Australian Government
Department of Agriculture, Fisheries and Forestry

Required components of a systems approach for grafted cacti production in The Republic of Korea for export to Australia

Biosecurity risk is managed in many steps along this import pathway. The following document provides an overview of the systems approach for the export of un-rooted grafted cacti to Australia from The Republic of Korea.

The components of this approved system actively reduce biosecurity risks to meet an appropriate level of protection for Australia. The components include: virus free mother plants, pest-exclusionary production houses, regular monitoring, insecticidal and fungicidal treatments and pre-shipment inspection and phytosanitary certification. The pre-export phytosanitary inspection and treatment all reduce the risks even further. The on-arrival verification inspection is the final step prior to release of the consignment, providing assurance over the import pathway.

Permitted species of un-rooted grafted cacti meeting these "systems approach" requirements will be permitted entry into Australia without fumigation and growth in post entry quarantine.

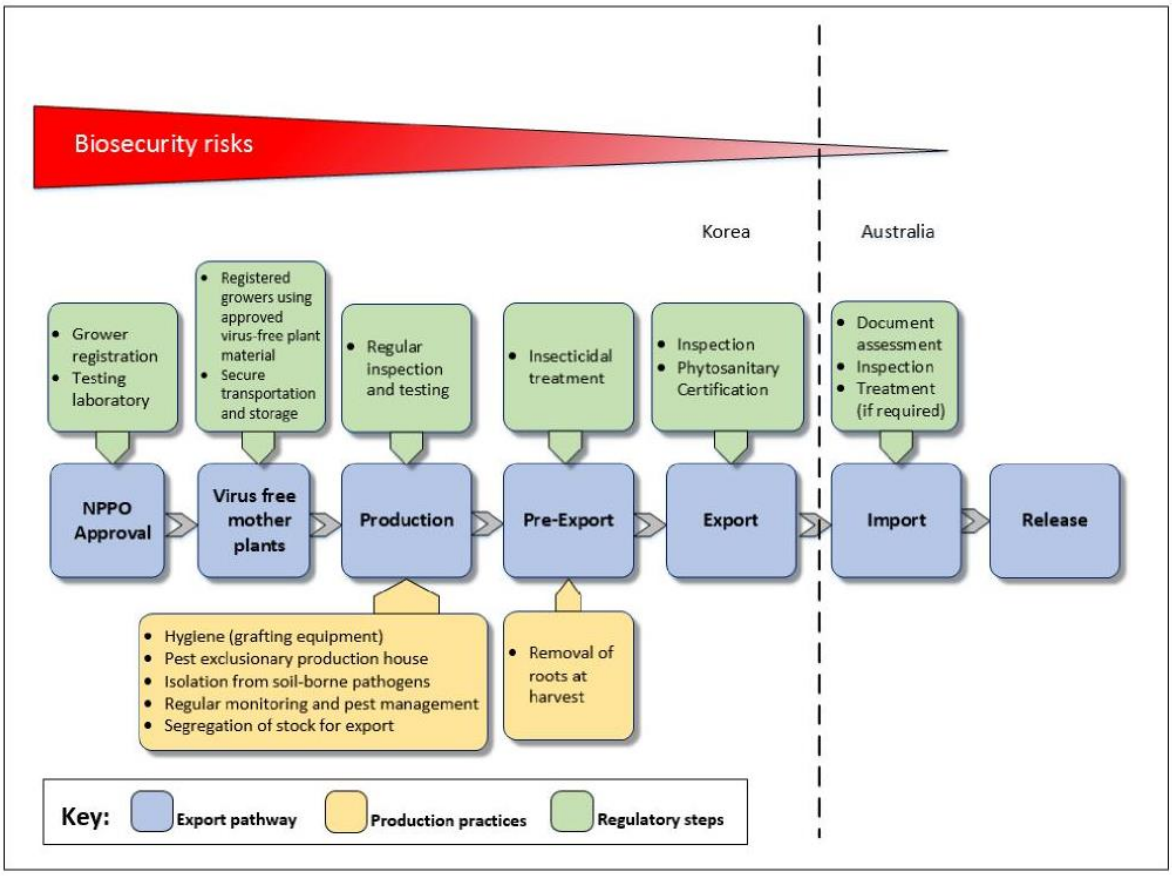

Image 1. Overview of the components of the systems approach

Table 1. The following table provides a summary of the key components of the systems approach for grafted cacti production in The Republic of Korea for export to Australia.

Components of the systems approach	**Effect of the measure**
Exporting National Plant Protection Organisation (NPPO) oversight and approval of: • Grower registration • Testing laboratory	Provides assurance that the requirements of the systems approach are understood by the participants and are being monitored and met.
Use of pest-free mother plants: • Cacti for export are derived from virus free and virus resistant mother plants produced at the state government 'Cactus Research Institute'. • Virus-free cacti are propagated through tissue culture and registered growers buy virus-free tissue cultured plantlets from the breeding program. • Regular inspection (four times/year) and testing of scion and rootstock cacti plants for viruses of quarantine concern. • Sourcing root stock and scions only from virus-free plants for grafting.	Reduces the risk of introducing viruses of quarantine concern into the production chain.
Growth in pest-exclusionary production houses: • Growing grafted cacti under controlled conditions in DPQ approved pest-exclusionary production houses and use of 'labor saving trays' on benches or in nutrient solution culture. • Routine application of pesticides and fungicides.	This provides a physical barrier to plants from arthropod and pathogen pests. These methods also isolate the plant body from the soil and control pests and diseases in the production houses.
Regular monitoring and testing: • Plants are inspected daily by farmer and any plants with pest and disease issues are removed. • Regular (four times/year) field inspections for freedom from pest and disease symptoms. • Testing for virus of quarantine concern to Australia (*Cactus mild mottle virus*) in an official laboratory approved by DPQ. • The un-rooted grafted cacti that passed field inspections will only be exported.	Regular monitoring allows inspectors to detect infected plants or signs of pest infestation and will reduce the introduction of pests of quarantine concern to Australia into the supply chain.
Pre-export treatments: • Applying pesticides mixed with germicide to plants 3-5 days before harvest • Removing roots	These treatments will ensure that only pest-free dormant tubers are planted in Australia.

• Removing dust on the root cutting and the surface of the plant body • Prior to shipment plants are dipped in Imidacloprid 0.05% and Dimethoate 0.01%.	
Pre-export inspection: • Pre-export inspection by DPQ officers immediately prior to export within the approved production houses for evidence of plant pests and diseases. • At least 2% of the consignments should be inspected but not less than 600 units. • Once passed from inspection, the boxes are sealed and placed straight into air or shipping container (on-site) to avoid cross contaminations.	Inspections will ensure that only pest-free dormant tubers are supplied to Australia.
Phytosanitary certification by NPPO including a description of consignment, pre-export treatments and additional declarations as listed on BICON and/or import permit.	Provides assurance that the requirements of the systems approach are met.

Version history

Version	Date	Description
1.0	December 2016	First publication of document.
2.0	October 2020	Updated to remove *Schlumbergera virus X* and *Pitaya virus X* as quarantine pests for Australia.