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Plant quarantine regulations in India

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Agriculture produce is an essential living entity for human beings as well as animals and good quality production not only facilitates yield and health of consumers but is also used for import-export purposes, which will provide a higher return from commodities. But the disease transmission from imported and exported material is increased which in turn led to the exchange of material is restricted. The entry of a single exotic insect or disease and its establishment in the new geographical borders continues to cause great national loss till such time it is brought under effective control. To control such introduced pest and disease in a country, it has to suffer large economic losses until it

is controlled. There is a need to closely monitor and control the imported and exported commodities so that there is no outbreak of disease into new areas. The method of exclusion of the pests is enforced through certain legislative measures commonly known as quarantine. "Quarantine," derived from the Latin word *'quaranta giorni'* means simply forty, i.e., a 40-day detention period. Firstly, it was used to detain ships in order to prevent epidemic diseases such as yellow fever, bubonic plague and health issues affecting passengers while they were isolated for a set period of time. Plant quarantine (PQ) is a legal term that refers to the process of preventing exotic pests, diseases, and weeds from entering and spreading into new areas. The legislation or regulations have specific conditions for considering a pest or disease as a quarantine pest. The pest/disease under consideration must be one that will offer actual or expected threats to substantial interests (agricultural or commercial). Also, the quarantine regulation provides early detection methods of disease incidence, less interference, phytosanitary certificate and has no substitute action for that particular pest or disease. There are different forms of quarantine adopted to regulate the exchange of planting material, which are listed below.

Forms of quarantine

1. International quarantine:

Legislation to prevent the introduction of new invasive pests and weeds from foreign countries. For example, potato tubers from South America are restricted commodities to introduce in India.

2. Domestic quarantine:

Legislations to prevent the spread of already established pests, diseases, and weeds from one part of the country to another. Propagating materials of banana from the States of Assam, Kerala, Orissa, West Bengal, and Tamil Nadu are prohibited for export to other states in India. Similarly, potatoes due to wart disease from West Bengal and apples from Himachal Pradesh due to apple scab are prohibited for export to other regions within India.

Events led to enactment the DIP Act:

- In 20th century, introduction of dreaded Mexican cotton boll weevil in USA (*Anthonomous grandis*) which cause a huge agricultural produce loss. To control introduction of such pest in India, Indian government ordered compulsory fumigation of imported cotton bales in 1906.
- In 1906, flag smut of wheat introduced in India from Australia. To control such pest introduction DIP act framed on 3rd February, 1914 in India.

Level of plant quarantine measure:

1. **Farmer's level:** Enforcement of legislations on farmers to apply effective control measures to prevent damage by already established pests.
2. **Processed Food level:** Legislation to prevent the adulteration and misbranding of insecticides and determine their permissible residue tolerance levels in food.
3. **Quarantine for pest control operations:** Legislation to regulate the activities of people engaged in pest control operations and the application of hazardous insecticides.

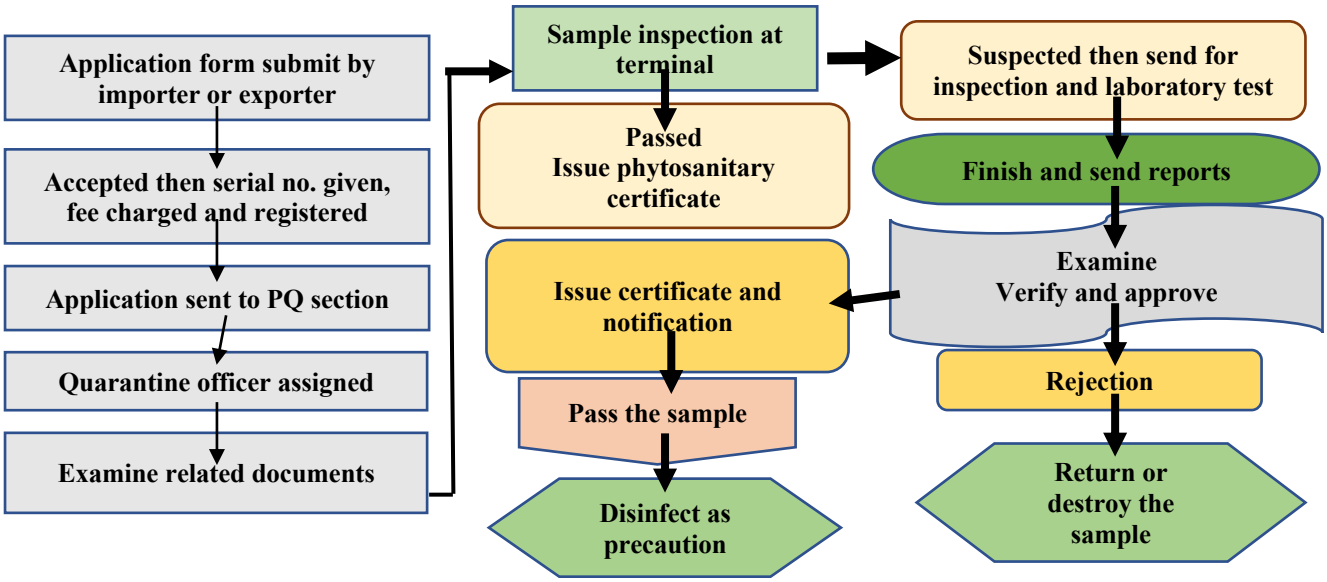
Agencies involved in quarantine

- Under the DIP Act of 1914, the DPPQS (Directorate of Plant Protection, Quarantine and Storage) was established in 1946 to regulate the inter-state movement of plants and propagating material. DPPQS distributes or disinfests articles/consignments either to regional or national plant quarantine stations for bulk samples or to NBPGR (National Bureau of Plant Genetic Resources) for small samples. According to the Plant Quarantine Order 2003, there were 59 plant quarantine stations, 12 of which were located at airports, 34 at seaports and 13 on land routes. Besides these
  - 60, Inland Container Depot/Container Freight Station (Schedule II)
  - Out of which, four are situated in Haryana at Ballabhgarh, Gurgaon, Rewari and Panipat.
  - 11 Foreign Post Offices have also been notified for the entry of plants/plant material for research purposes (Schedule III).
  - 28 SAU, 24 ICAR institutes, ICRISAT (International Crop Research Institute for Semi-Arid Tropics, Hyderabad), one institute from the Indian Council of Forestry Research and Education (under the ministry of commerce and industry), are also involved in PQ regulation in India.
- Seed was not covered under the DIP Act until 1984, and then the PFS (Plant Fruit & Seed) order of 1984 came into existence.
- From a farmer's point of view, to maximize productivity per unit area and to encourage the private seed industry in India, a "New Policy on Seed Development' in September 1988. The new policy covers the import of seeds and planting materials of wheat, paddy, coarse cereals, oilseeds, pulses, vegetables, flowers, ornamentals and fruit crops; procedures for their import and the related plant quarantine procedures and requirements.
- The Government of India has also approved three other national institutions to act as official quarantine agencies, especially for research material namely
  - NBPGR
  - FRI (Forest Research Institute), Dehradun for forestry plants and
  - BSI (Botanical Survey of India) is for other plants.
- Sanitary and Phytosanitary (SPS) Agreement framed under WTO (World Trade Organization)
- The import of agricultural commodities is presently regulated through the plant quarantine order of 2003.
- According to Plant Quarantine Order 2003 Schedule IV, a total of 14 commodities are prohibited, including potato, banana, cassava, cocoa from South America, etc. Under schedule V, a total of 20

commodities are restricted like citrus, wheat, cotton, tobacco, groundnut, rice, including 14 prohibited commodities. Under schedule VI some commodities are allowed with special characteristics and additional guidelines (total 45 commodities). Under schedule VII, commodities are allowed only with phytosanitary certificates issued by the exporter country. It includes

- Spices 22
- Dry fruits & Nuts 3
- Medicinal Herbs 15
- Plants/plant materials 10
- Narcotics & Beverages 6
- Timber logs & Timber Products 16
- Miscellaneous Plant Product 8

Procedure for import, export and quarantine clearance



Conclusion

Plant quarantine legislations are critical control measure required to manage invasive pest and epidemic conditions in new areas. To avoid article rejection and disease outbreak, mutually accepted procedures should be followed when exchanging consignments between two parties, such as proper phytosanitary certificate, consignment conditions and so on. However, there is a need to modernize and strengthen the legislative measures which provides methods of early detection of disease incidence. The easy and quick processing of bulk consignment at seaports, airports, or any plant quarantine stations led to the flow of imported and exported commodities with minimal time consumption.

References

1. Anonymous (1980). Plant Quarantine information, Govt. of India, Ministry of Agriculture, Department of Agriculture and Cooperation, Directorate of Plant Protection, Quarantine and Storage, Faridabad. 18.
2. Chalam, V. C. (2020). Elimination of plant viruses by certification and quarantine for ensuring biosecurity. In

Applied Plant Virology. Academic Press. 749-762.

3. Chand, P., Singh, A., Vishwakarma, R. and Singh, C. K. (2017). Plant Quarantine: An Effective approach for prevention of alien pest and disease. Bulletin of Environment, Pharmacology and Life Sciences. 6(11): 07-12.
4. Dubey, S. C., Gupta, K., Akhtar, J., Chalam, V. C., Singh, M. C., Khan, Z. and Kumari, P. (2021). Plant quarantine for biosecurity during transboundary movement of plant genetic resources. Indian Phytopathology, 74(2): 495-508.
5. Karuppuchamy, P. and Venugopal, S. (2016). Integrated pest management. In Ecofriendly pest management for food security. Academic Press. 651-684.
6. Kumar, P. L., Cuervo, M., Kreuze, J. F., Muller, G., Kulkarni, G., Kumari, S. G. and Negawo, A. T. (2021). Phytosanitary interventions for safe global germplasm exchange and the prevention of transboundary pest spread: the role of CGIAR germplasm health units. Plants.10 (2): 328.
7. Mallick, P., Haque, M. A., Mallick, N. and Choubey, A. K. (2020). Mobile Application for Plant Quarantine Regulations to Import in India. 9 (10): 764-775.
8. Neergaard, P. (2017). Seed Pathology: volumes 1 and 2. Macmillan International Higher Education.
9. PFS ORDER (1989). The Plants, Fruits and Seeds (Regulation of Import into India) Order, 1989.
10. Rana, R. S. (1995). Exchange and quarantine of plant genetic resources.
11. Ram, H. H. and Yadava, R. (2007). Genetic Resources and Seed Enterprises: Management and Policies. New India Publishing.