RISK BACKGROUND

Fresh root vegetables for human consumption

Overview

(Image: Aurelien Guichard, (2012), *Borough Market,* https://flic.kr/p/dhsdTB (CC BY- SA 2.0))

Fresh root vegetables for human consumption do not require an import permit but must be:

- a permitted plant part of an approved species
- from an approved country of origin
- subject to pre-export inspection by the exporting country
- accompanied by a phytosanitary certificate
- securely packaged (i.e. insect-proof)
- inspected on-arrival.

In addition to these requirements some root vegetables may also:

- undergo fumigation prior to shipment or on arrival
- have additional declarations for carrot rust fly
- meet size and weight specifications
- be topped tailed and washed prior to export.

The department has not developed import conditions for species of root vegetables or countries of origin not listed in BICON.

Importers and department staff should ensure that BICON conditions are met and that consignments are free from biosecurity risks.

Key risks

Imported root vegetables may harbour a range of biosecurity risk material such as live insects, disease symptoms, and contaminants such as weed seeds, hitchhiker pests and trash. A range of import conditions are in place to manage these risks as the specific biosecurity risk posed by a pathway varies depending on the type of root vegetable being imported. Some of the biosecurity risks associated with selected root vegetable pathways are provided below.

Root vegetables (excluding fresh ginger and large taro corms)

Carrot rust fly (*Psila rosae*)

Psila rosae (Carrot rust fly) is considered a high priority pest for the carrot industry in Australia. The larvae of the carrot rust fly feeds on taproots of species within the Apiaceae family, specifically carrot, parsnip, celeriac, sweed, turnip and radish. It causes severe damage resulting in death of the seedlings and channels throughout the mature roots and tubers. Due to the nature of the damage caused by the fly and its larvae, visual inspection is an appropriate measure for mitigating the biosecurity risk. Some host pathways also require consignments to be certified. The requirement for produce of host species to be topped and tailed further reduces risk of carrot rust fly entering on imported produce.

Leaf miners (*Liriomyza spp.*)

Liriomyza sativae (vegetable leaf miner) and *L. trifolii* (American serpentine leaf miner) are national priority plant pests and are considered highly polyphagous and are known foliage pests of beetroot, radish and swede turnips, and Jerusalem artichokes. These pests are generally associated with the leaves of these plants, rather than the tuber/roots. The general requirement that the produce is topped and free of leaf material, and phytosanitary certification and on-arrival inspection is sufficient to achieve ALOP.

Large corm taro

Taro leaf blight (*Phytophthora colocasiae*)

Phytophthora colocasiae (Taro leaf blight) causes large lesions on the leaves of infected taro plants which grow and spread until the leaf dies. The corms can also become infected causing the tissue to become brown and firm, destroying the corm within 5 – 10 days of harvest. Large corm taro is only permitted from countries free of taro leaf blight.

Fresh ginger

Yam scale (*Aspidiella hartii*)

Aspidiella hartii (Yam scale) have long tube like mouthparts that pierce the skin of the yam tubers and feed on the flesh beneath. The remaining flesh becomes fibrous and the quality of the yams are is reduced. Pre-export phytosanitary inspection and certification along with the requirement for mandatory fumigation, is sufficient to mitigate this biosecurity risk.

Burrowing nematode - ginger variant (*Radopholus similis*)

Radopholus similis (Burrowing nematodes) cause dark necrotic lesions on the root systems of affected plants causing stunted and necrotic root growth. This nematode is known to occur on ginger from Fiji. Pre-export phytosanitary inspection and certification along with the requirement for mandatory fumigation is in place to manage the biosecurity risk associated with this pest.