctions last year. ADM, Cargill Inc, and Riceland Foods have secured contracts to sell soy, corn, rice, wheat and other staples to Cuba. Cargill will ship 10,000 tons of crude soy oil in January and February.

756. Marking, Syl. 2002. Breakthrough bean bonus: New technology and a bold move made it possible. *Soybean Digest*. April. p. 8-9.

• **Summary:** Ag Processing Inc. (AGP), a farmer-based cooperative based in Omaha, Nebraska, is the first company in the USA to start a system of value-based pricing, where they pay more for soybeans with a higher oil content—according to Mike Marnell, AGP's vice president of member

and corporate relations. Called "The Premium Program," it is a joint initiative of AGP, Iowa State University, the Iowa Soybean Promotion Board, local cooperatives and producers. The program—which Marnell says has been well received—started on a limited basis in the fall of 1999, expanded in 2000, and added a protein premium in 2001. AGP paid about \$2.5 million in oil premiums on the year 2000 crop. Marnell sees this as the beginning of what could be the future of soybean marketing.

The key to the program is the near-infrared (NIR) whole grain analyzer, which takes slightly more than a minute to determine the oil and protein content of the sample. The analysis is linked to office computers, which calculate the premium and make that payment right with the settlement check as it goes through the doors. Researchers says this kind of program is long overdue.

The company has six crushing plants in Iowa and one each in Missouri, Nebraska, and Minnesota.

757. Murray, Shailagh. 2002. Will a 'temporary' fuel subsidy ever die? A biodiesel tax break could enjoy a long life, as 25-year-old ethanol grants show. Politics & policy. *Wall Street Journal*. May 9. p. A4.

• **Summary:** In 1977 Congress began to subsidize ethanol, a corn based fuel, to help the industry get started. That was 25 years ago, and the subsidy still exists. The General Accounting Office, the investigative arm of Congress, says the various ethanol incentives / subsidies have cost taxpayers as much as \$15 billion. Today, ethanol is the third largest use of corn, ahead of cereals and sweeteners.

ADM, which processes more corn and soybeans than any single country in the world, is enthusiastic about both ethanol and biodiesel subsidies. ADM is now considering building a biodiesel plant in Minnesota. An important first step is securing an exemption from the federal excise tax on motor fuels. The most widely sold form of biodiesel today blends 20% biodiesel with 80% conventional (petroleum-based) diesel. The pending legislation in the Senate's energy bill would reduce by one cent the 24.4 cents-a-gallon federal excise tax for each 1% of biodiesel in a blend, up to a maximum of 20 cents. That would eliminate the price gap for 20% biodiesel.

Rudolf Diesel (1858-1913), the German mechanical engineer who built the engine named after him (starting in 1896), envisioned that it would run on vegetable oils.

Soybean growers have proceeded wisely and carefully in bringing biodiesel to market. They have spent \$30 million to clear environmental hurdles. They have worked to avoid charges that a tax break would amount to corporate welfare. Sales of biodiesel have recently risen dramatically: 1999—500,000 gallons. 2000—5 million gallons. 2001—10 to 15 million gallons. Ag Processing Inc., a Nebraska farmer-owned cooperative, makes biodiesel.

Politics: The soybean and biodiesel industries don't have

political-action committees (PACs) to make campaign contributions. But they do have people—farmers in key farm states. And they have congressmen in important and often tight political races. GOP House Speaker Dennis Hastert is from Illinois, ADM's home and the top ethanol-producing state.

A recipe for making biodiesel (from the National Biodiesel Board) is printed on a recipe card: Harvest soybeans. Make soybean oil. Mix with alcohol and a catalyst, such as caustic soda. Boil at about 160°C. Wait 1-8 hours to get a mix of glycerin and biodiesel. Allow glycerin to settle and separate it from the remaining liquid. Remove excess alcohol and catalyst. Clear, amber-colored biodiesel is now ready to use. Republicans now embrace a renewable-fuels standard on the basis of national security. Address: Washington, DC.

758. Duffey, Patrick. 2002. Heavy debt pulls Farmland into Chapter 11: new CEO Terry leads reorganization effort. *Rural Cooperatives*. July/Aug.

• **Summary:** Farmland Industries of Kansas City, Missouri, filed for Chapter 11 bankruptcy protection on 31 May 2002. Firms seek protection from creditors under Chapter 11 while they reorganize their business. Address: Information Specialist, USDA Rural Development.

759. AGP—Ag Processing Inc a cooperative. 2002. Annual report. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 38 + 20 p. 28 cm.

• **Summary:** Net sales for 2002 (year ended Aug. 31) were \$1,801.561 million, up 0.7% from \$1,788.610 million in 2001. Earnings from continuing operations (before income taxes): \$39.150 million, down 15% from the \$46.038 million in 2001.

“Our cooperative system is well positioned to further develop opportunities which require strict adherence to identity preservation and food safety. Working through members enabled AGP to expand its non-GMO program in fiscal 2002 and placed increased importance in our value-based pricing system. This year we will be expanding component pricing to include contract production of non-GMO and AGP preferred seed varieties.”

“Sales of SoyGold biodiesel fuel increased in fiscal 2002, thanks in large part to AGP members and farmers who responded to our call for action to increase usage of this renewable fuel.”

AGP will continue to “differentiate products and services in order to de-commoditize some of the products we produce.” Contains many color photos. Address: Omaha, Nebraska. Phone: (402) 496-7809.

760. *ASA Today (St. Louis, Missouri)*. 2002. The present and future of soy products in Russia: Demand growing for quality products and technical assistance. 9(1):4-page insert

after p. 2. Oct/Nov.

• **Summary:** On 25 December 1991 the Soviet Union broke up into 15 independent republics. Since then, the 145 million people in the Russian Republic have struggled to build a democratic political system and a new market-driven economy. Before that time, millions of tons of U.S. soybeans and soybean meal were imported to the USSR; Today, total imports are lower, and mostly in the form of soybean oil. Michael Moditch, director of the American Soybean Association's office in Moscow, says approximately one million tonnes (metric tons) of U.S. soybeans are processed in Europe, then come to Russia in the form of soybean oil (600,000 tonnes projected in 2002), which is used in margarine and mayonnaise in Russia. The use of soybean meal in poultry production is steadily increasing.

Because of its northerly latitude and cold climate, Russia cannot grow more than about 300,000 tonnes of soybeans a year. But an intensive poultry industry in Russia will need 1.2 to 1.5 million tonnes.

The use of soy protein ingredients in Russian foods is growing. Biostar has a branch in St. Petersburg that distributes soy protein concentrates and isolates; they sell 250 tonnes a month. They are used mainly by the meat industry, in mayonnaise, and confectionery. Typical Russians presently regard soy products as cheap synthetic replacers for regular products; they are generally not aware of the health benefits of soy products. The forecast is for growth, since there is a serious protein shortage in Russian diets. Envoy International is a company in St. Petersburg that imports and trades American soy products, such as soybean flour and flakes, produced by Cenex Harvest States in Minnesota.

STEP is the Soybean Trade Expansion Program.

761. Kaplan, J. Kim. 2002. For you, the consumer. *Agricultural Research* 50(12):4-9. Dec.

• **Summary:** A color photo on the top half of the first page shows many soy products, both foods and Industrial products, including: Kaukauna Nacho Cheese, Yves Veggie Tofu Wieners, ProSobee soy formula, NutriGrain energy bars, Betty Crocker Creamy deluxe, Wish-Bone salad dressing, Edensoy soymilk, Mori-Nu Tofu, Ken & Robert's Veggie Burgers, SoyGold industrial solvent, Natural Touch Okara Pattie, soy ink and a newspaper printed with it.

Many “products that people use every day could justifiably carry the stamp ‘Courtesy of ARS Research.’” Omaha Steaks began offering irradiated hamburger patties and ground beef in November 2000—to be sure it is free of *Escherichia coli* O157:H7, bacteria that can cause serious, even life-threatening illness. Today all the 6.5 million pounds of ground beef they sell is irradiated, which means it is treated with “ionizing radiation produced by cobalt and cesium atoms, machine-produced X-rays, or electron beams. Treated meat in no way becomes radioactive.” Final FDA approval for irradiation treatment of meat came in Feb. 2000.

Nutrim, a product similar to Oatrim developed by USDA's Agricultural Research Service (ARS), is now being used to make vegan, organic chocolate truffles. Mrs. Mudd's Inc. (Oceanside, California) makes the delicious products; Nutrim flows like heavy dairy cream or coconut cream.

Tifsport is a variety of bermuda grass developed for football and soccer fields, and golf courses. Address: USDA-ARS Information Staff, 55601 Sunnyside Ave., Beltsville, Maryland 20705-5128. Phone: 301-504-1637.

762. Richter, Steve. 2003. From field to fuel and back: A growing number of producers complete the circle by blending soy-based biodiesel with Ruby Fieldmaster B2 for premium performance. *Cooperative Partners*. May/June. p. 8-9.

• **Summary:** Cenex Ruby Fieldmaster B2 is made by the energy division of CHS Cooperatives. B2 is a 20% blend of soy-based biodiesel with 80% petroleum-based diesel fuel. Sales of biodiesel climbed from 5 million gallons in 2000 to 25 million gallons in 2002.

763. *ASA Today* (St. Louis, Missouri). 2003. Value-added makes sense for growers: Ag Processing Inc. 9(8):4. June.

• **Summary:** AGP now has non-GMO grower contracts in Iowa, based on its long experience with Identity Preserved soybean meal. In 2003, non-GMO grower contract premiums range from 27 to 45 cents per bushel. For more information: [www.agp.com](http://www.agp.com).

764. Andreas, Lowell. 2003. History of work with soybeans (Interview). *SoyaScan Notes*. July 9. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Lowell grew up the youngest of six children, who were born in the following order: Osborn (born in 1903), Albert, Lenore (the only sister), Glenn, Dwayne (born 4 March 1918), and Lowell (born in 1922). Their parents were married in Sterling, Illinois, on 27 Nov. 1902, and soon moved to Minnesota. Four of the five boys (except Osborn, who later became a concert pianist with the Washington Symphony Orchestra, English teacher, and author), shared an almost lifelong involvement in the family's feed and oilseed processing businesses. Osborn was also involved, but only briefly in the mid-1930s.

In about 1927 Lowell's father, Reuben P. Andreas, started a feed compounding business named R.P. Andreas & Son, in Lisbon, Iowa; the "Son" was Albert. He obtained his soybean meal from A.E. Staley Mfg. Co. in Decatur, Illinois; the meal did not come from Joe Sinaiko [who began processing soybeans in the spring of 1928 at Iowa Milling Co. in Cedar Rapids, Iowa]. Reuben's products were sold as "Andy's Feeds." In 1934 Reuben took three more sons (Osborn, Glen, and Dwayne) into the business and changed its name to R.P. Andreas & Sons. Lowell, the youngest, was still in high school.

In 1938, on the advice of his son, Dwayne (who was so advised that year by Mr. A.E. Staley), Reuben decided to start a soybean processing company in Cedar Rapids, Iowa. The family bought an animal feed manufacturing mill in Cedar Rapids, contracted for a soybean processing plant to be built next to it, and imported solvent extraction equipment from Italy; the manufacturer may have been Bonotto. Next to the solvent extraction plant they had a livestock feed plant built. The family (Reuben, Lowell, Dwayne, Glen) moved to Cedar Rapids (12 miles to the northwest) and in 1938 the new company, named Honeymead Products Co., began processing soybeans into oil and meal.

The name "Honeymead" was coined by one of Lowell's brothers (he does not remember which one) in about 1938 in Lisbon, Iowa. The company was incorporated in Iowa.

In about 1944 Honeymead bought land in Washington, Iowa, and had a soybean crushing plant built on it. Shortly thereafter Honeymead had another soybean crushing plant built in Spencer, Iowa. The soybean oil and meal from both plants were sold on the open market.

Note: In May 1945 Cargill purchased the Honeymead plant at Cedar Rapids, Iowa. By March 1947 Cargill also owned the former Honeymead plants in Spencer, Iowa, and Washington, Iowa. Reuben Andreas, Lowell's father, was an entrepreneur and a good businessman. His sons learned much about business from him. Lowell recalls, "We never talked about sports at the dinner table." Reuben was a Mennonite in his youth, but Lowell recalls that "we did not grow up in a Mennonite home—even though Dwayne likes to eulogize about that"—his Mennonite upbringing and values. Reuben remained actively involved on a day-to-day basis with the family solvent extraction plants and the businesses until they were sold to Cargill.

Glen, Dwayne, and Lowell Andreas each learned a lot about soybean processing from Joe Sinaiko—who let them (his competitors) observe operations in his plant in Cedar Rapids. "In those days, there was room for a lot of competitors," Lowell recalls. "Joe was honest and stuck by his word." He also recalls learning about controlling the moisture in the soybeans being processed and the moisture in the meal being sold, controlling the fat content of the meal produced, and doing everything with a few people as possible. Lowell did this by observation in Joe's plant; Joe never "taught" these things to the Andreas brothers.

Lowell's mother, Lydia, died in 1938, when he was age 16. Lowell's father, Reuben Andreas, had several strokes during World War II (which removed him from business life), later remarried, and died in about 1958.

Lowell first attended Wheaton College in Illinois for 2 years, then went for 2 more years to the University of Iowa in Iowa City. He majored in philosophy (medieval) at both places. Today Lowell believes that philosophy, which taught him to think, reason, and concentrate on a subject, is an excellent major for business leaders—much better than an



MBA degree. Reuben was the only member of the Andreas family who entered the military during World War II. He volunteered and served in the Army Medical Corps in the U.S. for 4½ years; he was in limited service because of his eyesight, so he developed plans to train medics. During the war he married Nadine Hamilton. After the war he returned to Cedar Rapids, where he worked in one of the family owned businesses that insured turkeys; he was an adjustor for turkey insurance for about a year, then the family heard that a soybean plant in Mankato [Mankato Soybean Products Co.] was for sale.

In 1947 Dwayne and Lowell bought that plant and renamed it Honeymead, and Lowell and his wife moved to Mankato from Cedar Rapids to run the plant; "Dwayne was the visionary; I was the manager." Dwayne continued to reside in Minneapolis, where he was vice-president of Cargill, but he would visit the Mankato plant from time to time.

In 1960 Dwayne and Lowell sold the Honeymead plant in Mankato to the Farmers Union Grain Terminal Association (GTA). Lowell had a contract with GTA to manage the company for them for 10 years. After the sale, in 1964 Dwayne and Lowell started National City Bank in Minneapolis; it was Dwayne's idea, but Lowell was interested in finance and had it looked like a good business to be in. In 1965 Shreve "Bud" Archer, Jr. of ADM offered to sell Dwayne and Lowell a block of ADM stock [100,000 shares at about half its book value, for a total of \$3.3 million], which amounted to effective control of the company, if they would agree to come in and run ADM—a company that was in decline, had too many workers and was very poorly managed. Dwayne and Lowell saw ADM as a company with great potential if they could turn it around. Dwayne owned 60% of the block of stock and Lowell owned 40%.

Both Dwayne and Lowell moved to Minneapolis, where ADM was headquartered. Lowell stayed there for 1 year. Both men quickly realized that ADM needed "total reorganization" and the first step required moving the headquarters from Minneapolis to Decatur, Illinois,—where they built a new office building. All employees were offered their same jobs in Decatur or generous severance pay if they chose not to move. ADM lost 200 people in the move—without laying off anyone and without problems. Downsizing was the main reason for the move, yet the employees felt they had been treated fairly. By early 1967 Lowell was executive vice president of ADM, and by mid-1968 he was president—focusing on processing and trading. In about 1967 Lowell moved to Decatur with the company, but he told Dwayne at the time that, if he could afford to, he would like to retire at age 50—his ambition since he had gone into business. At age 49 Lowell reminded Dwayne that he had one year left and that he had hired and groomed the man (Donald B. Walker, former vice president of Ralston Purina, and a good friend) to replace him. True to his word, Lowell retired in 1972 at

age 50 and moved with his wife back to Mankato. He still owns his ADM stock and today he has residences in Mankato, Naples (Florida, on the Gulf of Mexico), and Grand Cayman (Cayman Islands, in the Caribbean northwest of Jamaica). Lowell has a daughter, Pamela, and a son, David. Dwayne has one son, but he can never return to ADM. Address: Mankato, Minnesota.

765. Dreeszen, Dave. 2003. Smithfield defends proposed purchase of Farmland division. *Sioux City Journal (Iowa)*. July 31. p. A1.

• **Summary:** Farmland Industries is bankrupt. Smithfield Foods, the world's largest pork processor, recently agreed to buy the assets of Farmland's pork division for \$36.5 million in cash—saying it represents the best chance to reverse the fortunes of the bankrupt cooperative. Some farmers, politicians, and consumer groups object to the deal, noting that it would give Smithfield one third of the U.S. pork processing market. Address: Journal staff writer.

766. CHS—Cenex Harvest States Cooperatives. 2003. History highlights of CHS (Website printout—part). <http://www.chsco-ops.com>. 7 p. Printed July 18.

• **Summary:** "Cenex Harvest States was formed in 1998 by a merger between two regional cooperatives, Cenex, Inc. and Harvest States Cooperatives. The following highlights are key dates in the history of CHS."

1929—North Pacific Grain Growers, Inc. (NPGG) is organized as a regional cooperative, with 60 affiliated local cooperatives. The original 17-member board of directors holds its first meeting on 19 Dec. 1929 at Lewiston, Idaho.

1931—Cenex, originally the Farmers Union Central Exchange, is founded Jan. 15. First offices are in downtown St. Paul, Minnesota.

1938—The Farmers Union Grain Terminal Association (GTA) opens for business in St. Paul, Minnesota, on June 1 with 121 affiliated cooperatives. The new regional cooperative operates one terminal elevator in St. Paul and two branch offices in Duluth, Minnesota, and Great Falls, Montana. NPGG moves its office to Portland, Oregon.

1960—GTA purchases the Honeymead soybean processing plant [Mankato, Minnesota] and the Archer Daniels Midland elevator line in southern Minnesota.

1975—GTA begins leasing the St. Paul Number Two Terminal, a corn and soybean barge-loading terminal on the Mississippi River.

1977—The Honeymead division of GTA purchases Holsum Foods of Waukesha, Wisconsin.

1979—Member-owners purchase more than \$1 billion in goods and services from Cenex.

1981—Cenex marks 50 years of service to agriculture, serving over 1,500 cooperatives in 15 states.

1983 June 1—North Pacific Grain Growers (NPGG) and GTA merge to form Harvest States Cooperatives.

1987–Cenex joins with Land O’Lakes to form the Cenex/Land O’Lakes Ag Services marketing joint venture.

1992–Harvest States reorganizes Holsum Foods and Honeymead to form the Grain and Food Processing Group. Holsum Foods division acquires Gregg’s Foods, Portland, Oregon.

1993–Cenex members officially adopt Cenex, Inc. as the regional cooperative’s name. The Holsum Foods division acquires Miami Margarine Co., Cincinnati, Ohio.

1995–Harvest States’ annual grain volume tops 1 billion bushels for the first time in history.

1996–Harvest States reorganizes: Oilseed Processing & Refining represents Honeymead and related processing / refining interests.

1997–Harvest States forms two defined business units–Wheat Milling and Oilseed Processing & Refining–and offers members opportunities for direct investment and returns on Equity Participation Units. Also: Plans are announced for a new soybean processing and refining operation near the Minnesota–South Dakota border.

1998 June 1–Cenex and Harvest States unite to become Cenex Harvest States Cooperatives, an integrated agricultural foods system linking producers to consumers.

1999–Cenex Harvest States posts \$86 million in net income on sales of \$6.3 billion for fiscal 1999.

2000–CHS Cooperatives is adopted as the name used for the company, a long with a new logo.

2001–CHS ends its defined investment program that allowed producers to participate directly in its wheat milling and soybean processing operations.

2002 April–Harvest States division of CHS Cooperatives breaks ground at the construction site of its second soybean crushing facility just outside Fairmont, Minnesota. Note: Production start-up is scheduled for early Oct. 2003 and a community open-house is planned for early September. This plant will be able to crush more than 220,000 bushels/day of soybeans. Situated on 26 acres of a larger 200-acre site, the plant will start with 40 new employees.

2003–Harvest States, the grains and foods division of CHS Cooperatives, announces the opening of Harvest States do Brasil Ltda. in Sao Paulo, Brazil, a wholly owned subsidiary originating and marketing soybeans from Brazil to customers nationwide in the USA. Address: St. Paul, Minnesota.

767. National Cooperative Business Association. 2003. Co-op primer: Significant dates in co-op history (Website printout–part). [Http://www.ncba.org](http://www.ncba.org). Printed July 24.

• **Summary:** “1752–The first successful cooperative was organized in the United States when Benjamin Franklin formed the Philadelphia Contributionship for the Insurance of Houses from Loss by Fire [Pennsylvania]–the oldest continuing cooperative in the U.S.

“1844–The Rochdale Equitable Pioneers Society was

established in Rochdale, England. These pioneers wrote down a set of principles to operate their food cooperative which contributed to their success and spread to their cooperatives around the world. The successful establishment of the cooperative in Rochdale marks the beginning of the modern cooperative era.

“1865–Michigan passed what is believed to be the first law recognizing the cooperative method of buying and selling.

“1895–The International Cooperative Alliance (ICA) was established. Today over 200 national cooperative organizations representing 92 nations belong to ICA, the apex organization of all national cooperative movements.”

“1916–The first national cooperative association was formed–now known as the National Cooperative Business Association.

“1922–Congress passed the Capper-Volstead Act [as a consequence of depressed agricultural prices after World War I] allowing farmers to act together to market their products without being in violation of antitrust laws.

“1920s & 30s–Congress established governmental agencies–the Farm Credit Administration (1929), the National Credit Union Administration (1934) and the Rural Electrification Administration (1936)–to provide loans and assistance to cooperatives.” Address: 1401 New York Ave., NW, Suite 1100, Washington, DC 20005. Phone: (202) 638-6222.

768. Koehler, Mike. 2003. AGP explosion injures 8: Three victims are in critical condition. Soybean processing plant was closed for maintenance. *Sioux City Journal (Iowa)*. Aug. 30. p. A1, A3.

• **Summary:** An explosion on Friday morning, Aug. 29, at about 9 a.m., at Ag Processing Inc, injured 8 people (all of them AGP employees), 3 of them critically, “with trauma from the blast along with heat and chemical burns.” The blast occurred at the “at the soybean processing facility located at 2753 Port Neal Road in an industrial area west of Salix near the Missouri River.” At the time of the blast, the plant was not operating and was down for maintenance. Presently, the cause of the explosion is unknown and a complete investigation is underway.

The victims, taken directly to Mercy Medical Center in Sioux City, are: Kyle Keck (age 22, critical), Mark Croghan (45, critical), Eric Ploen (23, critical), Dustin “Dusty” Hannah (26, serious), Richard Scott (24, released), William Beck (47, released), Patrick Swanson (44, released). One more person remained hospitalized, in critical condition, at Mercy on Friday, but his name was not released at the request of his family.

Hexane (n-hexane) has been identified as one of the chemical components involved in the blast; it “is highly flammable and its vapors can be explosive.” “The blast originated from the southwest corner of the extraction

building where the hexane is used.” Some of the victims had third- and even fourth-degree burns, the most serious, which require long-term care. “One of the major concerns is inhalation burn injury” which damages the lungs.

A large aerial photo shows the plant and many fire trucks after the explosion.

A sidebar, titled “Ag Processing has headquarters in Omaha” [Nebraska], states: “Besides the Port Neal plant located southwest of Sergeant Bluff,... AGP operates five other soybean processing plants in Iowa.” “Founded in 1983, AGP now markets the products from 250,000 farmers from 16 states. Those farmers represent 243 local cooperatives and eight regional cooperatives. AGP began in 1943 as Boone Valley Cooperative Processing in Eagle Grove.” Farmland Industries had formerly owned the plant on Port Neal Road.

Note: This plant is usually said to be located at Sergeant Bluff, Iowa. Address: Journal staff writer.

769. Claeys, Jesse. 2003. Five remain hospitalized after blast [at AGP plant in rural Salix, Iowa]. *Sioux City Journal (Iowa)*. Aug. 31. p. A1, A3.

• **Summary:** Five men are still hospitalized with heat and chemical burns. The investigation continues. Address: Journal staff writer.

770. *Corn and Soybean Digest*. 2003. Build global demand: Are there enough soybean markets for everyone? Aug. p. 10.

• **Summary:** Al Ambrose of Harvest States (Inver Grove Heights, Minnesota) believes that the big issue is not that the USA is losing market share to Brazil, but that the USA and Brazil should work together to expand global demand for soybeans and products, and to expand purchasing power. He notes that world soybean production has increased, on average, by ten million tonnes (metric tons) in each of the past 7 years, and still supplies are tight, so soybean prices are high. Usage of soybean meal worldwide has risen by 87% over the past 12 years—a breathtaking growth rate. There is a huge global demand for food, but many people do not have the purchasing power to buy what they want. A color photo shows Al Ambrose standing by a map of the world. Address: Editor.

771. Ag Processing Inc (AGP). 2003. Fire or explosion in solvent extraction plant. Sergeant Bluff, Iowa. Aug. 29.

• **Summary:** Koehler, Mike. 2003. “AGP explosion injures 8: Three victims are in critical condition. Soybean processing plant was closed for maintenance.” *Sioux City Journal (Iowa)*. Aug. 30. p. A1, A3.

Kingsbaker, C. Louis. 2005. “List of fires and explosions in extraction plants.” Atlanta, Georgia. 3 p. Aug. 4. Unpublished manuscript.

Letter (e-mail) from Bill Lester, former manager of this plant. 2005. Aug. 10. The date of this explosion was 29 Aug.

2003. After many months of investigation it was concluded that this was a hexane explosion, but the ignition source was never determined. The two people who could have helped to determine the source were badly burned in the explosion and later died of their injuries; it was very tragic. The plant was in the process of being remodeled at the time, with new equipment and increased capacity. The plant was down for almost a year. Note: About 6 articles on the explosion were published in the *Sioux City Journal*. Sergeant Bluff is a very small town on the southeast corner of Sioux City (population 85,000), about 10 miles from the city center; it is almost a suburb.

Letter (e-mail) from Lou Kingsbaker. 2005. Aug. 12. “Six other men were injured in the blast: Richard Scott, 24, and Patrick Swanson, 44, both of Sioux City; Dusty Hannah, 26, of Merville, Iowa; William Beck, 47, of Onawa, Iowa; Carl Parker, 40, Eagle Grove, Iowa, and Eric Ploen, 23, of Kingsley, Iowa. They have all been released from medical institutions.” Lou worked for Bill Lester, who was in charge of two Anderson Clayton plants in Phoenix and Chowchilla, California. Lou “spent several weeks in Phoenix and some months in Chowchilla. Both plants were disasters and I was hired to upgrade the Chowchilla plant and make a safety survey at Phoenix.” This was in about 1990.

Talk with Lou Kingsbaker. 2005. Aug. 20. One of the survivors was Carl Parker, Jr., whose lungs were badly burned by this fire. Lou knew Carl Parker, Sr. quite well. Petroleum burns are worse than most other burns. A burn prevents one’s skin from breathing, and thus can be quite fatal. Lou made a consulting trip to this plant in 1984. Construction of the original plant was completed in 1975; it was a Crown Iron Works plant with two dual lines. The plant was financed by the school teachers of New York; they loaned the money from the pension plan to the company building the plant. They hired him to see how the plant was being run and the condition it was in. Address: Sergeant Bluff, Iowa.

772. *Sioux City Journal (Iowa)*. 2003. Fund established for victim of AGP blast. Sept. 3. p. A5.

• **Summary:** The fund will help to pay the medical expenses of Kyle Heck, age 22, who has burns to more than 75% of his body. Heck, the father of three, is now at the Clarkson Burn Unit at Nebraska Medical Center in Omaha. Doctors give him a 40% chance of survival.

773. Koehler, Mike. 2003. Hornick man hurt in AGP explosion dies. *Sioux City Journal (Iowa)*. Sept. 10. p. A3.

• **Summary:** Kyle Heck, age 22, died on Aug. 29 at about 1 a.m. at the Clarkson Burn Unit at Nebraska Medical Center in Omaha. He was engaged to Jenny Heath of rural Hornick, with whom he had had twins. He had worked at AGP for about 2 years, most recently in maintenance. The AGP plant had been shut down for scheduled maintenance at the time of



the explosion. "The cause of the explosion remains under investigation by the Iowa State Fire Marshal's Office with the assistance of company officials..." Address: Journal staff writer.

774. Koehler, Mike. 2003. Probe continues in AGP explosion. *Sioux City Journal (Iowa)*. Sept. 23. p. A3.

• **Summary:** The soybean processing plant is still idle as the accident is being investigated from several perspectives. Was the safety protocol followed? Were the process and equipment design safe? What were the process procedures? Address: Journal staff writer.

775. Koehler, Mike. 2003. Eagle Grove man, survivor of AGP explosion, released from hospital. *Sioux City Journal (Iowa)*. Sept. 24. p. A1.

• **Summary:** Carl L. Parker, age 40 of Eagle Grove, Iowa, was released. He received severe burns on his face, ears, neck, both hands and both arms. His ears were burned severely enough to require skin grafts from both his legs. "His hands remain bandaged and in gloves because he also received skin grafts." A large photo shows Carl Parker—mainly head and gloved hands. Address: Journal staff writer.

776. *Des Moines Register (Iowa)*. 2003. Dateline Iowa—Sioux City: Man hurt in explosion released from hospital. Sept. 25. p. 5, col. 2.

• **Summary:** On Tuesday Carl Parker, age 40, was released from the burn unit at St. Luke's Medical Center. On Aug. 29, he and 7 other workers at the Ag Processing Plant near Sioux City were injured after an explosion of hexane gas, used to extract vegetable oil from soybeans. Investigators are still trying to determine the cause of the explosion.

"One worker, Kyle Heck, died from injuries suffered in the explosion. Another, Mark Croghan, remains in critical condition." Address: Journal staff writer.

777. *ASA Today (St. Louis, Missouri)*. 2003. Half the time to the Pacific Rim. 9(10):4-5. Sept.

• **Summary:** Ag Processing Inc. (AGP) or Omaha, Nebraska, is building a new custom export terminal at the port of Grays Harbor in Aberdeen, Washington. When AGP ships soybean meal to the West Coast, it is shipped in unit trains from 50 to 100-plus cars at a time. The terminal will be able to load up to 40,000 metric tons of soybean meal at a time. Photos show 3 views of the terminal and facilities.

778. Koehler, Mike. 2003. Last explosion victim identified. *Sioux City Journal (Iowa)*. Sept. 4. p. A4.

• **Summary:** Carl L. Parker, age 40, of Eagle Grove, is the last victim to be identified. He received scalds and burns in the blast. He is in fair condition at St. Luke's Regional Medical Center. Address: Journal staff writer.

779. *Sioux City Journal (Iowa)*. 2003. Fund raiser will aid AGP burn victim. Oct. 2. p. A5.

• **Summary:** Two fund-raising efforts will help burn survivor Mark Croghan and his family to defray expenses not covered by insurance. He has third- and fourth-degree burns over 80% of his body. Croghan and his wife, Carol, have two sons.

780. *Sioux City Journal (Iowa)*. 2003. AGP explosion claims second life. Oct. 20. p. A3.

• **Summary:** Mark T. Croghan, age 45, died on Sat. Oct. 20 at the Nebraska Medical Center in Omaha. He had been hospitalized since the Aug. 29 blast. Croghan worked as superintendent at the AGP plant.

781. *Iowa Soybean Review (Iowa Soybean Association, Urbandale, Iowa)*. 2003. AGP's new Pacific Northwest soymeal terminal nearly complete. 15(1):10. Oct.

• **Summary:** The terminal, being built by AGP, will be able to load Panamax and Handy-max vessels. It will be located at the Port of Grays Harbor in Aberdeen, Washington state. A state of the art vessel loading facility with equipment for cleaning and handling identity preserved (IP) products, it will provide AGP members to Pacific Rim customers.

An ad below the article state that AGP (Ag Processing Inc.) is "the largest farmer-owned soybean processing cooperative in the world. AGP is also one of the four largest U.S. crushing systems and one of the three largest vegetable oil refiners. AGP buys soybeans from its owners—over 280 cooperatives—and it processes over 15,000 acres of soybeans every day."

782. Lemke, Dan. 2003. A winning formula: Producers plan to follow corn-ethanol success with high-value soy. *Ag Innovation News (AURI—Agricultural Utilization Research Inst., Waseca, Minnesota)* 12(3):12. Oct/Dec.

• **Summary:** During June and July, members of the SoyMor cooperative in Glenville, Minnesota, raised \$6 million for a biorefinery that will use new, advanced technology to process raw / crude lecithin into high value nutraceutical ingredients without using toxic chemicals. These ingredients will include phospholipids like phosphatidylcholine and phosphatidylserine, which have been shown to lower cholesterol and improve the immune system and brain performance.

The basic goal is to create value-added products. SoyMor president Roger Peterson says that the biorefinery is the first phase of SoyMor's plan. The second phase will be biodiesel production, and the third will be construction of a facility to crush raw soybeans into meal and oil. About half of SoyMor's members have experience in value-added processing. They also belong to EXOL Agra Resources, a cooperative that started operating a corn ethanol plant near Glenville in March 1999.

783. AGP—Ag Processing Inc a cooperative. 2003. Annual report to members: AGP Your cooperative. Adding value to your harvest. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 38 + 21 p. 28 cm.

• **Summary:** Net sales for 2003 (year ended Aug. 31) were \$2,126.660 million, up 18.0% from \$1,801.561 million in 2002. Earnings from continuing operations (before income taxes): \$15.996 million, down 59.2% from the \$39.150 million in 2002.

This past year, “AGP partnered with member cooperatives to contract over 150,000 acres of non-GMO and approved variety soybeans.” “Our capacity to efficiently access world markets has been improved with the opening of our new trans-loading facility at the Port of Gray’s Harbor, Aberdeen, Washington, in November of 2003.”

“We are pleased to report continued progress in our branded products, AminoPlus and SoyGold.” At Sergeant Bluff, Iowa, soy methyl ester output increased by 30-40% a year. Contains many color photos. Address: Omaha, Nebraska. Phone: (402) 496-7809.

784. Koehler, Mike. 2003. Investigators close AGP blast probe as ‘inconclusive.’ *Sioux City Journal (Iowa)*. Dec. 6. p. A3.

• **Summary:** “The investigation into what caused the Aug. 29 Ag Processing Inc. explosion has been closed as inconclusive.” A hexane leak occurred. Normally the vapors would be carried away by fans, but because there was no electricity in the facility that day, the hexane was able to build up. The specific ignition source was never found. The plant in the Port Neal Industrial Complex remains closed. The cost to repair the damage is estimated at several million dollars, said Mike Maranell, corporate spokesman for AGP. Address: Journal staff writer.

785. CHS Cooperatives. 2003. Annual report 2002. St. Paul, Minnesota. 48 p. 26 x 21 cm.

• **Summary:** CHS stands for Cenex Harvest States. This is *the most* creative and interesting annual report ever seen by Soyfoods Center. The full title (in a self-adhesive clear plastic envelope attached to the center of the tan cover) is: “This is not an annual report (It’s a producer to consumer success story). Each of the following sections has a full-page color photo on the left hand page with a title, starting with the words “This is not...” in a box. For example: “This is not a steer. It’s a partnership.” This is not an ear of corn. It’s a special order.”

Contents: Leadership letter. Energy. Agronomy. Grain marketing / processing. Foods. Services. Financial highlights. Financial report. Board of directors. Management team. Acknowledgments.

The section on “Processing” (p. 15) states: “Ground was broken in April 2002 near Fairmont, Minnesota, for a second

soybean crushing facility. This state-of-the-art plant, set to begin operating by harvest of 2003, will supply soybean meal to livestock producers and soybean oil for our oilseed refining facility at Mankato, Minnesota [Honeymead], which supplies Ventura Foods, LLC. The \$90 million plant will consume 110,000 bushels of Midwestern soybeans every day, doubling our crushing capacity. Studies are underway to determine the ability to produce biodiesel as demand and margins dictate.”

The “Financial overview” states: “The Company was created in 1998 with the merger of two entities, Cenex Inc. and Harvest States Cooperatives, which were both organized in the early 1930s.”

In January 2002, the Company formed a limited liability company (LC) with Cargill, Inc., named Horizon Milling LLC (Horizon) to engage in wheat milling and processing. The Company holds 24% interest in Horizon.

In Nov. 2001 the company purchased the wholesale energy business of Farmland Industries, Inc. Address: St. Paul, Minnesota.

786. Claeys, Jesse. 2004. State proposes \$162,500 penalty on Ag Processing after fatal blast. *Sioux City Journal (Iowa)*. Jan. 9. p. A1.

• **Summary:** “The Iowa Occupational Safety & Health Administration [OSHA] has proposed penalties totaling \$162,500 against Ag Processing Inc.” “OSHA has issued 13 penalties listed as ‘serious’ violations.” “A total of \$100,000 in fines were proposed for ‘repeated’ violations...” Address: Journal staff writer.

787. Boyett, Frank. 2004. Soybean co-op gave local crop a big push. *Gleaner (The) (Henderson, Kentucky)*. April 24. p. 78. “Historic Headlines” issue.

• **Summary:** Farmers began planting soybeans around Henderson in about 1920. In an article published on 20 Dec. 1925 *The Gleaner* noted: “Henderson County has taken a leading part in the producing of soybeans in recent years and local farmers are rapidly being ‘sold’ on the merits of the crop.” “There is a use for this crop on every farm in Henderson County and the quicker it is adopted the sooner will appreciation and respect for it be felt.

By 1925 in Henderson County, 180 acres of soybeans were planted for seed purposes, 725 acres for hay, and 6,000 acres interplanted with corn for winter animal feed.

But before the crop could really expand, there had to be a local market for the soybeans. That occurred on 18 June 1941 when the Ohio Valley Soybean Cooperative began operations; the local price of soybeans, which averaged about \$1.40/bushel at the time, jumped about 20 cents a bushel.

“The soybean co-op began at the instigation of Henderson County Farm Bureau President Ben Niles.” In Feb. 1940, all farmers who were growing soybeans were asked to buy

shares of stock based on the acreage they had planted. In all, 364 local soybean farmers invested in the idea, according to a story published in *Progressive Farmer* in about 1960.

"The \$31,000 raised locally was supplemented with loans and the co-op bought the old A. Waller grain elevator on Fifth Street, which had been damaged by fire. After a thorough renovation and additional construction, the plant began serving farmers in Kentucky, Indiana, and Illinois. Portions of that plant are now part of the Bakery Feeds Inc. operation." For decades thereafter, Henderson Co. was one of Kentucky's top soybean producers and in many years it held the No. 1 title.

At first the plant expressed the oil from the beans, but soon converted to a solvent extraction system using hexane, according to Al Reisz, Jr., whose father was the plant's general manager for most of its existence. It was a fairly early solvent extraction plant, and industrial visitors came from across the USA and around the world. "Press clippings from the 1950s show visitors from France, Germany, Belgium, and Holland. A visit that occurred at the end of July 1959 included representatives from Vietnam, Ethiopia, Bolivia, China, the Philippines, and Thailand."

Most of the soybean oil found food uses, such as margarine or vegetable shortening. But some was used to make plastic products in the former Kusan plastics plant.

The cooperative was rocked by a scandal in the mid-1950s "when two employees were charged with a sophisticated scheme of falsifying receipt tickets. In February 1957, Thomas V. Greenwell was sentenced to five years in prison, while Joseph N. Eggler received a one-year sentence. Losses were estimated at \$50,000.

"The soybean cooperative lasted until the early 1960s. On June 19, 1962, its members voted 973 to 69 to dissolve the co-op. Final dissolution occurred on June 17, 1963, after all property had been disposed of.

"But the operation continued a few more years under the auspices of Ohio Valley Mills of Henderson Inc., a corporation formed by some of the co-op members, which bought the plant on Fifth Street in 1962. That corporation was dissolved in 1967, according to records at the courthouse." Address: Staff.

788. *World Grain*. 2004. Interstates completes soybean extraction facility. 22(4):80. April. [1 ref]

• **Summary:** Minnesota Soybean Processors cooperative has a new solvent extraction plant located in Brewster, Minnesota, which began operating in Dec. 2003. Capable of crushing 100,000 bushels (nearly 3,000 tonnes) daily, it can produce about 770,000 tonnes of soybean meal and 200,000 tonnes of crude soybean oil annually. The \$75 million plant was built by Interstates Companies, headquartered in Sioux City, Iowa.

789. Everitt, Lisa. 2004. Demos to lead combined brands.

*Natural Foods Merchandiser*. Sept. p. 1, 9.

• **Summary:** Dean Foods has invited Steve Demos, founder of White Wave, to head its combined branded businesses: White Wave, Horizon Organic Dairy, and the Dean National Brand Group (which includes Marie's Salad Dressings, Hershey's chocolate milk, and Land O'Lakes products). The new division, which will be headquartered in Boulder County, Colorado, accounts for \$1.1 billion in annual sales and will employ 500 people.

Because of the new arrangement, over the next year, retailers will see a single sales force and unified promotional and distribution efforts. Demos plans to use the new profitability to help pay for converting all the plants to "green" plants, thus furthering White Waves goals of sustainability and the environment.

White Wave is forecasting sales of \$370 million this fiscal year, while Horizon Organic Dairy is expected to post \$250 million.

A small color photo shows Steve Demos.

790. AGP—A Cooperative. 2004. Annual report to members: Adding value to your harvest. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 38 + 22 p. 28 cm.

• **Summary:** Net sales for 2004 (year ended Aug. 31) were \$2,663.640 million, up 25.3% from \$2,125.765 million in 2003. Earnings from continuing operations (before income taxes): \$28.941 million, up 80.9% from the \$15.996 million in 2003.

"During fiscal 2004, we were without the crushing capacity at Sergeant Bluff due to the accident at the end of fiscal 2003. Although the downtime was very costly to AGP during the year, the plant was rebuilt incorporating the most efficient and cost-effective technology... This plant was also the site of our methyl ester operation, and we are optimistic that the new energy initiative will promote the better use of methyl ester in the biodiesel market. This will give us an opportunity for a methyl ester expansion in fiscal 2005."

This year Masterfeeds marks its 75th anniversary; it is one of Canada's premier animal nutrition companies. "In 1929, Gordon C. Leith established Masterfeeds as part of Toronto Elevators Limited at Queen's Quay, Toronto."

Income taxes (p. F14): "The Company, as a nonexempt cooperative, is taxed on nonmember earnings and any member earnings not paid or allocated. Deferred income taxes are computed based on an estimate of the portion of temporary differences that are attributable to nonmember earnings." Address: Omaha, Nebraska. Phone: (402) 496-7809.

791. *Sioux City Journal (Iowa)*. 2004. Expansion planned for biodiesel facility in Sergeant Bluff [Ag Processing Inc]. Nov. 11. p. A3.

• **Summary:** The expansion is expected to give AGP the capacity to make 11-12 million gallons/year of biodiesel. In



1996, the company was the first to construct a purpose-built biodiesel plant. It has marketed its SoyGold biodiesel for more than a decade.

792. Dreeszen, Dave. 2005. AGP will build ethanol plant in Siouxland. *Sioux City Journal (Iowa)*. Feb. 1. p. A1.

• **Summary:** AGP will build a large corn-based ethanol plant in the Sioux City area. A job-creation bill enacted last year extends the federal tax break for ethanol through 2010 and contains some tax incentives for making biodiesel. Address: Journal business editor.

793. Hytrek, Nick. 2005. AGP increases biodiesel production. *Sioux City Journal (Iowa)*. March 28. Siouxland business progress report supplement.

• **Summary:** A biodiesel expansion project at AGP's plant in Sergeant Bluff, started in the fall and slated for completion by July 1, will increase output by 12 million gallons a year. "The biodiesel facility operates next to AGP's soybean processing plant." Address: Journal staff writer.

794. Givens, Joe. 2005. Re: Brief autobiography and detailed history of work with Dawson Mills. Letter to William Shurtleff at Soyfoods Center, May 8—in response to inquiry. Followed by interview on May 21. 7 p. Typed, without signature.

• **Summary:** Joe (who dictated this letter to his daughter) was born on 11 Aug. 1921 in Chatfield, Minnesota, the son of William Paul Givens and Fanny Bottom. He attended Carleton College in Northfield, Minnesota, from 1939 to 1943, with a chemistry major and strong minors in physics and math. During college, shortly after World War II began he volunteered to be an aviation cadet and was accepted. However his local draft board gave him a 2A deferment for being a science major, and would not release him. After graduating in June 1943, he attended graduate school for 1 year (1943-44) at the Institute of Paper Chemistry in Appleton, Wisconsin. In early 1944 he got a call from Washington, DC, and was ordered to report to Oak Ridge, Tennessee. Arriving on March 1, he worked on the Manhattan Project in the final steps of isolating Uranium 235. He was released in Jan. or Feb. 1946—after uranium had been successfully isolated and World War II had ended.

1946—Joe began work in the soybean industry, where he worked until his retirement in 1981. He began with the Cargill Co. as a management trainee at headquarters near Milwaukee during most of 1946-47. The following dates are inexact and based on Joe's memory, not on documents: "At that time the extraction industry was plagued by hexane explosions in solvent extraction plants. Cargill had a number of hexane explosions, one in their Fridley, Minnesota flax plant (late 1946-1954), where several men were badly burned; one in Savage, Minnesota (1947-1974), that killed about 5 men; two in Cedar Rapids, Iowa (1945-1956), where

no one was killed but the plant was destroyed; and another one later in Washington, Iowa (winter 1947-1954)." After his training, Joe worked in that latter plant which was outside and terribly cold, without even a building over it. The hexane solvent extraction equipment was made by V.D. Anderson Co. Other soybean processing companies also had hexane explosions.

"The E.I. duPont de Nemours chemical firm had done research on using trichloroethylene (trichlor) as an oil solvent. It was non-flammable, non-explosive, and was a stronger oil solvent than hexane. The chemical engineering department at Iowa State College had done a fair amount of research on processing soybeans using this solvent.

"One of the first soybean oil extraction plants using trichloroethylene was built in cooperation with Iowa State's chemical engineering department. It was built [as a small commercial plant] in Plainfield, Iowa, by and for Howard Roach (an ASA president)." Built in 1947, this plant ran successfully until 1951.

Another early trichloroethylene plant was in Michigan, designed by the Detrex corporation. It was very small, about 10 tons of soybeans a day. It was not successful and didn't last very long.

Crown Iron Works Co. (CIW) was looking to diversify their manufacturing business. They had several foundries—gray iron, bronze, aluminum, etc.—in Minneapolis. Much of their business was with railroads, manufacturing parts for steam locomotives, which were obsolete following World War II. They also had an excellent machine shop. So CIW made arrangements with Iowa State College and DuPont to use their designs, patents, and experience to develop commercial oil extraction equipment. They began this work in early 1947.

1948 Jan.—Joe started work at CIW; his first job was working with draftsman Al Kaiser to develop solvent extraction machinery for soybeans. "The goal was to have machinery that would process 25 tons of soybeans daily and was safe." Crown bought an old foundry in Minneapolis for the project. In early 1948, Al and Joe supervised installation of machinery in this building. Soon they were able to make the machinery work to process soybeans. "The designs were never really completed. CIW was not willing to spend the time or money to refine these designs. We were merely to make the machinery work well enough to sell. In 1948 Crown hired 2 men to market this equipment—Frank Scofield and Lee Luick. They sold several plants.

The first plant was sold to Glencoe Milling Co. in Glencoe, Minnesota, managed by Mr. L.H. Patten. In 1949 Joe supervised the installation and startup of this plant in 1950; it operated until 1952. The 2nd plant went into Blooming Prairie, Minnesota [to the Farmers Cooperative Elevator Assoc. / Co. Soybean Processing Div.]. Joe started this plant in 1950 and it ran okay. This was a new cooperative which never had competent management or adequate

capital. It did not last very long.

The 3rd trichlor installation was made in 1950 at the North Dakota Mill and Elevator in Grand Forks, North Dakota. In early 1950, Joe supervised the installation and got it running. This plant was owned by the state of North Dakota and has an interesting history. Once again, they did not have management which was attuned to operating a soybean plant.

In early 1950 Al Kaiser built and started up a plant for Fremont Cake and Meal in Fremont, Nebraska. They had previously processed soybeans using expellers.

In 1951 Joe installed the next plant for Townsends Inc. in Millsboro, Delaware. It was bought by the former Senator Townsend. The Townsends owned a large amount of farmland in Delaware. They wanted a source of soybean meal to feed the millions of chickens they raised. They had a large hatchery, a feed meal, and were good business people. The plant ran successfully until 1952 using trichlor. From that year until the present they have extracted soybeans with hexane and CIW machinery.

In Vermont, Illinois (a tiny town), a farmer tried to install a small CIW plant but it never became operational.

In late 1951 rumors began to circulate that cattle and other ruminants which had been fed soybean meal extracted with trichloroethylene had died horrible deaths from hemorrhaging.

"In Oct. 1951 I was assigned to start up a new trichlor plant in Dawson, Minnesota. When I went there the machinery was all pretty well installed. My job was to supervise the remaining construction and start it up. It began operating in Dec. 1951 [Note: It began operation on Nov. 28; open house on Dec. 8]. The manager of this plant was Louis Sandbakken, who ran the local fertilizer and fuel cooperative. Louis was an ex-farmer without technical education. He soon realized the job was too much for him.

"The plant was operating (the equipment ran, but not that well) but really had no management for the first month. At this time other trichlor plants were having considerable problems with cattle dying from having been fed trichlor processed soybean meal. Most of them shut down by Jan. 1952. I was of the opinion that I could correct the toxicity problem by changing the flake desolventizing process. At this time CIW was not selling any more plants because of the problems with poisoned cattle. I was facing not having a job.

"The situation was so serious and urgent that the board of directors at the Dawson plant called me on Christmas Eve and wanted to meet with me on the day after Christmas in 1951.

"The board of directors and the manager of the Dawson Farmers Elevator offered me a job to be the general manager of this plant. At that time it was called Tri-County Soy Bean Co-operative Association; the plant had more debts than assets. I did not know the exact figure when I said I would go out there, but I was offered a good incentive arrangement if the corporation survived and made money."

On 20 Jan. 1952 Joe took over as manager. Within a few days of this date, Dawson's sister plants at Grand Forks (North Dakota) and Glencoe and Blooming Prairie (Minnesota) ceased their operations because of lawsuits resulting from the sale of toxic meal.

Joe changed the way the meal was toasted—from using a pressure cooker to blowing live steam through the meal to "scrub" the solvent from the meal. This removed any residual trichlor. An experiment was carried out to feed one group of calves on meal made before the toasting changes, and other group after the changes were made. "Fortunately the calves fed on the new meal thrived and were sold at excellent market prices whereas the ones fed on the old meal lasted about 6 weeks before dying." Dawson soybean meal never had any toxicity claims against it. However, as a precaution, all Dawson meal carried a warning not to feed it to ruminants. The other trichlor plants did not use Givens' method of scrubbing out the solvent with live steam because, by then, the damage had been done. Address: 6566 France Ave. S. #906, Edina, Minnesota 55435. Phone: 952-926-7828.

795. Givens, Joe. 2005. More history of Dawson Mills, and the merger with Land O'Lakes (Interview). *SoyaScan Notes*. May 21. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Concerning the purchase of soy protein isolate technology: 1997 May—Dawson bought soy protein isolate technology from General Mills. Dawson was looking to expand and it looked like isolating protein was a good way to go. They paid \$1 million (not \$10 million), mostly for patents owned by General Mills, plus a few centrifuges. The patents turned out to be worthless; they contained nothing new. General Mills sold because they were not really in the soybean processing business. 1997 Nov.—Dawson Mills broke ground for the isolate plant on the outskirts of Dawson. It was scheduled for completion in Nov. 1978. At that time the isolate plant looked like it had a promising future.

1979 March—Official ribbon cutting ceremony and opening of the isolate plant—5 months behind schedule. The plant's future still looked promising at that time.

1980 June—Dawson Mills merges with Land O'Lakes. Joe was deeply involved in this merger. There were at least four reasons for the merger: Money, personnel, Joe's retirement, and Land O'Lake's interest in the soy specialties business. Of these, money was the most important. (1) Making and marketing the isolate turned out to be much more expensive than expected. It was a new type of product, with many potential applications. The isolate plant turned out to be a huge drain on Dawson Mills' financial resources. "When meat prices dropped, it sure changed the picture. It was a tough sell." (2) Dawson, Minnesota, was a small, rural town in a cold part of the U.S., with relatively little intellectual

and cultural stimulation. It was very difficult to find skilled workers and people with PhD degrees who were willing to move to the boondocks. So Dawson Mills had hired quite a few kids right out of high school to work at the isolate plant. "It was hard to find good people." Land O'Lakes had an excellent research staff and many such skilled workers. (3) Before the merger, Joe had announced his intention to retire; he had been with the company for 29 years, during which time it had become much larger and more complex. The management felt the need for new expertise. (4) Land O'Lakes was interested in getting into the soy specialties business—the food products, such as the isolates; they weren't particularly interested in the soybean crushing part of Dawson Mills. Joe agreed he would work for Land O'Lakes as vice president of their Soybean Division, which included some other plants, including Boone Valley in Eagle Grove, Iowa.

Joe recalls: "The merger with Land O'Lakes didn't really work out. They didn't have people to spare that they could send out to Dawson. The whole merger wasn't as successful as we would have liked." Land O'Lakes tried to run the isolate plant for 11 months—unsuccessfully.

During this time (in 1980) the isolate plant was unionized. The young workers believed all the promises the union organizers made, whereas older workers did not. A vote was held and the union won. At that point, in early 1981, Joe Givens retired; unionization was the catalyst. The union had tried to get into Dawson Mills' crushing plant 3-4 times before this, and they were always defeated in each election. The experienced workers realized that unionizing was not in their best interests. The union only lasted at Dawson Mills for a little more than a year; when the workers realized that they were paying substantial dues but that none of the union's promises had been fulfilled, they tossed (elected) it out.

1981 May—The isolate plant was closed. Many local workers lost their jobs. It was a very painful experience. Two months after closing the isolate plant building was purchased by AMPI (Associated Milk Producers Inc.). Today that building houses one of the world's largest cheese plants.

Dawson Mills is now owned by AGP, a cooperative. It is hard for outsiders like Joe to know how the plant is doing financially since no public reports are issued. The keys to running a successful crushing plant are to keep costs as low as possible and to steadily increase volume. Dawson Mills was located in a good area, with plenty of soybeans grown nearby and plenty of people to buy the meal. Two or three soybean crushing plants have started in the area since Joe left in 1981: One in Volga, South Dakota (late 1996), and one in Fairfax, Minnesota. Both compete with Dawson.

Dwayne Andreas has a long history with co-ops. After leaving Cargill, he went to work for Farmers Union Grain Terminal Association, a cooperative; he was the No. 2 man in that organization. In Aug. 1960 Dwayne and Lowell sold

Honeymead, their crushing plant in Mankato, to Farmers Union (GTA), which was a cooperative. Sometimes ADM was an unfair competitor, offering very low prices to Dawson's customers; that was when Dwayne Andreas's son was running the plant in Mankato. He was one who ended up going to jail. Cargill, on the other hand, "was always good, clean competitor."

When Joe first arrived at Dawson Mills, many of the shareholders were individuals. This was a very cumbersome arrangement, because Dawson ended up buying soybeans from the farmer direct, through the elevators. The elevators saw to it that Dawson always bought at the highest possible price. This was not a workable arrangement for Dawson Mills. So within 2 weeks of his arrival, Joe created several kinds of shares. Individuals had their shares changed to preferred stock, on which Dawson paid interest. Dawson Mills would offer each day at 2:00 p.m. (over the radio) to buy soybeans at a specified price per bushel, delivered to its mill. There was no bidding or negotiation. Dawson always hedged its operations by buying and selling futures in either soybeans, meal, or oil. Knowing which to hedge was very complex and could have a big impact on profits. It was an hour by hour decision.

Why were there so people with Scandinavian names living in Dawson? Joe notes that when the railroads built a new line, they would place a town center roughly every 10 miles. Many towns took on an ethnic character, becoming a magnet for immigrants. Dawson was basically a Norwegian town.

Patronage refunds: Each year, if cooperative business makes a profit, it is called "Net Savings." The company's board of directors decides how these Net Savings will be distributed. Dawson bought all of its soybeans from elevators that were cooperatively owned by local farmers, who sold their soybeans to the elevator. The majority of the New Savings would be allocated back to the elevators, in proportion to the amount of soybeans they had sold Dawson. This money was considered as income or operating revenues by each elevator, and there were various ways of accounting for it. This was complicated by the fact that most elevators had feed mills closely associated with the elevator. In some cases, if Dawson Mills allocated 5 cents per bushel, the elevator would pass that on to each farmer that had sold soybeans to the elevator. In other cases, if the elevator was losing money on its oats and wheat, the soybean income might counterbalance that. If an elevator lost money one year, the farmer-owners might get none of the patronage refund that Dawson Mills had paid the elevator. Some elevators were better managed than others; some always hedged. But over the years, Dawson Mills paid back to the elevators about 11 cents on each bushel purchased, and Joe guesses that farmers got about 50% of that.

Joe used to dread the annual meetings, because he never knew what issues would be raised. The boards of directors of the roughly 100 member elevators were invited to attend.



For example, someone might stand up and ask, point blank, “Joe—How much are we paying you these days?” But Joe recalls they were always very generous with both his salary and bonuses for good performance. Address: 6566 France Ave. S. #906, Edina, Minnesota 55435. Phone: 952-926-7828.

796. Bunge Ltd. 2005. Partnering for the future: 2004 annual report. 50 Main St., White Plains, NY 10606. 90 p. May. 28 cm.

• **Summary:** Consolidated net sales for 2004 (year ended Dec. 31) were \$25,168 million, up 13.5% from 2003 (\$22,165 million). Net income in 2004 was \$469 million, up 56.3% from 2003—not including a one-time gain of \$111 million on sale of soy ingredients business in Brazil. Cash dividends per share in 2004 was \$0.48, up from \$0.42 in 2003.

“Last year, according to the USDA, the world consumed 130 million tons of soybean meal, up from 118 million in 2000. Future growth is forecast to top 4 percent per annum.

“Demand for vegetable oil should increase at a similar rate. Growth will be particularly strong in China and India. Last year global consumption reached 100 million tons, up from 89 million tons in 2000.”

“South America is cementing its position as the world’s leading agricultural producer. Both Brazil and Argentina produced large soybean crops 2004, and their output is expected to grow steadily in coming years.”

“Vietnam is the fastest-growing market for soybean meal consumption in Southeast Asia, a region that has seen a 40 percent increase in demand for the product since 1999 and in which Bunge is the leading importer.”

“In the U.S., we formed AGRI-Bunge, LLC, a joint venture with AGRI Industries [a cooperative]. The partnership links AGRI’s crop origination network in Iowa with Bunge’s global sales, marketing and logistics. The result is a new source of crops for Bunge and wider market access for AGRI and U.S. farmers.

“We also entered the value-added market for cholesterol-reducing phytosterol ingredients by creating a partnership with Procter & Gamble and Peter Cremer in North America.”

Eastern Europe has the “potential to regain its status as one of the world’s breadbaskets.” Grain exports from Black Sea nations could rise dramatically. In 2002 Bunge acquired Cereol.

In 2006 U.S. law will require labeling of trans fats. In response, Bunge and DuPont have developed Nutrim, which contains less than 3% linolenic acid, making it naturally stable and eliminating the need for partial hydrogenation when it is used as a frying oil. This partnership links DuPont’s plant science with Bunge’s agribusiness and oilseed processing operations. However, Nutrim is a trademark of Pioneer Hi-Bred International, Inc. A bar graph shows projected Nutrim production, reaching 1 billion

pounds by 2009. A colored graph shows global agricultural trade. Trade of soybeans and soybean products, only 50 million metric tons (MMT) in 1985, passed both wheat and coarse grains in 2001 (at about 110 MMT) and is expected to reach 175 MMT by 2015, much more than wheat and coarse grains.

Accompanying the annual report is a “Notice of Annual General Meeting of Shareholders” (89 p.). Information is given about the amount of money paid to individual company officers. For example, Alberto Weisser (chairman and CEO) was paid a base salary of \$1.2 million and a bonus of \$3 million, plus securities underlying options awards (130,000 shares), long-term incentive payments (LTIP; \$3.7 million), and all other compensation (\$55,729). Address: White Plains, New York. Phone: 914-684-2800.

797. Dean Foods Co. 2005. Enhancing, enriching, sustaining—Dean’s place at the table: 2004 annual report. Dallas, Texas. 88 p. 28 cm.

• **Summary:** This annual report is structured to make it very difficult to find the company’s financials, and net income (profit). Dig enough and you will find the numbers on p. 49. For the year ended 31 Dec. 2004. Net sales were \$10,822 million, up 17.8% from 2003. New income (profit) was \$285.4 million, down 19.8% from 2003. “First, our Branded Products Group, which we have renamed WhiteWave Foods, had an outstanding year. WhiteWave Foods’ sales increased to \$1.2 billion for the year, with operating margins more than doubling to 10%” (p. 2).

New developments: On 2 Jan. 2004 Dean Foods acquired Horizon Organic. In March 2004 they acquired a license to use the Land O’Lakes name on certain dairy products sold in the eastern United States. Now they have an exclusive right to use the Land O’Lakes brand on most dairy products (excluding cheese and butter) sold anywhere in the country. In Aug. 2004 Dean Foods its decision to consolidate White Wave, Horizon Organic, and Dean National Brand Group into White Wave Foods, a stand-alone operating unit.

“Outstanding brand performance:... Silk continued to perform well, with sales up 33% compared to 2003. Silk market share in the retail grocery channel held steady at 78%, indicating that Silk remains the clear market leader.” Horizon Organic’s sales increased 24% and sales of Dean’s entire portfolio of Land O’Lakes products increased by 34% over 2003.

The section titled “White Wave Foods: Enhancing health, enriching lives, sustaining our environment” (p. 8-13) states that “WhiteWave Foods Company is the largest organic food company in the country.” The two colorful pages on Silk note: “We estimate that Silk has been enjoyed in close to 19 million American homes.” In 2004 Silk introduced 5 new items that generated \$50 million in sales: Very Vanilla, Enhanced, Unsweetened, Kids Silk, and Silk Live. Also the new Silk Twin Pack, which includes two half-gallon cartons

in an easy-to-carry box. Silk Kids packs come vanilla, chocolate and strawberry. "Each pack contains eight, 6.5 ounce cartons featuring kid-friendly animal artwork." Many Silk products bear the USDA Organic seal of approval. "Silk and Horizon Organic are proud sponsors of Farm Aid, an annual concert that raises funds to help farmers keep their land. We are the largest purchaser of organic soybeans and organic milk in the country."

Page 20-21 state: "In addition, effective March 11, 2005, Mr. Steve Demos, President of WhiteWave Foods Company resigned his position." Note: Demos was terminated by Engles without cause or explanation. On 5 April 2004, White Wave "acquired [for \$25.7 million] a soy processing and packaging facility in Bridgeton, New Jersey. Prior to the acquisition, the previous owner of the facility co-packed Silk products for us at the facility."

Accompanying the annual report is an innovative "2004 proxy statement and notice of annual meeting" (24 p.). In 2004 Gregg L. Engles, age 47, Chairman of the Board and CEO had: Salary \$1,000,000. Bonus zero. Other annual compensation \$238,767. Value of stock units awarded: \$3,148,170. Number of stock options granted: 324,000. Address: 2515 McKinney Ave., Suite 1200, Dallas, Texas 75201. Phone: 214-303-3400 [www.deanfoods.com](http://www.deanfoods.com).

798. Pogeler, Allen; Gary; Pogeler, Kathleen; Pogeler, Lewis. 2005. Recollections of Glenn H. Pogeler of Iowa (Interview). *SoyaScan Notes*. June 6. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** John Henry Pogeler and Leena Carstens, had four children. The second child, Glenn Henry Pogeler, was born on 3 Jan. 1915 in Manson, Calhoun Co., Iowa (about 20 miles east of Fort Dodge), and raised there. In 1932 he graduated from Manson high school, where he pitched on the baseball team and played football. It was the bottom of the Depression; he wanted to be a mechanical engineer, but no money was available.

On 25 July 1932 he went to work as the 2nd man at the Richards Elevator Co. in the small town of Richards, Iowa (now named Richard, about 5-6 miles due south of Manson in central Iowa)—for \$1 a week plus room and board. The manager was Charles Weideman, whom Glenn Pogeler greatly admired. In 1935, when Weideman resigned, Pogeler became manager.

In about 1938, while living in Richards, Glenn met his bride to be, Ardis Jenelle Fry.

In early 1940, Glenn received a better job offer to manage an cooperative elevator in Badger, Iowa (about 10 miles of Fort Dodge). He soon went to work for the Farmers Elevator Company of Badger, which had been in operation since 1902. In June 1940 the members voted to reorganize, and it was renamed the Badger Cooperative Elevator. Pogeler was hired back as manager, with a salary of \$125 a month—plus a house. In 1940 Glenn gave up smoking—on his doctor's

advice. He finished the one pack he had left and never smoked another cigarette for the rest of his life—a strong willed man! Throughout his life, Glenn was in the grain business, but he was never a farmer. He was also a devout Christian, actively involved with the American Lutheran church.

Glenn now had a solid job and reliable income. He and Ardis were married on 5 May 1940 in Fort Dodge, Webster Co., Iowa. Ardis was born on 16 March 1919 in Bancroft, Kossuth Co., Iowa. The daughter of Jesse and Alma Fry (also spelled Frye), Ardis came from a low-income family of nine children. She grew up in Callender, Webster Co., Iowa, and was working in Fort Dodge when she and Glenn met.

Glenn and Ardis had three children, all born in Iowa: (1) Allen Robert Pogeler, born 11 April 1943 in Fort Dodge. (2) Gary Dean Pogeler, born 4 July 1944 in Mason City, Cerro Gordo Co. (3) Neil Richard Pogeler, born 27 April 1952 in Mason City, Iowa. Allen (who now lives in California) is in business management and engineering. Gary (who now lives in Pennsylvania) is an attorney.

In June 1943 Glenn was secretary-treasurer (a part time job) of the Boone Valley Cooperative Processing Assoc. in Eagle Grove, Iowa; his main job was Manager, Farmers Elevator Co., Badger, Iowa. In late Aug. 1943 he resigned as secretary-treasurer so he could go to Manly to manage the new soybean processing plant there.

In early 1944, Glenn and his family moved from Badger to Manly in north central Iowa. There he became the first manager of a soybean crushing plant named the North Iowa Cooperative Processing Association, which began operations in Sept. Initially, the family lived in a small apartment in Manly. On 1 July 1944 they moved into a nice home at 220 Spring Street, rented from Mabel Benson. Gary was born 3 days later. Gary recalls that the rent was \$40/month. Mabel never raised the rent, but Glenn started paying her \$50/month after he felt the rent was too low. "He was that kind of a guy." They lived in this house until they moved to Mason City.

In 1948 Glenn was elected to the board of directors of the National Soybean Processors Association; he served as vice chairman of the board in 1957-1958, as chairman in 1959-60, and as president in 1959-61; he remained a member for at least 17 years.

In 1 July 1952 (not long after Neil, their 3rd child was born) the family moved to Mason City; the cooperative's new and bigger, state of the art soybean processing plant that Glenn managed there used solvent extraction (hexane) rather than expellers. Gary recalls that Glenn used hexane for years to light his charcoal grill—"Which makes for a very dramatic beginning to your outdoor cooking." Overseeing construction of the new plant was complex and stressful for Glenn. To relieve stress he took up golfing and (with his wife) and did painting by the numbers. His weight rose to about 210 pounds, then he lost weight for the rest of his life; he had

ulcers.

In 1960, an ad in *Soybean Digest* shows that the North Iowa Cooperative Processing Assoc., in Manson, Iowa, was still managed by Glenn Pogeler.

In 1962 the North Iowa Cooperative Processing Assoc. was renamed the North Iowa Soybean Cooperative.

In about Oct. 1964 Glenn was named president of the Soybean Council of America, Inc. (SCA), replacing Howard L. Roach of Plainfield, Iowa.

On 1 Dec. 1965 SCA moved its offices to Arlington, Virginia (just outside Washington, DC) and Glenn and his family relocated nearby in Falls Church, Virginia (a very nice at 6420 Crosswoods Drive, Lake Barcroft section). During this time Glenn traveled worldwide to visit SCA offices and negotiate agreements on behalf of SCA.

In April 1969 the 13-year-old Soybean Council of America was dissolved and the American Soybean Institute (a trusteeship) took its place. Glenn lost his job.

Then Glenn went to work for the USDA for about 5 years, again in the field of soybeans. His title in 1973 was Acting Chief, Oilseeds, Agricultural Stabilization and Conservation Service Branch (ASCS), USDA, Washington, DC.

After retiring from USDA, he became a commodities broker—which is something he always wanted to do—for about 5 years; he worked in a brokerage office outside of (but not far from) his home in northern Virginia.

There is a photo in the family that shows him meeting President Lyndon Johnson after the latter signed a major farm bill.

In about 1985 he retired; his doctor discovered that he had Type II diabetes—which runs in the family. He and his wife moved to Rancho Bernardo near San Diego, California, because he liked the weather there; his eldest son, Allen, also lived near there. He died on 20 Feb. 1995 in Poway, California (the town adjacent to Rancho Bernardo, where he lived) at the Pomerado Nursing Home, next to the Pomerado Hospital; he suffered a massive hemorrhagic stroke about 5½ months before he died. His wife, Ardis lived for a while in Solana Beach and died in Oct. 1998. Before she died, she left many personal possessions (incl. about 20 dated letters from Glenn while he was living in Richards {Dec. 1938 to early 1940}, photos of Glenn, newspaper articles that are mostly about Glenn, and letters from her mother, Alma) in a cedar chest, which Gary now has.



In Dec. 1985 AGP, a large cooperative soybean processor, purchased Glenn's former plant in Mason City, Iowa.

What kind of a man was Glenn Pogeler: Kathleen, his daughter in law, recalls: He was very kind, very personable, very friendly. "He knew how this ought to be done and you'd best do it his way. My father had died when I was 21 years old, and I always felt like Glenn was my second father. In his outspoken way, he always welcomed me. Everyone liked him." Kathleen first met Glenn and his wife in 1969; they were living outside Washington, DC, in northern Virginia.

Glenn never wrote the story of his life and the family has no family history. However Glenn's son wrote a brief story of his life which was delivered as a eulogy at his funeral.

Allen, Glenn's eldest son, is presently (Jan. 2008) Vice President Corporate Planning for Integrated Photonics Technology (IPITEK) in Carlsbad, California. The company develops, manufactures and sells fiber optic telecommunications equipment to various industries and government customers. Gary is an attorney in New York City with the firm Cadwallader, Wickersham & Taft, specializing in real estate. Neil is a real estate sales agent in Merritt Island, Florida. Address: 1-2. Pennsylvania; 3. Arnolds, Park, Iowa. Phone: 712-332-2302.

799. Pogeler, Allen. 2005. Recollections of Glenn H. Pogeler of Iowa (Interview). *SoyaScan Notes*. June 10. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** In 1893, Glenn's father, John, immigrated to the USA (at about age 9-11) with his parents, via Ellis Island, from Schleswig-Holstein, Germany. Allen has never been able to determine how their name was spelled in Germany. Glenn was 100% German; all his known ancestors came from the area that is now Germany. Both sides of the family were Lutherans—from way back.

Glenn was born in 1915 in Manson, Iowa, a small town famous as the site of the largest meteor impact (2.5 million years ago) on the mainland United States—in fact the "the **biggest** thing that has ever occurred on the mainland USA."



The Manson crater was once 3 miles deep and 20 miles across.

Glenn graduated from high school in about 1932 with very good grades, and he wanted to go on to college to study engineering, perhaps at Iowa State. But the Great Depression now stalked the land, and there was no way his parents could afford to send him to college. So he had to find a job instead, to support himself. His first job was in Richards, a tiny town (now named Richard) about 5 miles due south of Manson, on a rail line. He got paid \$10 a month, plus free room and board.

His next job was in Badger. "Badger isn't much, just a little hole-in-the-wall town off the main road." But there was a grain elevator there.

Glenn and Ardis Fry were married on 5 May 1940 in Fort Dodge, Iowa. Both came from Lutheran families. Lutheranism is the main denomination of Christianity in Germany and Norway. Allen, the first child, was born on 11 April 1943 in the Lutheran hospital in nearby Fort Dodge, while his parents lived in Badger.

The next move was to Manly when Allen was a child (about 1 year old). Their second child, Gary, was born soon after the move. Over the years Glenn became a self-made man.

When Glenn was managing the cooperative in Mason City, he was very interested in buying a Cadillac. But he was very concerned that if he showed up driving a Cadillac, his board of directors, composed of very conservative farmers, would think that was a bit excessive, and maybe they were paying him too much. So he bought a much less expensive car named a Hudson. He purposely tried to maintain a modest demeanor. He knew very well how tight-fisted farmers are.

Allen earned a degree in mechanical engineer from MIT then earned an MBA (business administration) from Harvard Business School, both in Massachusetts. Most of his work has been related to business and finance, rather than engineering.

He has a lot of photographs, letters, and other documents that belonged to his parents when they were still alive. He will put captions on all the photos. The photo of Glenn with President Lyndon Johnson was taken while he was working at department of agriculture. Johnson had just signed some agricultural bill into law. Glenn was invited to be present at the signing in the Oval Office. It was kind of ironic, because Glenn was a life-long Republican; it chafed that the only photo he had of himself with a president was with a Democrat. However, he was proud enough of that that he always kept it on his desk, even after he retired to California.

He did some traveling in the USA when he was with the cooperative in Mason City, and he at about the same time he and his wife took several vacation trips to Europe in the 1950s. With the Soybean Council he was often given VIP

treatment when he arrived in countries such as Iran or Egypt; they would whisk him around customs and into a limousine, where an official would stamp his visa on the way to the hotel. In Iran, he was shown the Crown Jewels, which were kept in a bank vault. He had no built-in biases, antagonisms, or racism while growing up, so he was intrigued by great diversity of people he met and did business with in his world travels.

On Ardis' side of the family, several close relatives are deeply involved with genealogy and family history. Ardis' mother was 100% Norwegian.

When they moved to the East Coast they lived in a very nice house in Falls Church, Virginia, about 10 miles due west of Washington, DC. They lived in the same city and house (6420 Crosswoods Drive), the entire time they were on the East Coast. His office was in Arlington, Virginia—always outside his home. He had 3 different jobs in that area. First was the Soybean Council, which was in Arlington (starting 1 Dec. 1964 at 1401 Wilson Blvd., Rosslyn). For the first year or so Allen, who had just graduated from MIT in 1965 and was working in nearby Alexandria, Virginia, lived at his parent's home. Then Allen got married. He and his wife moved into an apartment about a mile from his parents house, so he saw them constantly during the next 3 years, until 1969 when Allen left for Harvard Business School to start his MBA program. Allen was very close to both his parents. Gary, who was attending Iowa State Univ., transferred and (while living at his parents' home) graduated in 1966 from George Washington Univ. in Washington, DC. After the Soybean Council was dissolved (they lost much of their government funding), he was unemployed for about 14 months. He had contacts at the USDA where he found his next job in the oilseeds division at the USDA building near the mall, in Washington, DC. He took that job sort of in desperation, but he hated working for the government since he was basically an entrepreneur, not a bureaucrat. He complained about the young whippersnappers who had gone to school, read plenty of books but had no real-life experience and didn't know what they were talking about. One poor fellow asked him one winter how the soybean crop was doing in Iowa. Glenn replied that it was under 20 feet of snow. Yet Glenn had genuine admiration for those who had both a academic background (which he lacked) and practical experience. Yet he stayed at USDA for about 8-9 years. Third, he was a commodities broker for about 6 years working for Clayton Brokerage Co. at their office in Tyson's Corner, Virginia—which is on the Washington Beltway about 5 miles northwest of Falls Church. In 1984 they were planning to retire to Rancho Bernardo, California, a northern suburb of San Diego.

Near the end of his life, Glenn had a very bad stroke. He lost his ability to speak, and most ability to move. The nursing home in which he stayed for the rest of his life, was next to the hospital in Poway, California, where he was first

taken. His wife spent most of each day with him. It was a time of great sadness and suffering for everyone. When there was no hope left, the family decided to remove life support, and Glenn died on 22 Feb. 1995 in Poway, San Diego Co., California.

Allen recalls: "People liked my dad. He knew how to work in an organization, to get along with people, and to accomplish a lot. He was a hard worker, a very energetic man—really a ball of fire. He was always reasonable and flexible. He could analyze a situation and decide what was the best course of action, but he would listen to reason, and you could debate things with him, and perhaps persuade him." Address: Encinitas, California. Phone: 760-753-2743.

800. Givens, Joe. 2005. AGP's purchase of the Dawson Mills soybean crushing plant from Land O'Lakes (Interview). *SoyaScan Notes*. June 27. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** This whole acquisition was a very difficult and painful experience for many people at Dawson Mills. Many of the top people at AGP were former ADM employees. "I found them very difficult people to work with." They came in and "thought they knew it all." They wanted to replace many experienced, competent employees (such as the plant superintendent and a chemical engineer) with their own people—as fast as they could. Joe had already retired, but he got drawn into the drama because of his long relationship, and often friendship, with these Dawson employees that AGP wanted to get rid of. In the end, AGP had its way. The Dawson plant superintendent had a heart attack and died; Joe is quite sure it was caused by the harassment of the AGP people. One of the Dawson Mills directors, Jim Bauler, went on the AGP board.

Today, the Dawson plant is thriving. Its processing capacity is about 25% larger than it was in 1983. Address: 6566 France Ave. S. #906, Edina, Minnesota 55435.

801. Choquette, Ray. 2005. The origins of Ag Processing (AGP) in Boone Valley: Bill Lester and Jim Lindsay. (Interview). *SoyaScan Notes*. June 28. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** He thinks of Bill Lester as the "godfather" of AGP. "Through Bill's communication efforts, the doors were opened for the formation of AGP." Bill Lester is retired and lives (with his wife, Marion) in Omaha, Nebraska. He can pretty well tell you everything that happened during the organization of AGP; he was there.

"When the soybean processors were merged, a board of directors was in place and the new organization was named Boone Valley Cooperative Processing Association. That board then tried to find an individual to lead the company; that's when they hired Jim Lindsay. AGP became its own entity with its own board, and began to operate as a regional cooperative processor, whereby stock was issued to the

participants and dividends began to be earned. Jim Lindsay retired about 3 years ago and the current CEO is Marty Reagan (a man).

Bill Lester was instrumental in hiring Ray in 1979 to work at Farmland Industries. When Farmland's soybean crushing plant became part of AGP in Sept. 1983, Ray was working for Farmland. "We each had to turn in an application and see if AGP would hire us again. We started all over again." Ray was hired, so he moved from Sergeant Bluff to Eagle Grove, and has been with AGP ever since.

"Bill Lester would offer the perspective that led to the founding of AGP. Bill is one of the premier cooperative leaders in the Midwest, with expertise in the field of soybean processing. Jim Lindsay would offer the perspective of the person who led AGP from the time it started. Jim was an ADM private-sector purist; Bill Lester was a cooperative purist." Address: Merchandising Manager, Ag Processing (AGP), Eagle Grove, Iowa. Phone: 515-448-4711.

802. Lester, Bill. 2005. Boone Valley and the origins of Ag Processing Inc (AGP). Part II (Interview). *SoyaScan Notes*. June 28. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** In March 1983 the heads of the cooperatives that owned soybean processing plants met with the heads of many major cooperative banks in Dallas, Texas. The heads of about seven cooperative organizations were there to try to figure out how to structure a new consolidated or reconfigured cooperative that would work. But nobody could figure out a way. Bill recalls that Boone Valley was \$35 million dollars in debt from its expansion and the bank was "breathing down our necks." Moreover, He had managed 3 of the soybean processing plants of the original six that became AGP. He knew that his customer list at Sheldon, Eagle Grove, and Sergeant Bluff (all in Iowa) each had about two-thirds of the same customers. So these cooperatives were competing with each other rather than cooperating—and they were spending the farmers' money in this self-defeating process. For the 40 years that he had worked in cooperatives, Bill taught and preached a basic philosophy: That cooperates don't compete against one another, they cooperate and work together. Then Bill, one of the strongest advocates of consolidation, stated his astonishing conclusion: "There's only one way this new organization is ever going to go together. Boone Valley is going to have to purchase the processing assets of anybody that becomes part of that new organization." Everybody laughed. Boone Valley was on the verge of bankruptcy; it had no cash and had to make interest payments of \$500,000 a month just to service its debt. Yet the more they thought about it, the more Bill's idea was the only one that made sense. Why? Bill recalls: "Remember I told you we sold the tax credits worth \$17 million to General Mills. Tax law states that in order for those tax credits to be able to be utilized, without a substantial penalty coming back

to Farmland Industries, Boone Valley or its successor had to remain in business for a minimum of 7 years. That's why Boone Valley had to be the survivor. After that realization, everybody at the meeting in Dallas zeroed in on the key question—how to structure the new company around Boone Valley."

At this point most of the cooperatives dropped out. For Riceland and Honeymead, for example, their soybean processing operations were profitable and important to the whole cooperative. AGRI Industries also dropped out, but AGP later bought their two soybean plants at Mason City and Manning.

Committees were formed, and many more discussions were held. The new entity would be called "Boone Valley Cooperative Processing Association. Working under Boone Valley's existing constitution and bylaws, a board of directors for the new entity was formed. The board would consist of nine members. The boards of Land O'Lakes and Farmland Industries each elected 3 members—including the president of their respective boards (Ralph Hofstad and Kenneth A. Nielsen). Three of the original directors from Boone Valley (Urban Knobbe, Eldon Peterson, and Don Frye) rounded out the nine. The board included both managers and farmers.

Now let's step back for a minute: In 1983, when AGP was created, soybean processing margins were horrible; little or no profit could be made processing soybeans. All the cooperative soybean processors were struggling. "There's always a reason why things happen in organizations; that was one of the reasons. The economics of the industry were so horrible that it was advantageous to put the many soybean processors together. As things worked out, the new Boone Valley ended up buying soybean processing plants owned by Land O'Lakes and Farmland Industries. Remember—Ag Processing wasn't even in existence at that time. So how was Boone Valley (which was also struggling financially in 1983) able to afford these massive purchases? Because in late 1983 Land O'Lakes and Farmland Industries each financed the sale of their own plants to the new Boone Valley—the organization that we now know as AGP. If Boone Valley hadn't been in dire financial straits, AGP would never have come into existence.

"The merger deal was finalized on 31 Aug. 1983. Remember I said that everything happens for a reason. If it hadn't happened by that exact date, the entire deal would not have worked out—because Farmland's fiscal year ended on August 31. Farmland wanted to finalize the sale by Aug. 31 so they could show that income in their annual report. Farmland sold the plants for more than their depreciated value, so the income went straight to their bottom line. They needed profit to save face, because the cooperatives weren't making any money for their members—the farmers that ultimately owned them. The date wasn't crucial for Land O'Lakes, because their fiscal year ended on Dec. 31." Bill wanted to include

these crucial details in the book by Finnerty, but they were edited out by other board members from Farmland and Land O'Lakes for the sake of "co-op politics."

So the new Boone Valley Cooperative Processing Association officially came into existence on 31 Aug. 1983. The next day Bill Lester changed from being the general manager of Boone Valley (at Eagle Grove, Iowa) to being the plant manager at Eagle Grove. Morrie Sturtz, who had been Bill's assistant manager of the old Boone Valley was appointed general manager of the new Boone Valley at Eagle Grove.

Farmland Industries contributed 3 soybean processing plants to AGP: A big plant at Sergeant Bluff, Iowa (2,000 tons/day capacity; Bill built that plant for Farmland), a fairly large plant at St. Joseph Missouri (1,500 tons/day; it had been started by Dannen Mills), and a small plant at Van Buren, Arkansas (600 tons/day).

Land O'Lakes wanted to sell their soybean plants on Aug. 31 because they also needed (by Dec. 31) some money to go to their bottom line. Moreover, the soybean plants had nothing to do with Land O'Lakes' core business—which was dairy products. Land O'Lakes contributed two active plants (Sheldon, Iowa; and Dawson, Minnesota) plus the inactive plant at Fort Dodge, Iowa—which still had some value. Later, the roughly 500,000 bushel steel grain storage tank was moved to Sergeant Bluff, Iowa. The processing equipment was either relocated, sold or mothballed. Not long ago the old processing building was demolished and some of the property may have been given to the city of Fort Dodge.

Boone Valley in Eagle Grove, Iowa, had always been an independent cooperative prior to 1983, when it became part of the new Boone Valley; it was never acquired by or merged with another organization. Address: Omaha, Nebraska.

803. Lester, Bill. 2005. Boone Valley and the origins of Ag Processing Inc (AGP). Part I (Interview). *SoyaScan Notes*. June 28. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** A good book on the history of AGP, including a history of each of its component soybean processors is *Soybeans, Cooperatives and Ag Processing Inc.*, by Margaret Finnerty (1992). This book was the brainchild of Jim Lindsay and Urban Knobbe (chairman of the AGP board). They said, "We're all getting older and we better start to document some of this history." Bill was also involved in the project. It was edited in a way that it didn't create any "political problems" in terms of the sensitivities of AGP member companies.

The story of AGP begins with the widespread recognition that Boone Valley, an independent soybean processing cooperative in Eagle Grove, Iowa, was in deep financial trouble. In June 1959, Keith Voigt had been hired as the manager of Boone Valley. In early January 1982 he resigned (actually he was discharged; the co-op bank wanted him out) amidst financial difficulties. Farmland Industries and Boone



Valley had long had a very close working relationship. Boone Valley owned a very modern feed mill right in their complex, but they manufactured Farmland feed under a franchise agreement. Boone Valley had gotten into a very extensive expansion program, first to increase the size of their existing solvent extraction plant (which had a capacity of 1,000 tons/day) by adding a complete new separate unit (4,000 tons/day capacity), and then to acquire the local Eagle Grove coal-fired electrical energy plant from Iowa Public Service, which was being shut down. They needed this energy plant to generate sufficient energy to operate their expanded 5,000 tons/day soybean processing plant. But processing margins in those days were non-existent, so they were not making any profit. However, since Boone Valley had no debt, they were able to borrow the money needed for their expansion from the Omaha Bank for Cooperatives.

Enter “safe harbor” leases. Because of the tax structure of cooperatives, depreciation and investment tax credits really don’t do a cooperative any good in reducing taxes. During the time when the “safe harbor” lease program made such leases available, the investment tax credits and the complete depreciation on the complete expansion program of about \$19 million were sold to General Mills, but on the condition that both projects had to be up and running by 31 May 1982—so that General Mills could use those tax credits. Ironically, Bill recalls, Boone Valley was so deeply in debt, that these tax credits were its only real asset. By selling the tax credits to General Mills, Boone Valley reduced its debt to “only” about \$35 million from \$55 million. In effect, Boone Valley was using tax gimmicks and loopholes to help pay for its expansion. Farmland helped put the whole deal together and then guaranteed the sale of those tax credits. Basically, Farmland was now in the driver’s seat.

So Farmland called Bill Lester, described the problem, and said, “Will you go over there and get that project done!” So on 17 Jan. 1982 Farmland put Bill Lester on loan from Farmland’s soybean processing plant in Sergeant Bluff, Iowa, to Boone Valley at Eagle Grove. Bill went there as interim manager (on loan from Farmland, on Farmland’s payroll until 1 May 1982) and got all the work done on time—in fact almost a month ahead of schedule.

The Boone Valley board had seen how effectively Bill Lester could get things done. So on 1 May 1982 that board invited Bill to consider staying with them in Eagle Grove, Iowa. Bill checked with his boss, John Anderson, President of Farmland, who said that if Bill would like to make the move, he would have the complete blessings of Farmland Industries.

Thus, 1 May 1982 Bill Lester went to work for Boone Valley as their general manager. But soon a new and much bigger problem arose that had not been addressed. Boone Valley, with its new and expanded plant, was “killing” the other cooperative soybean processors. Most of those processors were in trouble financially. Moreover, they were

competing with each other rather than cooperating. Many in the industry agreed that individually, they were too small to compete with soybean processing corporate giants like ADM and Cargill. So cooperative leaders began talk with one another—men such as Jim Bauler (of Land O’Lakes), Urban Knobbe and Eldon Peterson (of Boone Valley), John Harling (President of the Omaha Bank for Cooperatives)—about the possibility of some sort of consolidation or merger, so they could start cooperating and stop competing. There was general agreement that the problem was greater than any one cooperative could handle by itself. Soon it was decided (based on a proposal by Ralph Hofstad, President of Land O’Lakes) to conduct a study to see how to best resolve the big problems and to see if consolidating the individual cooperative soybean processors would be to their benefit. By the summer of 1982, three cooperatives agreed to fund the study: Land O’Lakes, Farmland, and Boone Valley. They hired a consultant named Tom Veblin of Food Systems Associates of Washington, DC, to conduct a 3-part study. Tom first did a preliminary study, funded largely by Boone Valley. The goal of Phase One was to identify and contact every cooperative in the USA that was operating a soybean processing plant. Bill was actively involved, in part because he had worked with so many of the different cooperative companies.

As the next step in Phase One, a meeting was called of all heads of the cooperatives that had been identified as having soy processing plants in the greater Midwest. This first meeting was held in the board room of the Farm Credit building in Omaha. In attendance were general managers and CEOs from Harvest States / Honeymead of St Paul, Minnesota; AGRI Industries of Des Moines, Iowa; Gold Kist of Atlanta, Georgia (which once had soybean processing plants at Valdosta, Georgia; Marks, Mississippi; and Decatur, Alabama); MFA [Missouri Farmers Assoc.] of Columbia, Missouri [with a plant in nearby Mexico, Missouri]; and Riceland of Stuttgart, Arkansas (with soybean plants at Stuttgart and Helena, Arkansas). All the leaders agreed to discuss the idea of merger and to provide any information needed to Tom Veblin to complete his study. After about 3 months (in late summer or early fall, 1982) Tom’s study was completed. It concluded that merging or combining the various soybean processors was a good idea.

All parties involved studied the report. By late December 1982 or early January 1983 the three companies that commissioned the report decided to pursue to the idea of merging and to try to work out the details. Bill Lester recalls that Ralph Hofstad, president of Land O’Lakes, played a major role in moving the group toward consolidation—he was a real visionary. Two big questions were: What other companies (if any) would join in the merger and what would its basic structure be? Continued. Address: Omaha, Nebraska.

804. Lester, Bill. 2005. How cooperatives in America today pay taxes and allocate earnings (Interview). *SoyaScan Notes*. June 28-29. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Private businesses like to complain that cooperatives have an unfair advantage in that they pay no taxes on most profits. Yet in every AGP annual report, right after “net sales for the year,” is an entry for “Earnings [profit] before income taxes.” Under cooperative law in most of the states (including Iowa, where AGP is chartered, because they kept the old charter from Boone Valley), it is required that 10% of your earnings / profits have to go to “unallocated surplus,” which is basically internal capitalization = unallocated funds, which a co-op cannot distribute to its members. The co-op (AGP) must pay federal, state, and local income taxes (every tax that every other corporation pays) on that 10%, but only on that 10%. Say that AGP last year had earnings of \$10 million. \$1 million will go to unallocated surplus, and taxes will be paid on that at the regular corporate rate. The rest of the unallocated surplus can be used by AGP for capitalization (working capital, etc.) to grow and maintain existing plants. This money saves AGP from having to borrow that money; basically AGP borrows the money from itself.

The other 90% (\$9 million) of the earnings each year go to the “allocated equities” / “allocated patronage” (pronounced PAT-run-uj) account. This money is allocated back to the member owners / stockholders (all cooperatives) proportional to the amount of business each member did with AGP during the last fiscal year—NOT proportional to their investment / stock in AGP.

Of that \$9 million, AGP typically pays back 30% in cash to the cooperatives that are member owners. If a particular local member co-op keeps the cash, they must pay tax on it. Or that co-op may choose, instead, to allocate the cash back to their producers / farmer members, who must then pay the taxes.

The other 70% of the 9 million is paid into an account called “retained earnings.” This represents an increase in the members’ ownership of AGP and, for tax purposes, the local member cooperative must take this as income, even though they didn’t get it in cash. If a particular member co-op keeps the “retained earnings,” they must pay tax on it. Or that co-op may choose, instead, to allocate the “retained earnings” back to their producers / farmer members, who must then pay the taxes. Bill says: “Let’s put it this way. When they receive it, its patronage. After they’ve had it for about a week, it becomes equity. It changes in meaning because they didn’t get any money. It’s really a bookkeeping thing.” Every member of AGP has a stock ownership account.

So you can see a difference between the way corporations (such as ADM) and cooperatives are taxed. The corporation must pay corporate taxes on all its profits before the stockholders get any money. Then when the stockholders get their

dividends, they must pay an income tax on them; this is called double taxation.

In conclusion, Bill admits that cooperatives do have a small break when it comes to income taxes. It’s not as big a break as it used to be. But corporations have an advantage when it comes to borrowing money—they can issue stock to raise the money from the general public. The corporation pays no interest on this money, as a co-op if it borrowed money from a bank. However, pretty soon, the corporation must pay the new stockholder a return on their investment. Corporations have another important advantage, when it comes to depreciation and investment tax credits; cooperative law says that these really don’t do a cooperative any good in reducing taxes.

So looking at the big picture, Bill believes cooperatives do not have any significant advantage over the corporations against whom they compete. When corporations say “Cooperatives pay no taxes, so it’s hard for us to compete with them,” they are misleading those who are unaware of the details. They are only telling half of the story.

Another detail: All of the soybeans processed by AGP come from member elevators. In good years, AGP has paid a patronage refund of as much as \$0.25 to \$0.30/bushel on soybeans. So AGP may write a check for \$50,000 one year to one of its member elevators. That money goes into the elevator’s “patronage pool.” Suppose that elevator makes only \$50,000 profit that year. He divides that \$50,000 among all his member farmers, whether they grow soybeans, corn, wheat, or whatever. The money is *not* divided among only the soybean farmers. But, actually, it’s not a big deal because most farmers grow both soybeans and corn—the two main crops grown in Iowa today. Address: Omaha, Nebraska.

805. Lester, Bill. 2005. Cooperatives in America today (Interview). *SoyaScan Notes*. June 28-29. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Bill has worked in cooperatives almost all his life. His dad spent more than 40 years in the grain business, so that’s (mainly) how he got into it. Today in the Midwest, an estimated 95% or more of all grain and soybean elevators are cooperatively owned! Thus, most farmers in the Midwest belong to at least one cooperative, typically a local elevator to which they sell their corn, soybeans, wheat, etc.—and which they and other nearby farmers own! The same is true in California for fruits and vegetables. A co-op represents almost every type of fruit, nut, and vegetable—such as Sunmaid raisins, Blue Diamond almonds, etc.

A cooperative elevator can sell its soybeans and grain to whomever it wants. It has no obligation to sell to cooperative processors—although it is advantageous to sell to a cooperative processor if that processor is generally profitable and is located nearby. In fact, cooperative processors don’t have nearly enough capacity to process all the grain in co-op elevators. So inevitably these elevators sell a lot of their

grain and soybeans to private-sector processors. A private company like ADM feels no threat or problem from being surrounded by cooperative elevators.

About 95% of the grain that moves out of the Midwest, where it is produced, moves in “unit trains” with at least 104 cars per train. It has to load in one place in 24 hours, then heads for water, such as Grays Harbor, Washington, on the Pacific Coast, or New Orleans, Louisiana; or it may end up going to feed lots in Texas, Colorado, or California.

In terms of mergers, Bill notes: “Each cooperative has a little bit different political philosophy. That’s the main reason that some mergers happen and others don’t. One of the main reasons that Farmland didn’t go together with that Cenex Harvest States about ten years ago was the political differences within the boards. It’s that internal cooperative politics, which has in part to do with personalities. The composition of the board of directors of a co-op—especially 10-20 years ago—is a key determinant of that co-op’s political philosophy. For example, the old Felco organization was a manager-type organization in that its board was made up of local cooperative managers. But Land O’Lakes was more of a farmer-type organization, with primarily farmers on its board. Yet Farmers Regional Cooperative Co. went together perfectly with Land O’Lakes. After the merger, however, the two boards worked it out among themselves so that the resulting board (of Land O’Lakes) was composed of both managers and farmers / producers. The mixture worked out very well, since both managers and farmers bring different but very important perspectives to the table. AGP’s board is also a mixture of farmers and managers. The old Farmers Union GTA and the old Central Exchange had only farmers on their boards—no managers. Those with managers on their board have a stronger business orientation.

Farmland Industries has been in Chapter 11 bankruptcy since 31 May 2002 and is being liquidated. So their feed plant is in a joint venture with CHS (Cenex / Harvest States). Farmland’s fertilizer operation is in an LLC (limited liability company) joint venture with Land O’Lakes and CHS. Bill does not know what happens when one of the partners in a joint venture declares bankruptcy; it becomes complicated. In the past, when a cooperative has gone out of business, other cooperatives have almost always come in and purchased its assets. Farmland had a big feed mill at Eagle Grove that belonged to Boone Valley; part of the deal when AGP was formed was that Farmland got that mill. But since Farmland has been in bankruptcy, that feed mill has been sold off to the local Gold Eagle Cooperative in Eagle Grove and they are operating it now—profitably. Much of the money that Farmland owed was owed to local cooperative elevators; if they are making money, they can just write it off as a bad debt and use it as a tax deduction. “They get a reverse allocation from Farmland, that they can apply against their earnings for tax purposes.” This Farmland bankruptcy is a big dark cloud over the cooperative community in the USA.

There used to be many regional grain cooperatives operating in the Midwest. Today there is only one left operating—CHS (Cenex / Harvest States)—and they are very strong. Cenex used to be the old Farmers Union Central Exchange, which was basically a supply co-op, very similar to Farmland; one of their core businesses was petroleum. They owned oil wells and refineries, and with today’s high petroleum prices they are making big profits.

There is a new trend among some producer cooperatives. Soybean processors (such as the one at Brewster, Minnesota) or ethanol producers, start as cooperatives but, after several years with no profits and growing losses, they switch to being LLCs (limited liability companies). The same farmers own them—but these are now your typical farmers who are much bigger than in earlier times—farming on average something like 1,500 to 2,000 acres—depending on the area. Under an LLC they have limited liabilities and, often more important, they can pass those losses back and take advantage of them for tax purposes. Losses are of no tax advantage to a cooperative.

The single biggest challenge for cooperatives is find good management—businessmen who can compete successfully with their corporate counterparts, like ADM and Cargill. Address: Omaha, Nebraska.

806. Lester, Bill. 2005. History of his work with cooperative soybean processing (Interview). *SoyaScan Notes*. June 28. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Bill spent 8 years with the old Farmers Grain Terminal Association; he was managing their grain buying office in Windom, Minnesota. Then in Aug. 1965 he went to the soybean processing plant at Sheldon, Iowa as assistant manager to Ken McQueen; on 1 Oct. 1967 he became general manager. From the same desk in the office in Sheldon, he worked for the old Big 4 Cooperative, then for Felco, then for Land O’Lakes. Then in 1973 he left Sheldon and went to work for Farmland Industries when they built the new plant at Sergeant Bluff, Iowa (he and his family lived in nearby Sioux City). And finally he had worked for Boone Valley at Eagle Grove, Iowa. As one guy said, “Hell, Bill knows where all the skeletons are buried.” Address: Omaha, Nebraska.

807. Lester, Bill. 2005. Land O’Lakes, soybean processing, and Ag Processing Inc (AGP) (Interview). *SoyaScan Notes*. June 28. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Land O’Lakes (a dairy regional cooperative in Minnesota) first got involved in soybean processing in 1970 when the Farmers Regional Cooperative Company merged into Land O’Lakes. The Big 4 Cooperative (which had soybean crushing plants at Sheldon, Iowa, and Fort Dodge, Iowa) then became a division of Land O’Lakes. In 1980 Dawson Mills, which was on the verge of bankruptcy



because its Specialty Foods Division was losing so much money, merged into Land O'Lakes. Bill believes Land O'Lakes agreed to acquire Dawson Mills largely for reasons related cooperative politics—they bailed them out, being unwilling to just stand by and watch a major fellow cooperative go under. Moreover, Land O'Lakes had a feed mill in Dawson city. Saving Dawson Mills cost Land O'Lakes millions of dollars. In June 1982 the Fort Dodge plant (which had previously been owned and operated by Cargill) was permanently shut down: it never really operated after the merger with Land O'Lakes. So when AGP was formed, Land O'Lakes contributed only two soybean processing plants: Sheldon, Iowa, and Dawson, Minnesota. Address: Omaha, Nebraska.

808. Lester, Bill. 2005. Boone Valley and the origins of Ag Processing Inc (AGP). Part III (Interview). *SoyaScan Notes*. June 28. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Continued: Boone Valley now had to find a dynamic leader to run the new business—which was deeply in debt. A committee was formed and a head-hunting consultant was hired to let it be known that the job was available and to interview candidates. After seven weeks, in about Oct. 1983, the board of directors chose James W. Lindsay as general manager and CEO. Lindsay had been a vice-president at ADM—a private company and a competitor. “Jim possessed a great knowledge of soybean processing and vegetable oil refining; he worked his way up through the ranks at ADM. He had also spent time in Brazil in charge of ADM’s Brazilian operations. He was also a good leader, by giving you a job to do and the parameters, then letting you do it, with minimum updates unless you were deviating from the original discussion—a good boss and a very capable individual.” “Jim was a bit of a renegade. He didn’t go along with all of ADM’s philosophy and practices. He and I used to kid each other that we were a rare breed—neither of us had a college degree.” When Jim came to work at Boone Valley. He brought with him three coworkers and lieutenants from ADM: Jim Yeates, who became vice president for operations; Tony Porter, to be vice president for marketing and transportation; and Joe Meyer who became vice-president for vegetable oils and a meal exports. Not long afterwards, Daryl Dahl left Merrill Lynch to join the new cooperative as hedging center manager.

It was quickly decided to locate the new company’s corporate offices in Omaha, Nebraska. Initially, the Omaha Bank for Cooperatives offered temporary office space for the new management and staff. Lindsay and his team replaced some of the managers and other top employees at the 5 other soybean processors. “But overall there really weren’t that many. Some refused or hesitated to change the way they had been doing things. Lindsay said, you’re going to have to change, because the old way hasn’t been working.” It was

painful for some who had spent their lives in the soybean processing business and lost their jobs.

The board of directors and Jim Lindsay felt strongly that the new company needed a new name. A stigma had attached to the name “Boone Valley” because of all its financial problems. On 7 March 1984 the name of the new company was changed from Boone Valley Cooperative Processing Association to “Ag Processing Inc a cooperative.” Punctuation was deliberately omitted.” A new logo was also adopted “AGP” in gold letters on a green background. Before long the company was widely called simply “AGP.” That logo has been updated twice to adjust to the changing times.

Bill recalls: In February 1984 Jim Lindsay called me into Omaha. He said, “Bill, I want you to come into Omaha. I know soybean processing backwards and forwards. I know refining. I know the soybean side of it. But I don’t know anything about cooperatives. You’ve spent your whole life in them. I want you to come in and to head up the department known as Member Relations and Governmental Affairs.” In mid-June 1984, Jim and his family moved from Eagle Grove, Iowa, to Omaha, Nebraska. “Jim Lindsay had the private sector mentality and I had the cooperative mentality; we created what we called a ‘new hybrid.’” Bill stayed in this position until he retired on 1 June 1993.

Today AGP is strong organization. They haven’t grown as much during the last 10 in sales and profits as they did during their first 10 years in part because they are in a mature industry (soybean processing), with strong competitors such as ADM and Cargill. In the early years, much of their growth was from diversification, as into soybean oil refining, and from building new plants (as at Hastings and Emmetsburg). “AGP has done a tremendous job in the international marketplace. The terminal they built on the Pacific Coast at Grays Harbor in Washington state has been growing by leaps and bounds and is now a big asset. Their biodiesel business is also poised for growth. Jim Lindsay and Bill got AGP’s soy biodiesel started in its infancy. Two men in Kansas City, Missouri [Bill Ayres and Doug Pickering], were talking about and playing around with biodiesel. “We put \$50,000 into their business in about 1990-91 and now AGP owns that company.”

Bill retired on 1 June 1993. Tremendous changes have taken place in agriculture since then. Bill has kept in touch with developments at AGP since that time. He has continued to live in Omaha. During the summer, he and his family go to their cabin on Spirit Lake in Northwest Iowa. Nowadays he goes to AGP headquarters 2-3 times a month during the non-summer months.

The future of the big cooperatives looks limited to Bill because it is a mature industry. There may be growth of 3-5% a year. AGP also has a small grain operation; they work with the members—the local cooperatives—to help them merchandise their grain in other parts of the USA and abroad. For example, they use their 100-car trains to move

corn and soybeans down to their facilities near the big feedlots in Texas. The logistics is too complex and expensive for the small guys. Address: Omaha, Nebraska.

809. *AGP News*. 2005. Soy biodiesel moves forward: AGP expands SoyGold production. No. 2. p. 1-2.

• **Summary:** Joe Jobe, Executive Director of the National Biodiesel Board (NBB) says the soy biodiesel industry is making great progress. A federal tax incentive program that went into effect on 1 Jan. 2005, the singer Willie Nelson has been educating people, and state biodiesel initiatives are of great help. ABB estimates that biodiesel sales have jumped from 500,000 in 1999 to 20 million gallons in 2004.

AGP is in the forefront of soy biodiesel; in 1996 it became the first U.S. company to construct a purpose-built biodiesel for its SoyGold brand. Now AGP is expanding its production facility at Sergeant Bluff, Iowa, by about 60%—expected to be completed by July 1.

810. Ag Processing Inc. (AGP). 2005. Ag Processing Inc. (AGP). (Website printout—part). [Http://www.agp.com](http://www.agp.com). Printed June 27.

• **Summary:** Home: About AGP (2 p.). AGP News. Employment. E-store. Links. Contacts. Map / Hotels. Insurance. Products and services: Soybean processing, export, AminoPlus, food, grain, industrial products, feed, Protinal / Proagro. AGP News. Contract / Premium opportunities with AGP Member Cooperatives. MaxYield Cooperative announces partnership agreement with AGP. 2004 AGP Annual Report.

About AGP: A farmer owned company. Introduction. Formation in 1983, composition, and ownership. AGP's distinctions. AGP's mission. AGP's reason for existence. Our cooperative motto is "Partners in food production." "Since its formation in 1983, AGP has been committed to the success of its owners. Today, that is 222 local cooperatives and six regional cooperatives, representing 250,000 farmers from 16 states throughout the United States and Canada.

"AGP operates nine soybean processing plants including six plants in Iowa, located at Eagle Grove, Emmetsburg, Manning, Mason City, Sergeant Bluff, and Sheldon. Other AGP processing plants are located at Dawson, Minnesota, St. Joseph, Missouri, and Hastings, Nebraska. The Hastings plant is the first farmer-owned soybean processing facility in that state. AGP holds the distinction of being: (1) The largest 'cooperative' soybean processing company in the world. (2) The fourth largest supplier of refined vegetable oil in the United States."

Company history: A cooperative (3 p.). "In 1983, Land O'Lakes, Inc., a Minnesota corporation, Farmland Industries, a Kansas Corporation, and Boone Valley Cooperative Processing Association, an Iowa corporation doing business only in soybean processing, entered into a joint venture agreement to form one cooperative soybean processing

company. On August 31, 1983, Land O'Lakes Inc. and Farmland Industries combined their soybean processing plants located at Dawson, Minnesota; Fort Dodge, Iowa; Sergeant Bluff, Iowa; St. Joseph, Missouri; and Van Buren, Arkansas into a new company.

"Shortly after the reconfiguration of 1983, the new company name 'Ag Processing Inc a cooperative' was adopted with the corporate logo AGP as our company trademark.

In December 1985, the company acquired additional processing plants at Manning Iowa and Mason City, Iowa from American Grain and Related Industries (AGRI).

"Soybean processing: Soybean processing is AGP's primary business. AGP is the largest soybean processor in Iowa and the fourth largest soybean processor in the United States based on capacity. Additionally, AGP is the largest *cooperative* soybean processor in the world. Every month, AGP plants acquire more than 18 million bushels of soybeans for processing. That's the equivalent of the soybeans grown on 15 thousand acres per day. AGP annually purchases and processes more than 5.5 million acres of members' soybeans. AGP continues to expand crushing capacity with the addition of plants in Emmetsburg, Iowa (1997) and Hastings, Nebraska (1999).

"In 1985, AGP began refining soybean oil by purchasing equipment for installation in an existing building located at the St. Joseph, Missouri, soybean processing plant." AGP's refining business has since greatly expanded. AGP also makes ethanol from corn.

"Methyl esters: In 1997, AGP expanded in many areas with the completion of a soybean methyl ester plant in Sergeant Bluff, Iowa." The products are sold under the SoyGold brand and "are used in a wide variety of applications including soydiesel fuel, solvents, and spray adjuvants (used to enhance the effectiveness of agricultural chemicals)."

AGP 2005 contract programs: Vistive soybean premiums, Non-GMO contracts (Manning, Iowa). AGP guaranteed premium program: Rate table. Address: Omaha, Nebraska.

811. *Sioux City Journal (Iowa)*. 2005. AGP announces expansion of biodiesel plant. July 23. p. A3.

• **Summary:** The expansion will be completed in the fall of 2006.

812. Miller, Tommy. 2005. Riceland Foods no longer operates a soybean crushing plant at Helena, Arkansas. It is now closed (Interview). *SoyaScan Notes*. July 25. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** In 1984, Riceland sold this plant in Helena, Arkansas, to Quincy Soybean Co., which was acquired by ADM in about 1998. ADM shut down the plant in about 2003. Soybean acreage in the South has not decreased. This cutback is because newer and larger plants are more effi-

cient, and have lower processing costs. At the time it was built, in 1964, Riceland's plant in Helena, Arkansas, was the larger and more modern of the two, but this was not the case by 1984, when the plant at Stuttgart had become the larger and more modern of the two. Address: Soybean Div., Riceland Foods. Phone: 870-673-5500.

813. Givens, Joe. 2005. Early history of work with Dawson Mills (Interview). *SoyaScan Notes*. July 26. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** When Joe began as manager of Dawson Mills in Jan. 1952, all members of the cooperative were farmers. After about 2 days, Joe realized that this was an unworkable structure. The members should be the cooperative grain elevators, which were owned by the farmers and to which the farmers sold their grain. That would greatly simplify the buying and delivery of soybeans each day, the accounting and paying of patronage refunds at the end of each fiscal year, the conduct of annual meetings, etc.

Every day, the local cooperative elevators set the price that they would pay to farmers for soybeans. If the price went up, the farmers sold a lot of soybeans to the elevator, but if it went down, they usually sold none. "They aren't dumb."

Dawson Mills needed soybeans to process every day, and they decided what they were willing to pay—largely by looking at the closing price on the Chicago Board of Trade and then subtracting about 25-30 cents. Once a day, Dawson Mills would call the local radio station and tell them the price they were willing to pay for soybeans that day. Each day at 2:00 p.m. the local radio station would announce the price Dawson was paying per bushel of soybeans delivered on that day. All the elevator managers in the region were listening to these announcements. At the same time, the prices being paid by other soybean crushers in the region (Dawson's competitors such as Cargill and Continental Grain) were also announced. Note: Prices were also offered for other crops, such as corn, wheat, oats, barley, etc. Dawson Mills had no idea whether or not it was going to be able to buy any soybeans that day—whether any elevator accepted its bid. Each elevator manager typically sold to the highest bidder—after transportation costs were deducted. Yet it was not quite so simple. Dawson Mills had a small but important advantage over its private competitors, since the cooperative elevators (which owned Dawson Mills) *might* get a patronage refund at the end of the year from Dawson, but they could never get such a refund from private companies.

When Joe began as manager, Dawson Mills was essentially bankrupt. So the bank said, "We'll advance you enough money to accumulate two day's supply of soybeans—no more." If Dawson Mills received no deliveries for two days, they would have no soybeans to process. Therefore Dawson's bid had to compete with that of the other buyers—who were bidding competitively for the same soybeans

every day.

Note: Actually, the way of determining prices and buying soybeans was much more complicated than described above. Address: 6566 France Ave. S. #906, Edina, Minnesota 55435. Phone: 952-926-7828.

814. Lester, William C. 2005. Biography. Omaha, Nebraska. 1 p.

• **Summary:** 1931 May 17—Born in Lismore, Minnesota. 1949—Graduated from Worthington High School, Worthington, Minnesota. 1949 Sept. to 1951 Jan.—Attended Worthington Junior College.

1951 Jan. 15 to 1954 Oct. 23—United States Air Force.

1952 Aug. 9—Married Marion G. Ramerth in Worthington, Minnesota. Born on 11 Jan. 1933 on a farm in Murray County, Minnesota (3½ miles south of Fulda), she was the daughter of Frederick J. Ramerth and Esther Kunerth. Bill and Marion had 5 children (3 girls and 2 boys) now ranging in age from 52 to 45, plus 4 grandchildren and 5 great-grandchildren.

Work career: 1954 Nov. to 1957 Oct. 11—Fraser-Smith Grain Co., Minneapolis, Minnesota.

1957 Nov. 1 to 1965 Aug. 15—Farmers Union Grain Terminal Grain Terminal Association (GTA), Windom, Minnesota. Managed grain buying office.

1965 Aug. 18 to 1967 Oct. 1—Big 4 Cooperative Processing Assn., Sheldon, Iowa. Asst. manager, soybean plant.

1967 Oct. 1 to 1970 Jan. 1—Farmers Regional Cooperative, Sheldon, Iowa. (On 1 Oct. 1967 Big 4 merged with Farmers Regional Cooperative).

1970 Jan. 1 to 1973 Oct. 31—Land O'Lakes, Inc., Sheldon, Iowa. General manager, soybean plant (On 1 Jan. 1970 Farmers Regional Cooperative merged with Land O'Lakes, Inc.).

1973 Nov. 1 to 1982 Jan. 16—Farmland Industries, Inc., Sergeant Bluff, Iowa. General manager of new soybean processing plant, which started operating on 1 Oct. 1975; under construction before that.

1982 Jan. 17 to 1982 April 30—Boone Valley Cooperative Processing Assn., Eagle Grove, Iowa. Interim general manager, on loan from Farmland Industries.

1982 May 1 to 1983 Aug. 31—Boone Valley Cooperative Processing, Eagle Grove, Iowa. General manager. (The merger that formed Ag Processing Inc (AGP) took place on 31 Aug. 1983).

1983 Sept. 1 to 1984 June 16—Ag Processing Inc (AGP), Eagle Grove, Iowa. Plant merchandising manager.

1984 June 17 to 1993 May 31—Ag Processing Inc (AGP), Omaha, Nebraska. Vice president of member & corporate and government relations.

1993 June 1—Retired from Ag Processing Inc (AGP).

Note: Bill is widely recognized as a pioneer and very important figure in the world of cooperative soybean processing. Address: 1405 S. 118th St., Omaha, Nebraska



68144. Phone: 402-333-2366.

815. Dean Foods Co. 2005. TreeHouse Foods, Inc. Dallas, Texas. iii + 96 + 29 p. 28 cm.

• **Summary:** This document is officially known as "Form 10." The Specialty Foods Group segment (mainly pickles), WhiteWave Foods segment (branded products), and the Dairy Group are each different entities. This new company, TreeHouse Foods, Inc., will include Dean Foods' pickles segment, Cremora non-dairy powdered creamer, Mocha-Mix non-dairy liquid creamer, and Second Nature, a liquid egg substitute, plus salad dressings sold in foodservice channels. The CEO and president of the new company is Sam K. Reed, age 58, former CEO of Keebler Foods Co. His base salary will be \$750,000, with a target bonus percentage of 100%.

Note: White Wave, the maker of silk, tofu, and other soy products, will remain part of Dean Foods. Address: 2515 McKinney Ave., Suite 1200, Dallas, Texas 75201. Phone: 214-303-3400 [www.deanfoods.com](http://www.deanfoods.com).

816. Farmer, Richard. 2005. History of work at soybean processing plants (Interview). *SoyaScan Notes*. Aug. 3. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Dick served two stints on the NSPA / NOPA safety committee, one in the 1980s and one from 1994 to 2004. The committee created some early safety reports related to solvent extraction, but they were for in-house use by members of the Association. In addition, many companies developed their own reports.

Dick started in the soybean business in 1959 with Swift & Co. He is aware of the Monticello Co-operative Soybean Products Co. (Monticello, Piatt Co., Illinois). They were a small plant, still in operation in 1978, and he believes that they are still operating. At one point their name was Viobin, and they were extracting wheat germ oil from wheat germ for the health food trade. Note: A Web search shows that as of Aug. 2005 Viobin USA (A division of McShares, Inc.) was at 226 West Livingston, Monticello, Illinois 61856. Phone: 217-762-2561. Website: [www.viobinusa.com](http://www.viobinusa.com). The company produces defatted wheat germ and wheat germ oil.

The sewer explosion in Louisville, Kentucky, was perhaps the major reason that Ralston Purina got out of the soybean crushing business, but there were other factors. All of their plants were fairly small and relatively old, and some early ones (such as the plant in Memphis, Tennessee) now had towns growing around them, so there was no room to expand.

Another important soybean explosion was the one at Quincy Soybean, in Quincy, Illinois, and later related to Helena, Arkansas.

The original desolventizer, developed in Germany, was called a Schneckens. It used jacketed screw conveyors and condensed solvent that came off the meal—very inefficient. However it gave desolventized meal with a low pdi (protein

dispersibility index, of about 60). Later, some Schneckens were made in the USA.

The first desolventizer-toaster was developed in the USA in the late 1940s or early 1950s by Central Soya Co. Dick thinks Norm Kruse has the process patent and French Oil Co. has the equipment patent. It, of course, gave meal with a low pdi.

The EMI developed the flash desolventizer, which used superheated solvent vapors to get rid of 95% of the hexane. It was designed to give meal with a high pdi, that could be used in foods. Another innovation was the vapor desolventizer.

Dick studied engineering as an undergraduate at the University of Illinois at Urbana, but he did not graduate. He also worked and was married. He went on to earn an MBA at the same university.

He worked for Bunge for many years before he retired last year. The last plant of which he was in charge was in Marks, Mississippi. Address: Chesterfield, Missouri (near St. Louis). Phone: 314-576-1794.

817. Levin, Helen. 2005. Ezra Levin and the Viobin Company in Monticello, Illinois (Interview). *SoyaScan Notes*. Aug. 4. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** Ezra Levin founded the Viobin Company in 1933. He was married twice and Helen is his second wife; they were married in 1940 and had 3 children. Ezra was 20 years older than Helen. Ezra is no longer living, but Helen has many scrapbooks about him and his career. Ezra did his undergraduate work at either the University of Michigan or Michigan State Univ. (MSU) He earned his MS degree in biochemistry from MSU, and was later awarded an honorary doctorate decree by MSU—where he was a professor of biochemistry for many years. He invented a process and was issued a patent for solvent extraction of wheat germ to make two products which would not spoil: wheat germ oil (Viobin brand for humans; Rex brand for animals) and defatted wheat germ meal.

He acquired an existing company in Monticello (pronounced mon-tuh-SELL-oh) and adapted it to his solvent process. Initially his office was in Chicago, but after he and Helen were married, they moved to Champaign, Illinois.

Under the pseudonym Hayden Roberts, he had a radio program on personal health, broadcast from a station in Chicago.

Helen has 7-10 scrapbooks of newspaper clippings about Ezra Levin. She will send Soyfoods Center copies of several of these articles. Viobin is wheatgerm oil for humans; Rex is for animals. Viobin is now a division of McShares, Inc. which purchased it in 1996.

Note: Nobody at Viobin USA in Monticello has any information about the history of this company or cares about that history. There is no history at all on their website. Address: Champaign, Illinois. Phone: 217-352-3874.

818. Lester, Bill. 2005. Re: Overview of Arkansas Grain Cooperative and Riceland Foods, Inc. Letter (e-mail) to William Shurtleff at Soyfoods Center, Sept. 12. 1 p.

• **Summary:** Arkansas Grain Cooperative changed its name to Riceland Foods, Inc. in the 1970s. They still operate a big soybean processing plant in Stuttgart, Arkansas.

Their first plant, at Stuttgart, Arkansas, began operating in late 1960. They upgraded that plant, later built a new one (about 1968), and finally combined them into one.

Their second plant at Helena, Arkansas, began operating in about July 1964. They sold this plant in the 1980s to Quincy Soy Products Co, which was owned by the Moormon Family, and Quincy later sold the plant to ADM in the 1990s.

At one time, 25-30 years ago, Riceland's soybean growers "pooled" their soybeans, because they basically did not have any elevators, being more of a centralized cooperative. The grower could either sell his beans to the market or elect to go into the pool. Those who chose the latter option would deliver their soybeans to Riceland. If soybeans were selling for \$5 a bushel on that day, the farmer who was "pooling" his soybeans might get an "up-front" of \$2. As the year passed, Riceland would process the soybeans, merchandise them out, etc. Then the profits from that would go back to the producers. Bill thinks that this whole approach of "pooling" never worked out that well, and did not last for long. Moreover, a lot of rice farmers in California pool their rice. For more information contact the communication department at Riceland Foods, Inc., P.O. Box 927, Stuttgart, Arkansas 72160. Phone: 870-673-5500.

Note: The Riceland website (Sept. 2005) says that "Riceland provides marketing services for rice, soybeans, and wheat grown by its 9,000 farmer-members in Arkansas, Louisiana, Mississippi, Missouri, and Texas. Each year its 1,900 employees receive, store, transport, process, and market more than 125 million bushels (2.5 million metric tons) of grain." Address: Omaha, Nebraska.

819. Lester, Bill. 2005. Re: Farmland Industries and its bankruptcy. Letter (e-mail) to William Shurtleff at Soyfoods Center, Oct. 11. 1 p.

• **Summary:** Farmland Industries, Inc. was a Kansas corporation even though it was headquartered in Kansas City, Missouri. A company's headquarters doesn't have to be in the same state in which it is incorporated. For example, AGP is an Iowa corporation, because it is doing business under the old Boone Valley Cooperative Processing Association charter.

Farmland Industries filed for bankruptcy on May 31, 2002. Their reorganization plan has basically been liquidation, by selling off assets to pay debt. Bill thinks that they have paid 100% of the money owed to the secured and unsecured debt holders, but member stockholders have lost

all their equity. Farmland is still in existence, but they have no operating units left. It's a sad state, to say the least, for a once proud and viable company. Bill was personally an unsecured debtor on his last deferred compensation payment; he has received 100% of the money owed, but no interest. Address: Omaha, Nebraska.

820. Baker, David. 2005. Re: Kosmos Portland Cement Co. in Kosmosdale, Jefferson Co., Kentucky, started grow soybeans near the start of World War II and dried them near its kilns. Letter (e-mail) to Ms. Perry, Ms. Hornback, and Prof Ted Hymowitz, Oct. 18. 1 p.

• **Summary:** The company owned several hundred acres, mostly as a reserve for its underlying clay, which was used in making Portland cement. Until the late 1930s the Kosmos acreage was farmed, either under lease or share-crop arrangements with local farmers. But near the start of World War II, Kosmos began its own farming operation, growing soybeans. An elderly stroke victim (interviewee) told David that Kosmos was one of the first successful soybean growers in that region.

The interviewee said that in those days growers in this part of Kentucky had great difficulty with mold and rotting of the crop, but that Kosmos avoided that by storing the harvested soybeans near the kilns used to make their cement and "always got top dollar for their crop."

David has 3 questions: (1) When did soybeans become a significant crop in Kentucky, especially in Jefferson County. Ans: After June 1941, when the Ohio Valley Soybean Cooperative started operation in Henderson, Henderson Co., Kentucky. Note: Jefferson Co. is on the Ohio River about 100 miles (6 counties) northeast of Henderson.

(2) Were there any soybean processors in or around Louisville, which is the capital of Jefferson County? Address: Kentucky.

821. AGP—A Cooperative. 2005. Annual report to members: Adding value to your harvest. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 40 + 20 p. 28 cm.

• **Summary:** Net sales for 2005 (year ended Aug. 31) were \$2,349.849 million, down 11.8% from \$2,663.632 million in 2004. Earnings from continuing operations (before income taxes): \$50.656 million, up 75.0% from the \$28.941 million in 2004.

The report begins with a 2-page list of AGP's members (as of 31 Aug. 2005). They are located in the following states (listed alphabetically): Arkansas (1). California (1). Illinois (1). Iowa (87). Kansas (23). Michigan (1). Minnesota (40). Missouri (3). Nebraska (28). North Dakota (1). Oklahoma (1). South Dakota (30). Utah (2). Wisconsin (4). Saskatchewan, Canada (1).

"Double vegetable oil refining capacity at Hastings, Nebraska plant... New product launches: Vistive low-linolenic soybean program in the U.S." (p. 5).

“Renewable fuels: In 1996, AGP became the first company in the industry to construct a methyl ester production plant that exclusively utilized soybean oil. That plant, at Sergeant Bluff, Iowa, not only produces biodiesel but also products for industrial uses such as solvents and agricultural spray adjuvants... The biodiesel industry grew from 25 million to approximately 70 million gallons this fiscal year and is expected to increase to at least 400 million gallons in the next two to three years. In part, the increase will be due to passage of the federal energy bill. New state biodiesel legislation also will have an impact. In Minnesota, for example, a new law requires that all diesel fuel sold in the state contain a two percent vegetable oil blend, known as B2. Illinois also ordered government fleets to use biodiesel beginning in 2006, and similar standards are being considered in at least seven other states.

“In light of these circumstances the AGP Board of Directors approved expansion of the Sergeants Bluff plant to more than double biodiesel capacity. The project was completed this year, giving AGP the ability to produce over 15 million gallons of biodiesel per year... AGP was the first and remains the industry leader in methyl ester and biodiesel production. AGP markets its biodiesel, branded as SoyGold, through its wholly owned subsidiary Ag Environmental Products LLC” (p. 20-21).

AGP now has European offices in: Antwerp, Belgium. Barcelona, Spain. Komarno, Slovakia. Pecs, Hungary. Address: Omaha, Nebraska. Phone: (402) 496-7809.

822. Pahl, Greg. 2005. *Biodiesel: Growing a new energy economy*. White River Junction, Vermont: Chelsea Green Publishing Co. xiv + 281 p. Illust. Index. 23 cm. [286 endnotes]

• **Summary:** Contents: List of figures. Acknowledgements. Foreword, by Bill McKibben. Introduction. Part I: Biodiesel basics. 1. Rudolf Diesel. 2. Vegetable oil revival [1970 on]. 3. Biodiesel 101. 4. Biodiesel's many uses.

Part II: Biodiesel around the world. 5. Europe, the global leader. 6. Other European countries. 7. Non-European countries.

Part III: Biodiesel in the United States. 8. A brief history. 9. The main players. 10. Biodiesel politics. 11. Recent developments.

Part IV: Biodiesel in the future. 12. Looking ahead. Organizations and online resources. Notes. Glossary.

Chapter 8, “A brief history [in the USA],” has the following contents: Introduction. Early biofuels. The OPEC oil crisis. Early experiments: Idaho (Charles Peterson), Colorado (Thomas Reed), Missouri (Leon Schumacher). Early production: Interchem / Midwest Biofuels (1991, Bill Ayres and Doug Pickering), Ag Processing Inc (AGP) / Ag Environmental Products (AEP), Twin Rivers Technology (never actually produced any biodiesel), NOPEC (1995, Lakeland, Florida), West Central Cooperative (1996,

Ralston, Iowa), Columbus Foods (1996 fall, Chicago, Illinois), Pacific Biodiesel (1996, Kahului, Maui, Hawaii). The soybean factor: The American Soybean Association / United Soybean Board, National Biodiesel Board. Other organizations. Homebrew (grassroots movement employing used cooking oil as a feedstock). Fat of the Land (1995 humorous documentary by five women filmmakers). The Veggie Van (Joshua Tickell and Kaia Roman). Biodiesel online. Address: Weybridge, Vermont.

823. Anderson, George. 2006. Early installations of Crown Iron Works' solvent extractors for processing soybeans (Interview). *SoyaScan Notes*. July 11. Conducted by William Shurtleff of Soyfoods Center.

• **Summary:** The first 8 solvent extractors were installed in 1950; all used trichloroethylene as the solvent for extracting oil from soybeans and had a capacity of 25 tons/day. Crown got its original solvent extractor by buying a patent for the process and equipment from Iowa State University. Al Kaiser was head of the solvent department at that time and Joe Givens worked for him. From 1955 on, hexane replaced trichloroethylene in almost all extractors processing soybeans. The initial numbers (in parentheses) indicate the sequence in which the extractors were sold. The list contains entries for about 260 extractors.

(1) Glencoe, Minnesota. (2) Vermont, Illinois. (3) Grand Forks, North Dakota. (4 & 5) Dawson, Minnesota. (6) Blooming Prairie, Minnesota. (7 & 8) Millsboro, Delaware. (9 & 10) 1955–Millsboro, Delaware (25 tons, soybeans). (11 & 12) 1955–Altona, Manitoba, Canada (25 tons soybeans and about 15 tons rapeseed. Note: The capacity of an extractor depends on the type of oilseed it is processing). (13 & 14) 1955–Fremont, Nebraska (40 tons each). (15) 1959–Dawson Minnesota (250 tons).

(16) 1963–Millsboro, Delaware (400 tons). (17) 1963–Dawson, Minnesota (600 tons). (18) 1965–Altona, Manitoba, Canada (250 tons soybeans or 150 tons rapeseed). (21) 1965–Fremont, Nebraska (250 tons). (22) 1966–Monticello, Illinois (less than 100 tons, wheat germ). (23) A laboratory in Hershey, Pennsylvania.

(29) 1968–Clarksdale, Mississippi (600 tons). (30) 1970–Ashdod, Israel (75-100 tons; especially for soy protein concentrate).

(36) 1971–Mason City, Iowa (1,000 tons; the first of this capacity; still running)... (72) 1979–Decatur, Illinois (3,000 tons; the first new stainless steel model 3 extractor—the big seller today. Running on corn germ; still running).

As of 2004, Crown Iron Works has installed 389,622 tons of soybean processing capacity. 90% of the extractors it has ever installed are still in operation—somewhere. The largest extractor Crown has ever built and installed has a capacity of 8,800 tons/day. All Crown Extractors are loop shaped. About 5-6 years ago De Smet bought French Oil Mill's solvent extraction business and shut it down. Address: Vice Presi-



dent for Engineering, Crown Iron Works, P.O. Box 1364, Minneapolis, Minnesota 55440-1364. Phone: 651-639-8900.

824. AGP—A Cooperative. 2006. Annual report to members: Adding value to your harvest. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 33 + 4 p. 28 cm.

• **Summary:** Net sales for 2006 (year ended Aug. 31) were \$2,360.484 million, up 0.5% from \$2,348.167 million in 2005. Earnings from continuing operations (before income taxes): \$75.136 million, up 49.2% from the \$50.360 million in 2005.

AGP now has marketing offices in: Pecs, Hungary. Jakarta, Indonesia. Queretaro, Mexico. Manila, Philippines. Singapore. Komarno, Slovakia. Bangkok, Thailand. Istanbul, Turkey. Hanoi, Vietnam.

This was “the second best year of earnings in AGP’s 23-year history... Accordingly, your Board of Directors approved total patronage refunds of \$32.6 million, designating 30 percent to be paid in cash again this fiscal year... [and] equity redemption for fiscal 2006 of \$28 million, making the two year total of equity redeemed \$56 million. Cash patronage, equity redemption and value-based premium programs totaled over \$43 million dollars for fiscal 2006, also the second best in the history of your cooperative” (p. 5).

Today AGP’s “owners are 205 local cooperatives and six regional cooperatives, representing 250,000 farmers from 15 states throughout the United States and Canada” (p. 7). Note: Technically AGP represents 250,000 “producers.” A producer can refer to either a farmer or a land-owner, and both can be a member of a local cooperative.

“Record premiums paid: Participants in AGP’s value-based premium programs—oil and protein components, Vistive soybeans, and non-GMO soybeans—earned a record \$6.4 million in premiums from those programs” (p. 9).

Note: Talk with Bill Lester, formerly of AGP. 2007. Feb. 24. AGP will pay its member co-ops total patronage refunds of \$32.6 million this year. 30% of this amount (\$9.78 million) will be paid in cash (from this year’s earnings), and the remaining 70% (\$22.8 million) comes from retained earnings (or equity) (from past years’ earnings), and is called “equity redemption.” AGP is redeeming the old equity that the member co-ops owned in it. Retained earnings is the members co-ops’ investment in AGP. On the AGP balance sheet, this equity appears as a debt to individual member co-ops. For example: Heartland Co-op, Des Moines, Iowa. In 1999 AGP owes it \$12,300. In 1998 AGP owes it \$13,465, etc. right up to the current year. This debt is paid when the members’ equity in the company is redeemed / allocated. The oldest debts to each member co-op are always paid first, and they are always paid before Dec. 31 each year.

A local member co-op’s total earnings for any given year consists of its own earnings plus the earnings it gets from AGP. By law, the co-op must pay 20% of its net earnings that year in cash to its producer members. A typical local co-

op pays 30% of that year’s earnings in cash to its member producers (since that cash takes care of the tax liability) and keeps 80% as “retained earnings.” Each member producer must pay the income taxes on these retained earnings—even if he doesn’t get the money. One of the problems in the past is that sometimes the producer doesn’t receive enough cash from his co-op to pay the tax on the “retained allocated earnings.” When the producer finally gets paid his retained earnings, it is tax free.

Retained earnings is the way AGP borrows money from its co-op members to finance its ongoing operations. It takes a certain amount of cash or “working capital” to operate a business. AGP has two choices: Keep it as “retained earnings” from the membership or borrow it (as from a bank). Presently AGP has about 7 years of retained earnings (back to about the year 1999) that it has not yet paid to its co-op members. Yet this is perpetually rotating, or “rolled forward” as the oldest debts are paid back each profitable year to the co-op members. This system of paying the oldest debts first is also a way of transferring money from older producers (some of who may no longer be living) to current producers. Well-run cooperative soybean processors, such as AGP, have a relatively small number of years of unpaid retained earnings (7). Address: Omaha, Nebraska. Phone: (402) 496-7809.

825. *AGP News*. 2006. Cooperative news: Mergers and acquisitions. No. 5. p. 11.

• **Summary:** Farmers Cooperative Company, Manly, Iowa, and Northwood Cooperative Elevator, Northwood, Iowa, merged on 1 Dec. 2006. The new company is called Progressive Ag Cooperative, headquartered in Northwood.

826. *AGP News*. 2006. Breaking ground for soy biodiesel. No. 5. p. 1-2.

• **Summary:** Construction will soon begin on AGP’s new biodiesel plant in St. Joseph, Missouri.

827. Boyett, Frank. 2007. Yesterday’s news: Scale operator, area farmer unite to swindle Henderson co-op. *Gleaner (Henderson, Kentucky)*. Jan. 21. p. 5A.

• **Summary:** “A massive ‘cheating and swindling’ scheme that victimized the Ohio Valley Soybean Cooperative was coming to light” in 1957. “The co-op, which had about 5,000 members in the Tri-state area, had been cheated by Joseph Egger and Thomas Greenwell... since at least 1952.

“The scheme was discovered by Fred Gager, the daytime scale operator, who noticed that the beans for four weight tickets Egger had handled the night of Oct. 13, 1956, appeared to come from either the same truck or the same field of soybeans, even though the checks were made out to different owners. That prompted an investigation that lasted five weeks.”

The prosecuting attorney, John Palmore, who later became

Kentucky Supreme Court Chief Justice, called it “the biggest and most complicated trial I ever conducted by myself.”

“The scheme worked this way: Eggler would make sure weight tickets were falsified and checks made out to friends or employees of Greenwell’s. Those checks for what Palmore called ‘phantom beans’ would be cashed and the proceeds turned over to Greenwell, who explained to his friends,” perfectly respectable farmers whom he had persuaded to let him sell his own beans in their names in order to keep his “creditors” from attaching the money he received from the Co-op. When the farmer in whose name false the weight ticket (there were more than 100 of these) had been issued received the check issued by the Co-op for the phantom beans, this gullible friend simply endorsed it over to Greenwell. “Greenwell would then split the proceeds with Eggler.”

“Eggler, however, was not particularly discreet, flashing large sums of money.”

“The trial was the longest criminal case held in Henderson County since 1912. The commonwealth called 43 witnesses, the defense 10.”

After the convictions of Greenwell and Eggler, the co-op “filed a civil lawsuit against the two, as well as against three Greenwell employees who had allowed their names to be used, in order to recoup its losses. Greenwell and Eggler settled that suit in early 1958, while Gordon Morgan, Albert Saffer, and James ‘Satan’ Dixon didn’t settle until April 1959...

“And then there was the manufacturer of those supposedly tamper-proof scales.” Al Reisz told his son that Fairbanks-Morse guaranteed that their scales were tamper proof. However Nick Eggler had manipulated them. Reisz “tried to get Fairbanks to pay for the losses, but was unable to.”

Note: Part of the above story was excerpted from: Palmore, John. 2006. *From the Panama Canal to Elkhorn Creek*. Louisville, Kentucky: Butler Books. See p. 161-62.

828. Lester, Bill. 2007. Jim Lindsay and the Supersweet Feeds deal (Interview). *SoyaScan Notes*. Feb. 16. Conducted by William Shurtleff of Soyinfo Center.

• **Summary:** Jim Lindsay was an excellent CEO, very innovative and good with people. If there was any mistake he made during his tenure was going outside the core business when (on 1 Dec. 1991) he entered into a partnership agreement with Archer Daniels Midland [ADM] to purchase International Multifoods’ North American Ag Operations which included Supersweet Feeds, etc. Jim later wished he hadn’t done it—even though the board of directors made the final decision. He said, “I guess I was entitled to one mistake.” Within 6 months of that Supersweet purchase, you had a transition that took place in the feed business of almost 180 degrees. Let’s face it, the midwest is primarily hogs. You had the centralization and consolidation of that hog industry that took place almost overnight. There was vertical integra-

tion from breeding the hogs to feeding them, although slaughtering was usually done by a different company. Supersweet and a lot of the smaller feed companies serviced all of the mom and pop operations. But in 1990-91 those mom and pop operations, almost overnight, faded from the picture. After the consolidation, hog prices dropped. Today, Smithfield is one of the big consolidated hog companies, but they are also a packer. They came into the Midwest and acquired Farmland Foods. Many of these big consolidated companies are private LLCs that operate regionally; Bill does not know their names. Today, a lot of big, integrated producers supply the breeding stock and/or the pigs. And you have a lot of pigs that are fed and cared for on almost a consignment business, by contract. If the death losses are below a certain level, and contractor does a good management job, there is a bonus or incentive. AGP at one time owned the sows and everything else, but the return on investment was too small, so they’ve gotten out of all of it.”

Bill has visited with a lot of people he knows who are feeding hogs. He has been told that DDG (dried distiller’s grain, a byproduct of the process for making alcohol) only works as a feed in very, very small amounts—because most of the carbohydrate (energy) has been removed and it lacks the right balance of amino acids. Most hog rations, from starter to finishing rations, will range from 18-12% protein. Starter rations contain the most protein (16-18%). DDG is fed to cattle wet; they just slop it in to eliminate the drying cost.

For big hog operations, the smell and pollution are big problems that will be hard to fix. “Basically, it’s the protein in the manure that creates all the problems. It putrefies.” One promising approach is to use the manure from big dairy operations to produce methane gas.

Marty Reagan has also been a good CEO. He has spent capital year after year to upgrade or expand processing plants and refineries. AGP is spending \$100 million to upgrade the plant in St. Joseph, Missouri, and double the capacity. “Marty Reagan is probably doing a better job with the membership today that Jim Lindsay was doing when he retired—communicating and meeting with the members, keeping them informed. About 15-20 times a year Marty and man who took Bill Lester’s place will travel to have breakfast, lunch, and dinner meetings with six managers, face to face.” Still, membership has continued to drop, mostly through mergers (of two or more cooperatives) and consolidation. When Bill left in 1993, there were about 310 member shareholder cooperatives in AGP; today its dropped to 210 member shareholders. The number of farmers in the member cooperatives is also dropping. The farms are getting bigger. If anyone is losing ground, its the local cooperatives.

Plants at Volga (South Dakota) and Brewster (Minnesota), are farmer owned processing plants that that changed from being cooperatives to private LLCs. They were losing money, and in a cooperative it is very difficult to pass losses back to your members. But under an LLC they are simply

tax write-offs.

Its unbelievable the effect all these new ethanol plants are having on the Midwest. They are driving corn prices up, which in turn are driving land prices up. It will eventually reach a saturation point, but nobody knows when that will happen. Land values should be \$6-8,000 an acre, which seems ridiculously high to Bill.

Back to AGP: Jim Lindsay left AGP on very good terms, greatly admired. Marty Reagan is doing an outstanding job. AGP has been fortunate to have had very good boards of directors. Bill has never missed an AGP annual meeting; they're usually in Omaha and he enjoys going. Cooperatives force the private soybean processors to offer farmers more money for their soybeans, because at even money, the farmer will always sell the to co-op of which he is a member, since there will be additional income down the line in the form of patronage payments and equity ownership. But all is not rosy within the cooperative system. Ask yourself: Why did the soybean processing plants at Volga and Brewster come into being? As farmers get bigger, they look for an investment (as in an ethanol or biodiesel plant) that will (1) create an additional product for their crops, (2) add value to the cash basis at which they sell, and (3) receive some income in the form of dividends; co-ops pay patronage to their member co-ops but many individual farmers see little or none of that money. (4) see his income increase in value, or, if things do not go well (5) serve as a tax write-off.

One of the unwritten rules of the game, in terms of locating new soybean processing plants, is that you don't build too near an existing plant. If you don't come onto our turf, we won't come onto yours. This rule is enforced by the threat of retaliation. Address: Omaha, Nebraska.

829. Lester, Bill. 2007. Origins of soy biodiesel (Interview). *SoyaScan Notes*. Feb. 16. Conducted by William Shurtleff of Soyinfo Center.

• **Summary:** The first methyl ester from soybean oil was produced by Interchem Industries (later Interchem Environmental in Kansas City) in about 1991 in a small batch plant in Leawood, Kansas, and I do mean small—like 55 gallon drums. The two men who started and ran the private corporation and the little plant, and who did the research to make the process more efficient, were Doug Pickering and Bill Ayres. Both men are still alive, in their mid- to late 60s. Neither one of them is involved with AGP any more; the two founders had a falling out with AGP over something. “They were looking for funding, and AGP (Jim Lindsay and Bill Lester), thought that the idea had a future, so they decided that AGP would put “some money into Interchem to keep them going.” The money came out of Bill’s research budget. “Let’s give ‘em so much a month for a year as a research project; let’s see what they can do.” It wasn’t a loan or an investment, it was a research project that AGP hoped would work out. “The money AGP gave Interchem was unquestion-

ably essential to their survival.” Small amounts were produced and provided free of charge for experimentation and testing. Municipal bus companies in cities with air pollution problems, in California (Los Angeles) and on the East Coast, were the first to test their product seriously. In the end, in about 1995, AGP ended up purchasing Interchem at the same time that AGP started its facility at Sergeant Bluff. Both Doug and Bill were involved in the new merged company for 5-6 years.

John Campbell is now responsible for biodiesel and ethanol at AGP. Bill hired John in Dec. 1991. At the time, John was Deputy Undersecretary of Agriculture at USDA in Clayton Yeutter’s administration. John has a lot of political connections, which have proven to be very valuable.

The soy biodiesel industry is still in its infancy.

Note: In June 1997 AGP Inc started making methyl ester, named SoyGold, from soybeans at their plant at Sergeant Bluff, Iowa. Address: Omaha, Nebraska.

830. Reisz, A.I., Jr. 2007. Re: Ohio Valley Soybean Cooperative News (Henderson, Kentucky). Letter (e-mail) to William Shurtleff at Soyinfo Center, March 27. 1 p.

• **Summary:** On July 31, 1959 the Directors were: Harry S. Brumley, Jr., John Pierce, James R. Rash, Jr. (went by “Buck” I recall), J. A. Gerhart, James P. Esche, William S. Hirsch, Oscar D. Keck, Bronson Fitzgerald, Harry Gatton, Jr. and John Palmore. The Officers were: Charles B. Smith, Honorary Chairman of the Board, Oscar D. Keck, President, James R. Rash, Jr., Vice-President, A. I. Reisz, Secretary-Treasure and Manager, David Frymire, Assistant Secretary-Treasure and Assistant Manager.

The corporate charter was granted by the Commonwealth of Kentucky on August 29, 1940, under provisions of the Bingham Co-operative Marketing Act. The Articles of Incorporation were last amended on January 18, 1952.

Authorized Capital—500,000 shares of common stock, par value \$1.00 per share; 3,800 shares of permanent preferred stock, par value \$50.00 per share; and 1,200 shares of temporary preferred stock, par value \$50.00 per share. (The “temporary preferred stock” was fully redeemed and cancelled as of July 31, 1954.)

Corporate life—Fifty years. Debt Limit—None.

Directors—Not less than seven nor more than ten years. Eligible Members—Common stockholders who should patronize the Association. Only producers are eligible to own common stock. Address: Son of Al Reisz, Manager, Ohio Valley Soybean Cooperative, Henderson, Kentucky.

831. Tong, Leland. 2007. People who know the history of soy biodiesel in the USA (Interview). *SoyaScan Notes*. March 30. Compiled by William Shurtleff of Soyinfo Center.

• **Summary:** Marc-IV is dedicated to the commercialization of industrial products from agricultural resources. Since 1993 the company has been instrumental in the research and



market development of biodiesel—a cleaner burning fuel for diesel engines that is produced from renewable resources. Leland and Marc-IV work as consultants and contractors for the National Biodiesel Board, dealing with technical issues, economic analysis, marketing, etc.

When asking which company introduced the first soy biodiesel, it is important to have a definition of or standards for soy biodiesel. In the early days there were no specifications; there may have been some loose trading specs on methyl esters, but they weren't necessarily methyl esters for biodiesel. In 1999 the first provisional specifications for biodiesel (PS121-99) were passed by ASTM International (ASTM formerly meant American Society for Testing and Materials). In 2001 final specifications (ASTM D 6751) were passed by the same organization.

Two good contacts who were at Procter & Gamble are: (1) Jim Gardner, retired. Phone: 417-754-8185, in southwest Missouri. Jim was at the plant in production. (2) Mack Findley. Phone: 513-471-7200, in Ohio. He was in P&G's sales department. He now works for Peter Cremer North America, selling biodiesel. You might ask him: Who first ordered methyl esters from P&G? When? Did they have specs? Did P&G know how these methyl esters were going to be used?

Another good contact is Steve Howell, president and founder (in the spring, 1993) of Marc-IV. He has been in the biodiesel industry since 1993. Prior to forming Marc-IV, Howell was the business development engineer for Stratco, a Kansas City (Missouri) based engineering firm, where he concentrated on the development of new biodiesel process technology. Previous to Stratco, he held various positions in quality assurance and production management with the Procter & Gamble Manufacturing Company in Iowa City, Iowa. A native of Ames, Iowa, Howell graduated with distinction from Iowa State University with a bachelors degree in chemical engineering. Howell worked with Bill Ayres. Leland thinks that Ayers was the one who got a contract with Steve to work with the National Soy Diesel Development Board (NSDDB) in 1993. Steve's office number is 816-903-6272. He works just outside of Kansas City, Missouri, and is hard to reach since he travels a lot.

Leland thinks that documenting the early history of this industry is an important project. Kenlon Johannes, the first executive director of the first biodiesel trade association, is very knowledgeable. Previously, he was at the Missouri Soybean Association. He read an article from the University of Missouri that discussed using rapeseed for biodiesel. He contacted them immediately and asked them why they were not studying soybeans as well. "He got those guys in hot water. They started doing some soy research, and one might say the industry was born."

Important companies in the early days included AGP, West Central, and Pacific Biodiesel. There is some dispute among these three as to which was the first to make biodiesel

commercially.

Leland has a table showing the exact dates that each biodiesel company began manufacturing the product for sale commercially; he must check with several people before he can send a copy to Soyinfo Center. He just sent (by e-mail) a table titled "US production capacity history," which shows the number of plants producing biodiesel and the industry's production capacity from 2001 to 2007. In 2001 there were 9 plants with a capacity of 50 million gallons/year. In 2003: 19 plants and 85 million gallons. In 2005: 45 plants and 290 million gallons. In 2007: 105 plants and 864 million gallons. Source: National Biodiesel Board.

A second table (sent April 5) shows 108 manufacturers of biodiesel fuel in the USA. The five columns are: Company name. City. State. ZIP code. Starting date (the year and month the company started to make and sell biodiesel fuel). Source: Marc-IV. The companies that started earliest are: (1) 1996 Sept.—Renewable Energy Group, Inc. [West Central Co-op], Ralston, Iowa. (2) 1996 Nov.—AGP (Ag Processing), Sergeant Bluff, Iowa. (3) 1996 Nov.—Pacific Biodiesel, Kahului, Hawaii. (4) 1998 Dec. Griffin Industries, Butler, Kentucky. Address: Business Specialist, Marc-IV, 1616 4th Ave. E., Williston, North Dakota 58801. Phone: 701-572-1826.

832. Johannes, Kenlon. 2007. *Pioneering SoyDiesel and Biodiesel in the USA. Part III (1994 to present)* (Interview). *SoyaScan Notes*. March 8. Compiled by William Shurtleff of Soyinfo Center.

• **Summary:** Continued: 1994 Oct. 1—John Becherer becomes the 2nd CEO of the United Soybean Board (USB), serving until 1995. He replaced David Thomas, who was fired by the farmers who comprised the Board for various reasons, among them for being too "hands on," paying too much attention to details, wanting to know everything that was going on, being a "control freak." Becherer was hired by the Board. Kenlon recalls that when John Becherer became CEO he didn't understand what was going on, so he had a lot to learn quickly. Kenlon believes that the soy diesel program was receiving the most funding at that point." Becherer said, what are you doing? This is a waste of money. This is the most ill conceived, poorly planned program I've seen." His basic approach was to start from scratch and remake USB in his own image; get rid of the old and bring in the new, with his ideas and seal of approval on everything.

Kenlon is now looking at the 1996-1998 Biodiesel Marketing Plan, a 3-ring binder with 8 tabs, developed in 1995. It is filled with programs, dates, assessments, etc. Becherer never took the time to look at such plans or to talk with Kenlon (who was now an expert in the field) about his ideas. Thus, we can see in retrospect, that Becherer completely failed to understand that soy biodiesel had a bright future in America. Kenlon was not allowed to speak to the United Soybean Board or at to the committees. He was

forced to work through contractors, who would then talk to the committees. USB's new attitude reduced their funding of soy biodiesel, however by 1995 NSDB had an annual budget of \$1.3 million, and that often expanded before the fiscal year was over. Simply speaking, John Becherer and Jerry Slocum (a farmer from Mississippi) got Kenlon fired from the National SoyDiesel Development Board, which he was responsible for starting. One basic problem is that USB has far too many of the states with small soybean production running things. "They're windshield farmers at best. They drive around their farm and look at what their workers are doing. Executive farmers that don't get their hands dirty. Some from Louisiana grew more sugarcane than soybeans."

1995 April 1—Leonard Guarraia became CEO of ASA; he came out of Monsanto. "Oh man, he was all over the place!"

To go back a step. When the NSDB started, the president, Gary Ellington, a farmer, came from Missouri. The two committees, research and market development, each had a farmer heading the committee—Jim Gay (from Illinois) and David Stone (from Iowa), respectively. Gary Ellington and David Stone were very proactive; they would go to the USB meetings, sit down before the meetings and sit down with the farmers who sat on the relevant committees, and explain to them what NSDB was doing, what proposals NSDB was submitting to USB, what funding they needed from USB, and why this was important to America's soybean farmers. Since David Thomas was still CEO of USB, the organization was receptive and funded the proposals fully. In about 1995 Gary Ellington and David Stone both had to leave the NSDB (it was too much of a commitment); David Gay took over as president. The name of Kenlon's group had changed to the National Biodiesel Board (NBB). He was not proactive, and things were never really was quite the same at NSDB or at USB. Jim Gay was not proactive, in fact he was afraid that John Becherer and USB would stop funding the biodiesel program completely.

1996 Feb. 24—Kenlon is asked by his board to move up (and out) to the National Biodiesel Foundation (NBF, founded about 1994; it still exists) to raise money and we're going to find a new executive director. Since USB is dropping support, we've got to get money from other sources. Jim Gay was the leader of this move. They brought in Jeff Horvath (who came out of Boeing in St. Louis) as the new CEO of NBB; it was a stinging blow and rebuke to Kenlon, who was basically given no projects to seeking funding for, and no money. Deborah Boldt took Jim Gay's position as president of NBF. The foundation had no money. Then Jeff Horvath hired Deborah Boldt as his communications director. In Feb. 1997, she showed up in the office and told Kenlon his position no longer existed. Kenlon left for Florida, sad because he had to leave a project in which he believed deeply, and never really understanding why he had been kicked out—although he believed that John Becherer was really behind the ouster. Kenlon was a big name in the

soybean industry and he had many friends and admirers among farmers. In April 1997 Kenlon went to work as director of development for NOPEC, a soy biodiesel manufacturer in Lakeland, Florida. He worked there for 51 weeks until the owner and founder Karl Rehberg, was indicted for securities fraud. The company is now up and running again.

After several odd jobs, he was hired on 1 March 2001 as CEO of the Kansas Soybean Association and Board.

But the soy diesel vision was far from dead. Bill Ayres and Doug Pickering (his partner), of AEP, picked up the leadership. They got Jeff Horvath fired and he was replaced in about 1999 by Joe Job, who shared Kenlon's vision. The American Soybean Association picked up the slack, with Leonard Guarraia and Steve Censky taking the lead.

1995 April 1—Leonard Guarraia (rhymes with "Warrior") becomes the 3rd CEO of USB, serving until he resigned on 15 April 1996.

1995 April 18—Steve Censky becomes the 4th CEO of USB, serving until at least Sept. 1997. John Campbell, who was on the board at ASA, also played a leading role; John later went to work for AGP. And USB continued its funding, but at about half of earlier levels (from roughly \$3.5 million a year in FY 1995 down to \$1.5 million). History has vindicated Kenlon's vision.

The word "SoyDiesel" (or "soy diesel") was changed to biodiesel because soybeans (soybean oil) alone would not be able to fill the demand if the idea became successful. "It's also called political clout. You want to get the cotton farmers, and the renderers association involved too—as well as the politicians who represent them. Early on, Bill Holmberg brought in the renderers. Gary Pearl has always been an advisor to the National Biodiesel Board until he retired about 2 years ago. As early as 1992 Kenlon used the term "biodiesel" in his memo and tried to alert others to the fact that this would happen. On the Ford diesel pickup that the Board owned, the first sign on the side said "Powered by Soybean Oil," but after several months that was changed to "Powered by SoyDiesel." The idea of the word "biodiesel" actually came from the Europeans, who called it "Diesel-Bi." The most adamant early users of "biodiesel" were Bill Ayres, Kenlon, and Bill Holmberg.

In 1995, while Kenlon was still with the NBB, he asked Bev Thessen ("TAY-son," who is still there) to write all the English dictionaries they could find and suggested they add the word "biodiesel" to their dictionary. It took many years before it was included.

How does Kenlon see the future of biodiesel? It has reached a "critical mass." People are investing today who may be investing in the wrong ways and without a good understanding. There will be some failures there. AGP has taken a very cautious, smart approach. They still have the policy that if soybean oil prices rise too high, they will shut down their biodiesel plant and sell the oil to others as oil.

Kenlon as no idea what things will look like for biodiesel 20 years from now. He is in the forest and all he can see are the trees. But last summer, biodiesel was selling for \$0.30 less per gallon than diesel fuel. So as we think we are nearing the end of cheap petroleum, this is very good for biodiesel. But the petroleum industry may then get into biodiesel using thermal depolymerization of things like Tyson chicken fat in their cracking towers, to get tax credits for renewable fuels. "That could be a big fly in the ointment."

1999 April—Bob Elits is now CEO of USB. Address: CEO and Chief Administrator, Kansas Soybean Assoc., Topeka, Kansas.

833. Johannes, Kenlon. 2007. *Pioneering SoyDiesel and Biodiesel in the USA. Part II (1992-1994) (Interview).* *SoyaScan Notes*. March 8. Compiled by William Shurtleff of Soyinfo Center.

• **Summary:** Continued: 1992 Jan.—Statewide City Demonstration Project; providing fuels to other cities interested in doing demonstration is funded.

1992 Jan. 1—David Thomas becomes the first CEO of USB, serving until 31 March 1994.

1992 Feb.—MSMC purchases [its own] Ford F-250 diesel pickup for continued research and development.

By March 1992 three states were involved with soy biodiesel: Missouri, Illinois (Lyle Roberts and his people), and South Dakota (Betty Hansen). Kenlon's board told him that the program was getting too big for Missouri to carry alone; he should try to get the national soybean organizations (ASA and USB) involved. USB now had a lot of money from the unified checkoff and they were looking for effective ways to spend it. Kenlon wrote a project proposal and USB contributed millions of dollars in the early years. Kenlon believed in the potential of soy diesel before and more strongly than anyone else in the soybean industry. He was on the cutting edge of new ideas. For example, in July 1991 Kenlon drove the Dodge pickup (owned by Univ. of Missouri—UMC) up to a soybean festival in Norburn, Missouri. Don Heil (an ASDF director and last chairman, a USB director from Missouri, and one of the first chairmen of the USB checkoff) and other farmers flocked around the pickup to hear about the idea. Later Kenlon was criticized for believing that soy diesel had a bright future.

1992 March—Kenlon drove the Ford diesel pickup to Washington, DC. The main purpose of the trip was to get support from the American Soybean Association, whose board of directors was meeting there. Ken Bader, CEO of ASA, was critical of this trip, which was using soybean checkoff funds and could be viewed as playing politics. Kenlon made a video on the grounds of the White House, to which Bill Holmberg got them access, as well as to EPA, DOE (Dep. of Energy), etc. They met with C. Boyden Gray, who was one of the main architects of the 1990 Clean Air Act Amendments that suggested market solutions for

environmental problems. Senators Kit Bond (R-MO) and Tom Daschle (D-SD) both liked the idea of the soy diesel truck. The trip helped Kenlon understand how soy diesel might fit into the larger picture and become a commercial product.

1992 March—Kenlon drove the truck to one of the early meetings of the United Soybean Board (USB) in Atlanta, Georgia. David Thomas, USB's CEO seemed very interested and supportive. He talked with Kenlon directly and asked, "What can we do to get this thing moving?" He asked about and was very interested in all aspects of soy biodiesel. He worked behind the scenes to help the biodiesel program in a big way. He was 100% behind soy biodiesel and he understood what it could do for the checkoff program. The project was assigned to the "Industry Information" committee, which was a sort of forerunner to the New Uses Committee.

At about this same time Kenlon drove the truck to Nebraska and presented the idea to the Nebraska Soybean Board in Lincoln. On the same trip he met with AGP leaders at their headquarters in Omaha, Nebraska. AGP, which got on board at an early date, soon started to pay for soy diesel fuel for the growing number of demonstration projects. Not only did they start funding biodiesel, they soon became an important player; their prestige, interest, and progressive reputation added legitimacy to the fledgling project.

1992 April 29—Interchem holds a press conference to announce that they plan to scale up their production of soy methyl esters to 1.5 million gallons a day. Before this time, Bill Ayres and Interchem had made and sold all the soy diesel for all the test projects in the USA. Unfortunately almost no one came to the conference, because the big story that day was that the police officers accused of beating Rodney King in Los Angeles were acquitted. However a few days later, Procter & Gamble contacted Ayres and told him they made large quantities of methyl esters. Bill decided to stop manufacturing these on a relatively small batch scale and to start buying from Procter & Gamble—which then became the 2nd manufacturer of commercial soy diesel in the USA. Kenlon recalls that Procter & Gamble made an excellent soy diesel fuel since it was distilled. Today, practically no soy diesel is distilled. Distillation makes sure the reaction is complete with less glycerine in the fuel.

1992 May—The National Soy Fuels Advisory Committee (NSFAC) was formed in by Qualified State Soybean Boards (QSSB's), state soybean checkoff farmers and staff from Missouri (Kenlon, executive director), Illinois (Lyle Roberts), South Dakota (Betty Hanson), and Iowa (Dan Hall, then Kirk Leeds). This advisory committee got a \$50,000 grant from the United Soybean Board (USB), and ASA may have added \$10,000 to that; the committee pooled that money and used it to hire IRI to conduct a study.

1992 Sept.—Information Resources, Inc. (IRI, Washington, DC) did a study that concluded: "You are in the right place at the right time. Now is the time for action. Form a trade



association (NSDB) without an industry, which is very unorthodox.” This led to formation of the National SoyDiesel Development Board, and gave Kenlon and NSFAC a clear focus.

1992 Sept. 18—The National SoyDiesel Development Board (NSDB) is formed in St. Louis, Missouri, replacing the NSFAC. The minutes of each meeting of this board are still at the Board.

1992 Oct. 1—USB / ASA funds become available.

1992 Oct. 24—The Energy Policy Act of 1992 is signed into law; it includes adoption of alternative fuels.

“Then there was always that mysterious West-Central Co-op in Ralston, Iowa. They said they had a methyl ester plant, but they were making industrial products (such as solvents), not fuels. I should have driven up there to see their plant but I never had time. I don’t know whether or when they ever produced soy diesel fuel. But I know I had a near empty file in my office with the tab ‘Fuel suppliers.’ West Central was not in there. Interchem was the only supplier that was in my file,” and (by now) Interchem got their methyl esters from Procter & Gamble—who may well not have known that they were being used as fuel. Bill Ayres probably wanted to keep them in the dark as long as possible. Procter & Gamble tore down their plant in Kansas City, and Bill Ayres may well have bought methyls esters from P&G’s plant in Cincinnati, Ohio. “If West Central was interested in biodiesel, why did they never join our National SoyDiesel Development Board (NSDB). They should have come to the table and at least told us what they were doing.” Kenlon knows Bill Lester and both go to AGP’s annual meeting every year. Bill Lester might know more about West Central’s history with biodiesel.

In the early years of NSDB, the United Soybean Board was very supportive. They budgeted large amounts of money for soy diesel research and development. USB gave NSDB \$75,000 for the “SoyDiesel Demonstration Project,” and said, “You get this soy diesel fuel all over the United States. Send as much as the people who want it will take in whatever containers they prefer. Demonstrate this stuff.” USB also funded the research arm. Before long USB was budgeting \$2 million a year for the NSDB and soy biodiesel. Fleishman-Hillard Inc. (Kansas City, Missouri) came on board as a communications and PR firm. The IRI report recommended that the NSDB approach soy diesel in two ways: Research and market development. On the research side, NSDB worked with Detroit Diesel and Cummins Manufacturing (both in Detroit, Michigan), which are the two big diesel engine manufacturers that serve transit fleets. They both offered to test the fuel if NSDB would provide it. On the market development side were the growing number of demonstration “clean air” projects, plus educational work. By Nov. 1993, the Sunrider expedition, a round the world boat trip powered by soy diesel, was underway. Interchem and MSMC were the initial fuel providers to Sunrider.

Fleishman-Hillard worked with Bill Ayres, Doug Pickering, and Steve Howell in the greater Kansas City Area; they started calling transit companies and offering them free soy diesel fuel if they would only try it and report on their results. “There was a massive expansion. It was done for two reasons. First to get the fuel out, and second for USB to use in 1994 as a promotional item as soybean farmers prepared to vote on SPARC, the unified checkoff program.” Kenlon has a list of all the research projects in the 1995 report: Oxidation stability. ESTM development. Microbial activity. Long-term storage. Lubricity. Additive compatibility. Transportation and handling. Kenlon was later sharply criticized for spending money on such basic research. Address: CEO and Chief Administrator, Kansas Soybean Assoc., Topeka, Kansas.

834. Pickering, Doug. 2007. Pioneering commercial production of soy biodiesel in the USA. Part II (Interview). *SoyaScan Notes*. May 28. Compiled by William Shurtleff of Soyinfo Center.

• **Summary:** Continued. Now that Bill Ayres did not have to worry about making methyl esters, he devote almost all of his time to developing new biodiesel demonstration projects. He worked closely with Kenlon Johannes in doing this, and both helped to raise grant money as well. Among the early projects that Bill played a major role in establishing were: (1) The University of Missouri-Columbia project with Leon Schumacher (1991). (2) Lambert Airport project in St. Louis. (3) The Cincinnati Transit project. (4) The Connecticut Transit project. (5) The Sunrider Expedition. “Bill Ayres was so committed to that project that he took a cash advance on his American Express credit card to pay for a transmission repair on Brian Peterson’s truck to keep him going—so he could call on these soybean councils to raise money. After Sunrider started on its journey around the world, we did all the logistics on all the fuel internationally.” It was a huge, complex, and very expensive project.

1993 April—Bill Ayres and Doug talked with AGP, told AGP that they were stressed financially, and ask for financial support for their efforts to develop biodiesel. AGP asked “What is the minimum amount of money you would need to make it to the end of the year?” “We told them we needed \$20,000 a month; they said they would give us \$10,000 a month.” The money was paid from September to December (4 months). The money was needed, useful, and appreciated. The agreement ended at that time.

1993 late—Procter and Gamble begins the shutdown of its Kansas City plant that makes methyl esters. At about the same time they raise their prices slightly. These changes have very little effect on Midwest Biofuels because P&G had always supplied methyl esters from one of its 3 manufacturing plants in Kansas City, Cincinnati [Ohio], or Sacramento [California] (Doug and Bill never knew where it came from), or from that storage facility which had load-out

capability and was closest to the end user. For example, if there was an order from a project in Cincinnati, Doug and Bill arranged for a truck to be sent to the P&G plant there, they would load the truck with the desired amount of biodiesel, weigh it, and then the truck would deliver it to the project. There were various ways of getting the biodiesel from Procter & Gamble to Midwest's clients.

1994 Aug.—AGP makes an offer to fund Midwest Biofuels (still a subsidiary of Interchem), pay their payroll and travel expenses, etc., in essence to fund their operations. The ownership of Interchem (which did not include Doug) did not want to accept the offer, because they thought it would give AGP too large a share of the company for too little money. In September, AGP withdrew the offer. But the incident showed Bill and Doug that AGP was looking seriously at Midwest Biofuels.

1994 Oct. 5—Bill and Doug resign from Midwest Biofuels / Interchem, and AGP immediately hires the two men as consultants; they were paid \$5,000 a month each, until 1 May 1995. However, even though their income had improved, these were 7 months of hard times, working in limbo in Doug's basement in Overland Park, Kansas. They had no supply of methyl esters, no samples, no brochures or literature—nothing. They had two phones, so they mostly talked to people.

1995 April 7 to May 1—AGP establishes Ag Environmental Products LLC (AEP) as a joint venture; AGP owned 90% of the shares, and Doug and Bill each owned 5%—with the option of working up to 10% ownership. AGP later “arranged so that the work-up to 10% never happened.” Doug recalls: “On May 1, when we left Kansas City to go to Omaha to sign the papers, Joe Meyer said ‘Have a name for the company and a name for the products before you get here.’” Doug came up with three names: Ag Environmental Products for the company name (since the parent company's name was Ag Processing Inc), SoyGold for the biodiesel (which was yellowish gold in color), and SoyClear for the double-distilled industrial solvent. AGP liked these names, and uses them to this day. After all the papers were signed, Bill and Doug each began to receive a paycheck. AEP was to “be a research and development company, which would develop new industrial demand for soybean oil and its derivative products.”

Shortly after AEP was formed, with Bill and Doug as partners, they moved their headquarters out of Doug's basement in Overland Park, Kansas, to 9804 Pflumm Road, Lenexa (pronounced luh-NEX-uh), Kansas—about 3 miles southwest of Overland Park. They soon had biodiesel samples and literature.

As soon as Procter & Gamble learned about AEP, they notified Bill and Doug that they would no longer supply them with methyl esters. Doug thinks there were two reasons for this. First, since AEP which was basically an oleochemical company (AGP crushed soybeans to produce

oil and meal), they concluded that AEP would be producing its own methyl esters before long, and they didn't want to be supporting a potential competitor.

Second, shortly after AEP was established, Bill and Doug set up a meeting with Procter & Gamble. Doug recalls that John Campbell, who was there, “tried to dictate to them what he was going to pay them for their methyl esters.” P&G did not appreciate this. It was after this incident that P&G stopped selling to AEP.

So Bill and Doug, with the permission of AGP's Joe Meyer, a Group Vice President and John Campbell's boss (at an open management meeting where Campbell was present), arranged another meeting with P&G, made amends, said that Campbell was “out of line” and that AEP still desired to buy methyl esters from them. “Bill and I gave P&G assurances that the industry was going to be a billion pound industry within 10 years. They said, ‘We think you guys are going to do it.’ We said, ‘There's no reason for you not to participate all the way through.’” P&G changed their position about 4-6 months after cutting off AEP, and started supplying them again with methyl esters—all double distilled as always, because AEP needed a double distilled product.

Not long after AEP was founded, the new company began to establish storage facilities for their methyl esters. They acquired a storage tank of 3-5 million lb capacity just outside Cincinnati so they could load out as needed for railcars and trucks. They also positioned one or more rail cars (160,000 lb capacity) filled with methyl esters on a rail load-out site near Sacramento, California. Eventually they also had some storage in Omaha, Nebraska.

1995 fall—Procter & Gamble began shutting down their plant in Kansas City, Kansas, as they expanded their plant in Cincinnati, Ohio, and kept their plant in Sacramento.

As soon as AEP was established, with their supply from P&G cut off temporarily, Bill and Doug had to look for new suppliers.

835. Pickering, Doug. 2007. Pioneering commercial production of soy biodiesel in the USA. Part I (Interview).

*SoyaScan Notes*. May 28. Compiled by William Shurtleff of Soyinfo Center.

• **Summary:** Doug has a stack of spiral notebooks ten inches high with the day to day notes of what he and Bill Ayres did to develop the biodiesel industry in the USA from scratch.

1990—Dr. Tom Reed of the Colorado School of Mines produces biodiesel / methyl esters from used grease from Der Wienerschnitzel (a hot dog franchise) to run a bus demonstration project in Denver. Tom was the first person in the modern American biodiesel movement to make methyl ester. He wanted to call the new fuel “McDiesel” because he thought he could get all the waste restaurant grease he needed from McDonald's—but the lawyers from McDonald's got hold of him and encouraged him to “rethink” that name.

1991 Jan.—The Missouri Soybean Merchandising Council

(headed by Kenlon Johannes) agreed to fund a one-year project for \$22,000 to test a diesel pickup burning 100% soybean oil fuel. But the project had no fuel. So in the spring and summer of 1991, Leon Schumacher, in search of fuel for use in the for project, located Bill Ayres of Interchem Industries of Leawood, Kansas, who agreed to provide esterified soybean oil for the project. Bill Ayres was not making soy methyl esters at the time, but he said he could make and provide the fuel. Bill Ayres and Dr. Tom Reed had been working on alternative fuels and alternative energy since the late 1970s. Bill called Dr. Reed, who provided him with the formula over the telephone. Using Dr. Reed's formula for the transesterification process, Ayres started making the first batches of methyl esters in the gravel parking lot of his uncle's tree service business in Kansas City; Interchem did not have a plant facility in Kansas City at that time.

1991 Dec.—Doug Pickering and Bill Ayres had been friends in high school. They had stayed in touch because of their mutual interest in alternative fuels and alternative energy; they had worked together for years on wood pyrolysis and wood or cellulose gas projects. In the 1980s, Doug had invested in a company that provided alternative wood chips. Bill used to bounce his many ideas off Doug. Bill went to see Doug one day, explained the details of biodiesel and his interest in it, then asked Doug what he thought about the whole thing. Doug replied: "For the first time in your life, I think you're onto something that actually has longevity to it."

1991 summer—Doug and Bill Ayres were both present at an important meeting at Stratco Engineering with Diane Graham (owner), Steve Howell (new products development engineer), and Dr. Tom Reed. Dr. Reed talked about the future of biodiesel as an alternative fuel. Stratco had agreed to supply the engineering, staff and hardware for a biodiesel pilot plant if Interchem would provide the facility.

1991 Dec.—Bill Ayres and Kenlon Johannes were planning to drive to Washington, DC, in the Missouri Soybean biodiesel demonstration truck. They expected to be gone for at least 10 days, during the time that the Stratco plant was to be installed. So Bill called Doug Pickering, who was then in the construction business, and asked: "Since your business is slow in January, would you be willing to oversee the installation to make sure it is done right?" Doug said okay.

1992 Jan.—Doug and Bill Ayres start to work together on their first biodiesel project, as Doug oversaw the installation of the Stratco pilot plant that was designed to make methyl esters / biodiesel in Kansas City. The new project involved leasing a building and creating a new company name. Bill came up with the name Midwest Biofuels, which was a subsidiary of Interchem—the company for which Bill Ayres worked. The building, which Interchem leased, was a former rendering plant consisting mainly of a 4,000 square foot room in Kansas City, Kansas, in the industrial bottoms

(down near the river). Interchem paid the rent (about \$600 a month) and the utilities, yet they did not pay either Bill or Doug a salary. "This is the way R&D companies often operate—and it ain't for everybody," says Doug. "It's either get rich or starve. Somebody usually gets rich from it, and it's seldom the pioneers, who are lying on the trail face down, with blood marks their shirts. Interchem thought Bill was involved with something strange again. Doug recalls: "Interchem said, 'If you want to do that, go do it, but were not going to pay you. We're doing other projects.'" However Midwest Biofuels was funded by various grants, totaling over \$1 million, which Bill and Doug had raised. Since the grants were designated for specific projects, Bill and Doug could not use that money to pay their salaries. Doug recalls: "I got paid exactly \$13,000 and I survived on my savings and credit cards. Bill got about the same amount—maybe a little more—and survived in about the same way. Interchem also paid another employee intermittently to do logistics and shipping.

The Stratco installation took about 3 weeks and the little plant, which had a rated capacity of 50,000 gallons a year, began trying to start operation about Feb. 1. Since there wasn't much money available yet, Doug didn't get paid much for his work. Stratco paid no rent. Midwest Biofuels and Stratco had an arm's length relationship. Midwest provided the space, Stratco provided the technology. If it worked, Midwest would benefit from the technology, if not then too bad.

As it turned out, the Stratco plant never worked, even though Stratco invested well over \$100,000 in it; they paid the bills themselves, and staffed and operated the pilot plant with their people. They were very secretive about the whole thing and were doing it for their own proprietary technology development. Stratco produced a product named a "Stratco contactor," which is a device used in the oil refinery industry. Most refineries own a Stratco Contactor. Diane wanted to diversify beyond the Stratco Contactor. She envisioned biodiesel plants around the world and she wanted to have the state of the art technology to be able to license it to those plants. "In all fairness, they were petroleum engineers. Our product was oleochemical, which is completely different from petroleum. We taught Stratco more than we ever learned from them."

Meanwhile, inside the same building, Doug and Bill constructed their own biodiesel pilot plant. They mounted two 55-gallon drums on stands, had a sump pump, a garden hose, some methanol and some caustic soda. They had a 250 gallon tub that they used to wash the fuel to purify it. The whole thing "was as crude as could be." They did not distill their biodiesel.

There was a ready market for this biodiesel from the growing number of biodiesel demonstration projects. They sold their product and began to earn a little money. Midwest Biofuels was the first commercial manufacturer of biodiesel



in North America; Bill and Doug were pioneering a new industry! Doug recalls: "We would load up drums of biodiesel and take them to the project at the St. Louis airport. We'd get the empty drums, replace them with full drums, and drive back."

Midwest Biofuels, based on Bill and Doug's pilot plant, operated for 6-12 months and made an estimated 10,000 to 12,000 gallons of biodiesel fuel. They made two products: SoyDiesel (biodiesel, for fuel), and SoyClean (an industrial solvent); they were exactly the same product, yellow methyl esters.

Doug notes: "Over the ensuing years, Ayres was the visionary, with a very high I.Q. He was the market development and front man. I was the executioner, follow through guy, and political operator." It soon became apparent that Midwest Biofuels could grow into a nice, valuable little company.

1992 May—Procter & Gamble (P&G) contacted Bill and Doug and said they could supply all the methyl esters that Midwest Biofuels would ever need. "On the same day that the policemen who beat Rodney King in Angeles were acquitted [29 April 1992] and there were riots in Los Angeles, we held an open house and plant dedication at our production facility and announced that we were going to build a big plant to make methyl esters / biodiesel. Present at the open house were John Campbell of AGP, Brian Peterson of the Sunrider expedition, and a small number of other people. This was the first time Ayres and Pickering had ever met John Campbell. We didn't get much press coverage for our event, because the media was scurrying to cover the riots caused by the Rodney King story. However we also sent out news releases and one was published in the *Wall Street Journal*. The Procter & Gamble people read it, called us up, and said they wanted to talk with us. They brought in four people to meet with and convince us not to build our plant: Ray Bitzer (global sales manager), Ian Edwards (top man, in charge of their global operations for methyl esters), Howard "Mac" Findley, and one other man. P&G was already making methyl esters, which are a precursor to fatty alcohols which is a big product line is their line of surfactants (soaps and detergents). Their main products in Kansas City were surfactants, methyl esters, and glycerol / glycerin. Procter & Gamble's main goal was to prevent Bill and Doug from making glycerine, which is a big profit center for them. They weren't concerned about the methyl esters.

The methyl esters that P&G made were all double distilled. That made them extremely pure, as clear as water, and more effective as an industrial solvent—whereas typical methyl esters (the type Bill and Doug had made at their pilot plant) were yellow in color. However the double distillation did not necessarily produce the best methyl esters for fuel; it removed some of the natural antioxidants that were present in yellow biodiesel and which helped to maintain product stability.

It took about 1-2 months before Bill and Doug actually received their first methyl esters from Procter & Gamble. Bill & Doug still sold the same two products under the same names, except that now both were double distilled and as clear as water. Continued.

836. Pickering, Doug. 2007. Pioneering commercial production of soy biodiesel in the USA. Part III (Interview). *SoyaScan Notes*. May 28. Compiled by William Shurtleff of Soyinfo Center.

• **Summary:** Continued: Over the years, they had been in touch with almost every maker of methyl esters worldwide. Now they shared these contacts with AGP. On behalf of AEP, both Bill and Doug, and AGP contacted these and placed orders. They purchased methyl esters (biodiesel) from Chemol (Greensboro, North Carolina; they are primarily a specialty molecule company in smaller volumes), Halterman Chemical (a custom producer from soybean oil out of Houston, Texas), Calgene (Chicago, Illinois), Surftec (Chicago), Carolina Byproducts, and Corsicana Chemical (Corsicana, Texas), and Procter & Gamble (Cincinnati, Ohio). At one point Halterman made a big batch of about 2 million pounds of distilled methyl esters to meet fuel specifications.

AEP was also in charge of supplying the methyl esters to the growing number of projects across America that needed them—on time, to meet specifications, and in the right quantity. AGP took care of all the accounting—billing and collecting the money.

1995-2000—AEP developed tens of millions of pounds of demand for soy methyl ester products with names like SoyGold SoyDiesel, SoyGold 1000 (which replaced the industrial solvent name SoyClean, which was owned by Interchem and Midwest Biofuels), SoyGold 2000, SoyGold (plus some number) used in making special high-tech papers by one customer only, SoyGold (plus some number) that was an industrial solvent containing a surfactant to make it water rinseable, and SoyClear (the double distilled industrial solvent, which could have no color bodies present, as in coatings, and thus looked as clear as water). Other applications included agricultural adjuvants They had record sales and volume levels year after year. They even sold more than AGP could make.

1996 Aug. (late)—AGP announced that it would build a new \$6 million plant to make soy methyl esters at Sergeant Bluff, Iowa.

1996 Nov.—AGP's new plant starts to make methyl esters in Sergeant Bluff, Iowa. It had a capacity of 7 million gallons/year (40 million lb/year). Bill and Doug were in charge of selling all of the methyl esters made by this new plant worldwide. The new relationship between AEP and AGP was different from the one Bill and Doug had had with Procter & Gamble: (1) AEP was guaranteed the lowest cost esters in the world, and the subsidiary had an exclusive

agreement with AGP to provide all the soy methyl esters made in AGP's new plant. AGP did not sell SoyGold to anyone but their subsidiary AEP (run by Bill and Doug; so AEP did *not* compete with AGP). (2) AEP was selling a methyl ester product made by AGP to meet a fuel specification, whereas Procter & Gamble had to meet a generic specification for the oleochemical industry—and not for fuel. Thus AGP's SoyGold was a better product for use as a fuel.

Unfortunately, during at least the first three years, AGP's plant never produced more than about 20% of the level it was designed to produce at due to design flaws by the engineering and construction company, which Doug thinks was Crown Iron Works. Therefore AGP continued to order methyl esters (although in somewhat smaller quantities) from exactly the same suppliers it had ordered them from before November 1996, when AGP also started making them. AEP was able to sell more soy methyl esters than the AGP plant was able to make. So occasionally, at these times, they would go to outside suppliers such as Chemol, and when the ester plant was shut down for maintenance and repair, or if they needed the special clear double distilled, they went to other suppliers. They did not distill at the AEP plant.

During harvest time, the Union Pacific Railway was almost always backed way up and in gridlock. At this time of year AEP was often unable to get product from AGP's plant because they couldn't get railcars; they were all used for hauling soybean oil in hauling methyl esters out. A joke has it Union Pacific's vice president of logistics tried to commit suicide. He had himself tied and gagged and laid on the UP railroad track. He died of starvation. That just how bad it really was. AEP did its best to fill its orders from product stored in tanks across the country.

2000 Nov. 1—AGP Chief Executive Officer Jim Lindsay retires. Joe Meyer, a Group Vice President, was put in charge of AEP; then he retired about a year after Lindsay. The years during which Bill and Doug worked under Jim Lindsay and Joe Meyer were good ones. They won a sales award and a plaque with a special dinner of recognition for achievement and profitability. But after Lindsay and Meyer retired, everything changed—for the worse.

Lindsay was replaced as CEO by Marty Reagan; he basically put John Campbell in charge of AEP and biodiesel. The subsequent conflict that developed for Bill and Doug was largely with John Campbell. Doug thinks the conflict was mainly about power and money. He and Bill were in line to be making bonuses of \$500,000 a year. They had made substantial bonuses under Jim Lindsay but no where near six figures—although they were certainly on track to.

2001–2003. More record volumes and record sales. Then in 2002 there starts an insidious sabotage of AEP's profitability by the new senior management at AGP. Bill and Doug file a formal complaint, requesting that management honor their written operating agreement.

2003 Oct.—Bill and Doug are fired from AEP by AGP. “They just closed the operation. This was a surprise to us and a breach of our contract, which said that all management functions would be discussed with all managers and owners. In exchange for our 5% ownership (each), they offered us the equivalent of \$25,000 each, two-thirds of which was vacation pay, severance, etc. They then said, ‘We know you won't like that, so you can sue us,’ and we did.

“AEP had more than \$20 million in yearly sales. Our forensic accountant told us that each of our 5% was worth roughly \$1-1.5 million. We had record profits year after year until AGP began thinking about shutting down AEP. Then they made sure it began losing money; any controlling interest can make a company lose money and net worth if they want to. They began making six-figure contributions from AEP to political action committees or lobbying groups, and they increased the corporate overhead charges to AEP to a level that worked its way up to \$28,000 a month. AEP had only 5 employees. That went on for more than two years, until they announced that AEP had to be shut down because it was not doing well financially.

John Campbell, who was now generally in charge of AGP's biodiesel operations threatened Bill and Doug by saying that AGP had the power to make AEP have no profits and they would never get any bonuses. “After Jim Lindsay retired, AGP did not value the fact that we were bringing them a steady stream of new customers.” “John Campbell told us that the agreement that Jim Lindsay and Bill Lester signed with us would make it possible for us to make more than the CEO of AGP—and that's not gonna happen.” The CEO of AGP at the time was Marty Reagan. Doug believes that Jim Lindsay, who was an honorable man, would have treated them fairly. “Jim was a tough businessman and demanding, but fair; people liked to work for and with him.”

The lawsuit took about 2 years and the initial agreement contained a non-compete clause that lasted for 3 years after termination. Doug and Bill were finally forced to settle. They felt quite sure that if AGP had lost, they would have appealed the case.

Doug is now in the commercial concrete business. His company forms it, pours it, and finishes it. “You know who wins in lawsuits: Accountants and lawyers. We did not get enough out of it to make the lawsuit worth it—just a token amount. We had hundreds of thousands of dollars in legal and accounting fees. Do you know the definition of a pioneer? Somebody laying face down on the trail with an arrow stuck in his back. If AGP had done something rational and fair, we would have accepted it and gone quietly away.” Doug agrees with Bill Ayres that they did not get a good deal from AGP for the biodiesel marketing company they had built.

Today Doug, a pioneer in biodiesel in the USA, is with a concrete company named Concrete, Masonry and Restoration.

837. Lester, Bill. 2007. More on AGP and soy biodiesel (Interview). *SoyaScan Notes*. July 8. Conducted by William Shurtleff of Soyinfo Center.

• **Summary:** When Bill Lester retired from AGP on 1 June 1993, John Campbell took Bill's place as vice president of government relations. John was hired by AGP in late 1991, specifically to take Bill's place when Bill retired. He worked with Bill for over a year, learning the job he would step into. When AGP hired John Campbell, he was deputy undersecretary of agriculture at USDA in Clayton Yeutter's administration. "He was a high-powered young man when we took him on board."

Actually John assumed only part of Bill's responsibilities. John's titled was "Assistant Vice President for Corporate Relations." It took three men to do the work that Bill had been doing. Address: Omaha, Nebraska.

838. Lester, Bill. 2007. Biodiesel plants being built in the USA (Interview). *SoyaScan Notes*. Nov. 6. Conducted by William Shurtleff of Soyinfo Center.

• **Summary:** Many biodiesel ventures have failed for lack of a source of soybean oil. "Most of the biodiesel plants that are being built today are being built by people who have direct ties to a soybean crusher, which becomes a reliable source of crude / unrefined soy oil." For example, ADM is a partner in the biodiesel plant being built in Missouri. AGP has been big in biodiesel since it is a big soybean crusher that can supply the crude soybean oil. Address: Omaha, Nebraska.

839. Lester, Bill. 2007. Ventura Foods in California (Interview). *SoyaScan Notes*. Nov. 6. Conducted by William Shurtleff of Soyinfo Center.

• **Summary:** CHS (which includes the old Honeyamead-Mankato, Minnesota—which has a soy oil refinery) is a part owner of Ventura Foods in California; they are a big packager and distributor of vegetable oils and their products (such as margarine). They even distribute butter. Ventura Foods was formerly named Wilsey Foods, which itself was previously named Bennett (also in Los Angeles). Bill thinks these companies were started by the Benett family.

Ventura Foods also has a huge packaging plant in St. Joseph, Missouri—several blocks down the street from AGP's plant in St. Joseph. Address: Omaha, Nebraska.

840. Lester, Bill. 2007. Details of how farmers sell their soybeans to an elevator they own, and of how their patronage (profit) is calculated (Interview). *SoyaScan Notes*. Dec. 26. Conducted by William Shurtleff of Soyinfo Center.

• **Summary:** Imagine the situation where there is a local elevator (which stores only soybeans) that is owned as a cooperative by many soybean farmers in the area. When a particular farmer is ready to sell some (or all) of his soybeans, he contacts the local elevator and asks what price they

are paying right now for typical grade No. 2 soybeans. The elevator gives him the price, which is determined by the market. The farmer can either accept the price and deliver the beans, or he can wait and try to get a better offer later. The key point is that the impersonal market (not the farmer nor the elevator) determines the price. Moreover, a member of the local cooperative gets the same price at a particular moment as a farmer who is not a member of the cooperative.

At the end of the cooperative's fiscal year (which for soybean cooperatives is usually about Aug. 31, when both their inventories and accounts receivable are lowest), the cooperative prepares its financial statements for the past year. If it has done well and made a significant profit (say \$100,000), it will keep some of this profit for running the business and pay the rest of it as a "patronage" refund to its member growers. However only the member growers who actually sold soybeans to that cooperative during the past fiscal year participate in the profits. Then the amount of patronage is allocated based on the number of bushels sold to the elevator; the price that the grower received at the time of sale is *not* a factor in determining the patronage. So if one grower sold 2,000 bushels of soybeans to his elevator for \$5.00 a bushel and a second grower sold 4,000 bushels at \$6.00 a bushel, the second grower will receive twice as much money as patronage refund from the cooperative elevator as the first grower.

By what authority are Americans allowed to join together and form cooperatives? The Capper-Volstead Act of 1922 was enacted to assure cooperatives freedom from antitrust action—to relieve them of fear of being prosecuted under the Sherman Antitrust Act of 1890.

The 1920s were perhaps the most difficult decade of the 20th century for farmers. They needed to find new ways to join and work together cooperatively in order to survive.

Note 1. Andrew Volstead (lived 1860-1947) was a Republican congressman from Minnesota. From 1919 to 1923 he served as chairman of the House Judiciary Committee. His name is also closely associated with the National Prohibition Act of 1919, usually called the Volstead Act. That was the enabling legislation for the enforcement of national prohibition beginning in 1920. Address: Omaha, Nebraska.

841. AGP—A Cooperative. 2008. Annual report to members: Your cooperative. 12700 West Dodge Road, P.O. Box 2047, Omaha, Nebraska 68103-2047. 32 + 21 p. 28 cm.

• **Summary:** Net sales for 2007 (year ended Aug. 31) were \$2,685.065 million, up 13.8% from \$2,360.484 million in 2006. Earnings from continuing operations (before income taxes): \$90.296, up 20.2% from \$75.136 million in 2006.

Records achieved (p. 3): Soybean crush. Aminoplus production and sales. Growth in Vistive contract areas. Refined vegetable oil production. Renewable fuels production. Earnings by Protinal / Proagro in Venezuela.



Capital investments (p. 3): Soybean processing upgrade and expansion under construction at St. Joseph, Missouri. Methyl ester plant expansion at Sergeant Bluff, Iowa. New methyl ester plant at St. Joseph, Missouri. Masterfeeds expansion and upgrade of Daco premix and testing plant.

Message to the stockholders, from Marty Reagan (CEO and General Manager) and Brad Davis (Chairman of the Board). "All AGP businesses were profitable, and each contributed to the excellent financial performance. As a result, AGP will pay patronage funds of \$46.2 million, of which the Board approved 30 percent to be paid in cash to members.

"The excellent cash flow generated from these strong earnings combined with your cooperative's ongoing balance sheet strength allowed your Board of Directors to approve equity redemption of \$28 million for 2007. This amount brings the three year total of equity redeemed to \$84 million. Cash payments for 2007 totaled \$45.2 million including current cash patronage, equity redemption, and value-based premium programs. These payments bring the three-year total of cash returned to members to over \$123 million—the most cash returned in any three-year period in AGP's history" (p. 5).

AGP is "the largest cooperative soybean processing company in the world." It "processes more than 15,000 acres of soybeans every day." "Today its owners are 195 local cooperatives and six regional cooperatives, representing 250,000 farmers from 15 states throughout the United States and Canada" (p. 7).

"Vistive soybeans, developed by Monsanto Company through conventional breeding, contain 3% linolenic acid, compared to the typical 8% found in traditional soybeans. The result is a more stable, low-linolenic (low-lin) soybean oil which, for certain applications, does not need the partial hydrogenation process that produces trans fatty acids (trans fats).

"Labeling of trans fats content in food became mandatory in Jan. 2006, so in partnership with Monsanto, AGP began contracting acres for Vistive production in 2005. Since then, growth of Vistive contract acres through AGP's membership has been outstanding. From 2006 to 2007, acres increased almost five-fold, and the number of participating members that offer local delivery of Vistive more than doubled.

"AGP expanded processing of Vistive soybeans from two to six plants,..." "AGP has been a leader in identity preserved soybeans for many years." Contains many color photos. Address: Omaha, Nebraska. Phone: (402) 496-7809.

An asterisk (\*) at the end of the record means that SOYFOODS CENTER does not own that document. A plus after eng (eng+) means that SOYFOODS CENTER has done a partial or complete translation into English of that document.

An asterisk in a listing of number of references [23\* ref] means that most of these references are not about soybeans or soyfoods.

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Johnson Family of Stryker, Williams County, Ohio. Including (1) Edward Franklin “E.F. Soybean” Johnson (1889-1961) of Johnson Seed Farms (Stryker, Ohio) and Ralston Purina Company (Missouri); (2) Elmer Solomon Johnson (1879-1920); (3) Perhaps E.C. Johnson and Hon. Solomon Johnson (1850-1918). 355, 467

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- Soybean crushers (USA), Early. *See* Elizabeth City Oil and Fertilizer Co. (Elizabeth City, North Carolina; 1915)
- Soybean crushers (USA). *See* Allied Mills, Inc., Archer Daniels Midland Co. (ADM) (Decatur, Illinois), Bunge Corp. (White Plains, New York), Cargill, Inc. (Minneapolis, Minneapolis), Central Soya Co. (Fort Wayne, Indiana), Chicago Heights Oil Co. (Chicago Heights, Illinois), Continental Grain Co. (New York, New York), Dannen Mills (St. Joseph, Missouri), Delphos Grain & Soya Products Co. (Delphos, Ohio), Honeymead Products Co., Lauhoff Grain Co. (Danville, Illinois), Pillsbury Feed Mills and Pillsbury Co. (Minneapolis, Minnesota), Procter & Gamble Co. (Cincinnati, Ohio). Including the Buckeye Cotton Oil Co., Quincy Soybean Products Co. (Quincy, Illinois), Ralston Purina Co. (St. Louis, Missouri), Shellabarger Grain Co. / Shellabarger Soybean Mills (Decatur, Illinois), Spencer Kellogg & Sons, Inc. (Buffalo, New York), Staley (A.E.) Manufacturing Co. (Decatur,, Swift & Co. (Illinois)
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- Soybean production–Marketing. *See* Chicago Board of Trade (CBOT), Marketing Soybeans
- Soybean production–Plant protection. *See* Diseases (Bacterial, Fungal, and Viral / Virus), Insects–Pest Control. *See* also: Integrated Pest Management, Pesticides (General), Weeds–Control and Herbicide Use
- Soybean production. *See* Crop Rotation of Soybean Plants for Soil Improvement, Cropping Systems: Intercropping, Interplanting, or Mixed Cropping, Green Manure, Harvesting and Threshing, Identity Preserved / Preservation, Nitrogen Fixation, Inoculum, Inoculation, and Nodulation by Rhizobium Bacteria, Peoria Plan of 1928-29 for Growing, Selling, and Processing Soybeans, Plant Protection from Diseases and Pests (General), Policies and Programs, Government, Prices of Soybeans, Soybean Products, and Soybean Seeds, Seed Quality, Yield Statistics, Soybean
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