



**Australian Government**

**Department of Agriculture  
and Water Resources**

**Announcement Information Paper – regarding a review of biosecurity import requirements for fresh dragon fruit from Vietnam.**

The commencement of this review is in response to a request for market access for fresh dragon fruit from Vietnam into Australia. Vietnam advised Australia in October 2013 that fresh dragon fruit was its top priority for horticultural market access.

Although fresh dragon fruit for human consumption has not been previously assessed, Australia already has established import conditions for seed (for sowing) and nursery stock of some varieties of dragon fruit. Also, a preliminary pest categorisation for fresh dragon fruit from Vietnam has been undertaken and the potential quarantine pests of concern identified are the same as or similar to those for other fresh fruits from several tropical Asian countries, for which Australia already has established import conditions.

Given the similarity of pests of concern and that there are appropriate risk management measures for these pests, the department will undertake a review of biosecurity import requirements to consider a proposal to import fresh dragon fruit from Vietnam into Australia.

The *Import Risk Analysis Handbook 2011* sets out specific criteria that need to be met for an Import Risk Analysis (IRA) to be conducted. These criteria are:

- relevant risk management measures have not been established; or
- relevant risk management measures for a similar good and pest/disease combination do exist, but the likelihood and/or consequences of entry, establishment or spread of pests or diseases could differ significantly from those previously assessed.

In this case, fresh dragon fruit from Vietnam do not meet the above criteria. However, the risk analysis process will be applied to this review, using the best available scientific information.

*Dragon fruit*

Dragon fruit, also known as Pitahaya or Pitaya, belongs to the cactus family. The fruit is elliptic in shape with small spines or leaf-like scales depending on the variety. The fruit can have red skin with red, white, or purple flesh, yellow skin with white flesh, or combinations of other colours. Originating in Mexico, today dragon fruit are distributed all over the world (in tropical and subtropical regions). The robustness of the plant enables them to grow under different ecological conditions. In Vietnam, the fruit has undergone extensive development with nearly 2000 ha under cultivation. Elsewhere, the fruit is still considered a new fruit and commercially cultivation has only really taken off in the past 15 years. The edible part of the fruit is the inner flesh, which has a texture somewhat like a melon with numerous small soft seeds distributed throughout the flesh. Fruit pulp represents upwards of about 80 percent of the mature fruit weight.

*Fresh dragon fruit industry in Vietnam*

Fresh dragon fruit production in Vietnam is concentrated around cuttings plantations grown in open fields on supporting structures. In 2013 Vietnam's fresh dragon fruit yield was 23.0 t/ha, which is higher than most other fruit crops.

The major dragon fruit growing regions in Vietnam are in the southern provinces of Tien Giang, Binh Thuan, and Long an. There is also minor production in the north of Vietnam.

Dragon fruit is produced throughout the year in Vietnam; however, the peak season is May to September. The main species grown is the red skin with white flesh species (*Hylocereus undatus*). Other species grown include: pink skin with red flesh (*Hylocereus polyrhizus*), red skin with red flesh (*Hylocereus costaricensis*) and yellow skin with white flesh (*Selenicereus megalanthus*).

In 2015 Vietnam exported almost 900,000 tonnes of fresh dragon fruit. The main export markets are USA, the Netherlands, China, Japan, South Korea, Russia and Singapore. These are all protocol markets (i.e. have phytosanitary requirements), except for Singapore.

#### *Australian dragon fruit imports*

Australia does not currently import fresh dragon fruit for human consumption from any countries. However, Australia has established import conditions for dragon fruit seed (for sowing) and nursery stock.

#### *Fresh dragon fruit industry in Australia*

In Australia, fresh dragon fruit are produced in the Northern Territory, Queensland, Western Australia and New South Wales, with the Northern Territory being the largest producer. According to the results of a survey reported in 2012, the industry was worth around \$2.25 million, from a production of 750 tonnes of fresh dragon fruit. The Australian dragon fruit industry is currently small and focussed on domestic fresh fruit supply.

The types of fresh dragon fruit grown in Australia include red skinned (*Hylocereus undatus*, *Hylocereus polyrhizus*, and hybrids) as well as the yellow skin with white flesh species (*Selenicereus megalanthus*).

#### *Trade between Australia and Vietnam*

Total agriculture, fisheries and forestry exports to Vietnam in 2013-14 were valued at \$1.68 billion. Vietnam is a major market for Australian lobsters (\$501.3 million), wheat (\$495.7 million) and live cattle (\$124.5 million) as well as timber products.

Horticulture trade, excluding nuts and dried fruit, to Vietnam was worth \$39 million in 2014 (January-November 2014, which are the latest seasonal figures available). Grapes were the highest value commodity (\$31.8 million), with cherries (\$2.1 million), summer fruit (\$2 million), and citrus (\$1.3 million) also being exported in reasonable quantities.

Total plant-based agriculture imports from Vietnam in 2013-14 were valued at approximately \$110 million, consisting mostly of cashew nuts (roughly \$99 million) and rice (\$5 million). Vietnam began export fresh lychees to Australia in 2015

#### *Preliminary assessment of Vietnamese dragon fruit*

A preliminary assessment of the pests of fresh dragon fruit in Vietnam indicates that the potential arthropod pests or pest groups of quarantine concern are fruit flies, mealybugs and scales. Potential pathogens of quarantine concern are *Bipolaris cactivora* and Cactus Virus X.

### *Next steps*

The department will undertake a scientific analysis of the risks of importing fresh dragon fruit from Vietnam and develop risk mitigation measures as required. These findings will be published in a draft report in the third quarter of 2016 on [www.agriculture.gov.au](http://www.agriculture.gov.au).

Stakeholders will be able to comment on the draft report during a 60 day consultation period. The department will consider stakeholder comments in the development of the final report.