PEST RISK ANALYSIS (PRA)
AND
PHYTOSANITARY REQUIREMENTS FOR IMPORTATION OF FRESH CARROTS (*DAUCUS CAROTA* L.) FROM CHINA

A REVIEW

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SUMMARY OF REVIEW

The Benguet State University review team members strongly recommend that the Philippine government **should not import carrots from China**.

The reasons are as follows:

1. <u>On Pests and their Management</u>

    a. The carrots in the Philippines do not have major economic pests hence pesticide usage is almost nil. There was never a report of a pest outbreak on carrot unlike on the other vegetable and fruit crops in the Cordillera.

    In Cordillera, carrots are sometimes infested by slugs and cutworms and maybe infected with diseases such as powdery mildew (*Oidium* sp.), leaf spot (*Alternaria dauci*), *Fusarium* rot and *Sclerotinia* rot but with with low to moderate damage. The powdery mildews and leaf spots occur also late when the carrots are almost ready to be harvested.

    b. In China, there are twelve (12) quarantine pests and majority of them are not reported in the Philippines. The willow aphid is not present in the Philippines and if introduced it is a serious pest as it infests carrot from the cotyledon stage (seedling stage) up to harvest. Among the diseases, the introduction of the hairy root that is also absent in the Philippines is inevitable as the risk assessment is high in both the agro and urban ecosystems. *Agrobacterium xanthomonas* and *Alternaria radicina*, the other two serious diseases of carrots in China were not also noted in Cordillera.

    c. The presence of major pests on carrots in China may indicate that the pests are difficult to manage thru crop management. The pest management systems in China from the field to post harvest should likewise be thoroughly studied.

    d. There may be more than pests in China than what was recorded since there was no actual field observation that was conducted but instead the list were based mostly on literatures.

    e. Other high value crops in the Philippines will be affected if the pests of carrots in China will be introduced. The PRA showed that the hosts of the 12 quarantine pests of carrots in China include other high value crops that are also grown in the Philippines. The willow aphid for

instance infests tomato and celery while the brown wheat mite infests garlic, onions, strawberry, lettuce and also rice.

2. On Risk Estimates and Assessment

a. There is a greater risk of the quarantine pests being established and making a negative impact in the agroecosystem as presented in the PRA such as the brown wheat mite with high risk estimates both in the agro and urban ecosystems.

b. There was no participation of researchers/stakeholders from the carrot growing areas in the Philippines in the preparation of the PRA.

c. There is no soil analysis that was conducted establishing also the absence of hyperparasites of soil borne beneficial organisms such as the nitrogen fixing bacteria, decomposers or plant disease antagonists.

3. On Risk Management

a. The PRA reports that the pests should be prevented from being introduced in the Philippines and the best way is not to import carrots at all.

b. There is no defined methodology for quick response service incase a pest is introduced and cause an outbreak such as the case of the golden “kuhol” that was imported by the Philippine government as food and now a pest of several crops all over the country.

c. There is doubt on the implementation of the risk management and quarantine conditions as there is laxity on the implementation of quarantine laws or importation laws in general in the Philippines as evidenced by the entry of smuggled fresh produce and even dry goods. The occurrence of new pest outbreaks in Benguet for instance has been attributed to the importation of the host crops such as in the case of club root on crucifers and leafminers on potatoes and the spider mites.

d. There is no definite procedure on the containment of imported carrots within Metro Manila as recommended in the PRA, i.e. “police power” of concerned LGU’s and quarantine officers, quarantine in transport systems, etc.

4. On Socio-Economic Consequences

a. There is a need to conduct a socio-economic and even environmental assessment on the impact of carrot importation over and above having a pest risk analysis in view of the sentiments of the stakeholders in the Cordillera.

   There are more than 177 farming households that are planting carrots in Benguet Province alone and about 60 farming households in Mindanao and Visayas who will be affected by the importation of carrots.

b. Although the estimated loss in the reduction of carrot production in the Philippines is only 10% in case the pests will be introduced, the monetary cost is high ranging from PhP100 thousand to PhP748 million as indicated in the PRA.

   The willow aphid alone for instance, if it will infest tomato may cause a yield loss amounting to PhP107 million and on celery about PhP13 million.

5. On Supply Reliability and Competitiveness

a. While the per capita requirement of Filipinos on carrot is 0.41 gm and this can be supplied by Benguet province with a produce of about 61,000 tons, this can be increased by the expansion of production areas in Mindanao that at present is producing about 15 to 20 tons per cropping season.

b. Consultation with the farmers showed that they are willing to adopt crop programming to address year round supply of carrots and they are also willing to adopt new technologies especially on postharvest handling and processing.

f. The postharvest handling practices and processing of carrots in the Philippines can be addressed with the commercialization of technologies such as the manufacturing of small scale carrot washers, provision of appropriate packaging materials, and well-defined grading and sorting systems. At present, carrots are processed locally into fresh juices, cakes, pastries, wine, vinegar, ice cream and even cosmetics such as carrot soap and carrot shampoo.

g. Carrots produced in the Philippines are claimed to be of lower quality than those in China but there was no comparative study that was conducted.

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