

Developing export markets

Australian growers and exporters export about 12% of fresh Australian mangoes to over 25 countries throughout the world. The Australian mango industry is looking to grow this volume as part of the Mango Strategic Investment Plan.

CURRENT STATISTICS

Australian Mangoes, CEO, Robert Gray, recently presented the most current statistics (source: Australian Bureau of Statistics) in February 2020 at the Mango Export Performance—End of Season Review. These statistics indicate that while overall there has been a growth in export over the past few seasons, the 2019/2020 mango season saw a slight downturn in the amount of mango exported. This can mainly be attributed to less volume in the marketplace overall than previous seasons and also unrest in some overseas markets, such as Hong Kong.

DEVELOPMENT OF EXPORT MARKETS IN RECENT SEASONS

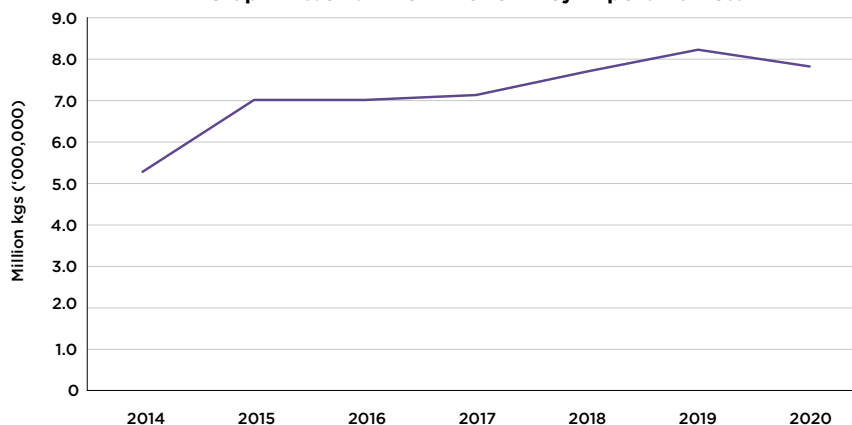
To meet the goal of increasing exports, Australian Mangoes (in conjunction with the wider Australian mango industry (Industry) and the Department of Agriculture, Water and Environment (DAWE)) have focused on streamlining the export process, so that more growers are able to export their product and also send more volume.

We have focused on:

- Access to new markets, such as the United States of America (USA), which has seen a steady increase in volume exported over the past few seasons.
- Negotiating with existing markets to create less stringent policies, which in turn costs exporters less. For example, South Korea used to require a permanent inspector in Australia for the entire mango season. This is no longer necessary.
- Advocating for research into additional treatment options and more varieties into markets.
- Streamlining the export process by bringing it online this season and having Industry Development Officers (IDOs) on farm to assist exporters with navigating this process.
- Participating in trade visits and the Trade Assessment Panel (TAP) and Industry Trade Advisory Panel (ITAP); including attending meetings and creating submissions.

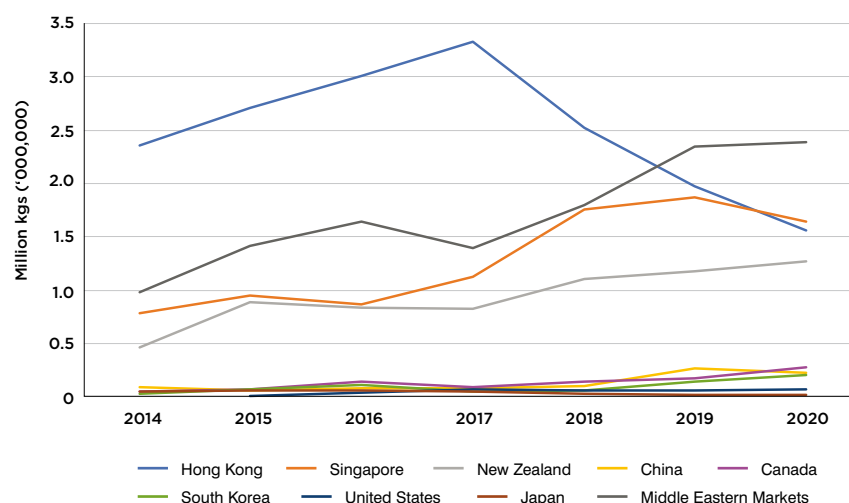
Continued page 17

Graph 1. World - 2014-2020 - Key Export Markets

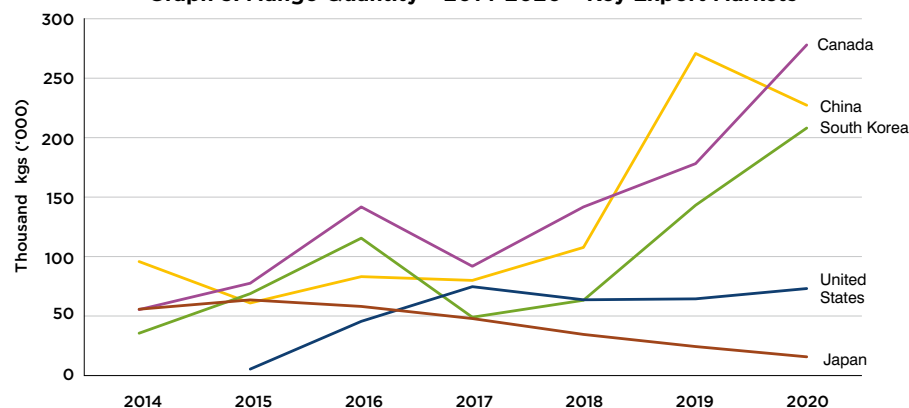


Note: Graph 1 was not presented at the meeting, but displays an overview on the total volume exported. Source: Australian Bureau of Statistics. Data collated mid-February 2020.

Graph 2. Mango Quantity - 2014-2020 - Key Export Markets



Graph 3. Mango Quantity - 2014-2020 - Key Export Markets



Note: Graphs 1 and 2 show volumes exported to key export markets. Graph 3 displays a close-up of the markets displayed at the bottom of Graph 2. Source: Australian Bureau of Statistics. Data collated mid-February 2020.

- In conjunction with Industry and DAWE facilitating and coordinating visits with Korean and Japanese Inspectors, who are responsible for certifying the Australian VHT treatment facilities registered to export mangoes into these markets.

The section 'protocol market requirements' delves into more detail about some of the key export markets and what Industry is working on in these markets where applicable.

PROTOCOL VERSUS NON-PROTOCOL MARKETS

Key export markets include both protocol and non-protocol markets. The non-protocol markets include countries whereby there is no agreement with Australia prescribing the export requirements for a particular commodity. They are usually easier to export to than protocol markets and include for example Singapore, Hong Kong and Canada. These markets might still have phytosanitary requirements.

The protocol markets are countries that have an agreement with Australia prescribing the export requirements for a particular commodity. For mangoes, these are China, Japan, Korea, New Zealand and USA. These countries have specific requirements which are described in country-specific workplans and protocols.

PROTOCOL MARKET REQUIREMENTS

The below outlines the detailed requirements of the key protocol markets.

Country	Orchard approval by DAWE (annually)	Packhouse approval by DAWE (annually)	Approved crop monitoring program (approved annually)	Vapour Heat Treatment (Fruit Fly)	Irradiation (Fruit Fly and other arthropods pests)	Mango Seed Weevil (Freedom)
People's Republic of China	✓	✓	✓	✓		✓
Japan		✓		✓		
Republic of Korea	✓	✓	✓	✓		✓
New Zealand					✓	
United States of America	✓	✓	✓		✓	

CHINA

China is a growing market with 227,082 kilograms exported in 2019/2020. Orchards and packing sheds need to be registered and growers must monitor orchards to ensure that freedom from mango seed weevil, orange fruit borer and bacterial black spot is maintained at all times. Where orange fruit borer and bacterial black spot are detected, the orchard or block will be suspended. Growers can verify orchard freedom from mango seed weevil by one of two methods:

- Fruit cutting survey to demonstrate orchard/block freedom (monitoring every two weeks)
- Systems approach to ensure product freedom (weekly monitoring).

Fruit flies are also a major concern for China and all Australian mangoes must undergo vapour heat treatment (VHT). VHT treatments and the loading of the chambers must be supervised by a Departmental Authorised Officer or a person authorised by the Department of Agriculture, Water and the Environment (DAWE). Being able to use authorised officers rather than relying solely on departmental staff allows for greater flexibility and cost savings for industry.

INTERESTED IN EXPORT?

To access relevant workplans and protocols for any of the above countries, please register for DAWE's MICoR website via this [link](#).

Australian Mangoes in conjunction with DAWE is currently reviewing the online export process that was implemented last season. If you are interested in exporting for the 2020/2021 season, we will keep you informed via our newsletter regarding export updates.

We would like to thank Manbulloo Ltd., Diamond Star and the Australian Department of Agriculture for allowing us to attend their treatment facility pre-clearance inspections.

As of February 2020, there are three operating and approved (approved by DAWE) VHT facilities and three irradiation facilities in Australia.

Vapour Heat Treatment facility operators

Diamond Star Australia

P: +61 (0)7 4093 4448

M: +61 (0)487 934 448

<http://diamondstaraus.com.au>

Manbulloo Ltd.

P: +61 (0)7 3860 6990

E: export@mangoroad.com.au

Perfection Fresh

P: +61 (0)7 3310 3900

E: export@perfection.com.au

Irradiation facility operator

Steritech

T: +61 (0)7 3385 8400

M: +61 (0)417 122 230

E: breilly@steritech.com.au

JAPAN

Japan is quite a small market with 15,437 kilograms exported during the 2019/2020 season. Japan has varietal restrictions and only Australian KP, R2E2, Keitt, Kent and Palmer can be exported into Japan. Packing sheds need to be registered for export but not the orchards. The presence of Queensland fruit fly (*Bactrocera tryoni*) and Mediterranean fruit fly (*Ceratitidis capitata*) is a major concern to the Japanese authorities and all Australian mangoes for export to Japan must undergo VHT to mitigate the risk of fruit flies. The VHT facilities registered to export into Japan must undergo pre-clearance inspections undertaken by a Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) officer.

Industry is working closely with DAWE to negotiate the removal of pre-clearance inspections and varietal restrictions.

At the end of last year, the MAFF officer went to Manbulloo Ltd. and Diamond Star to oversee the first VHT treatment of the season and Australian Mangoes were able to attend. The inspection process includes the calibration of the sensors in water using a NATA certified reference thermometer and the actual treatment schedule where temperature probes are placed in fruit pulp in each of the lower, middle and upper parts of the chamber.

SOUTH KOREA

This is a growing market with a significant increase in volume exported—208,298 kilograms in 2019/20. Orchards and packhouses need to be registered and crop monitoring needs to be undertaken every two weeks from flowering by an accredited person, for mango seed weevil, stem end rot, red-banded mango caterpillar and bacterial black spot. Fruit flies are also a major concern for Korea and all Australian mangoes must undergo VHT. A Departmental Authorised Officer must be present for all VHT treatments and supervise the loading of the treatment chambers. The Republic of Korea's Animal and Plant Quarantine Agency (QIA) may, at their discretion, send an officer to inspect orchards, packhouses and treatment facilities and observe the export procedures for mango exports to determine compliance with the protocol and to observe practices relating to pests of quarantine concern.

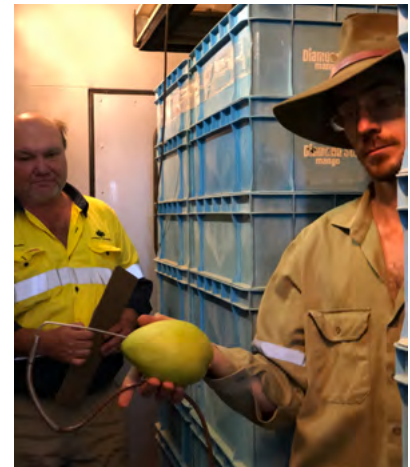
NEW ZEALAND

New Zealand is the third biggest market in terms of volume exported after Singapore and Hong Kong with 1,275,127 kilograms exported during the 2019/20 season. Orchards and packhouses don't need to be registered for the New Zealand export program. The treatment pathway for mangoes into New Zealand is irradiation. The minimum treatment rate, specified by the NZ Ministry for Primary Industries (MPI),

At the end of last year, the MAFF officer went to Manbulloo Ltd. and Diamond Star to oversee the first VHT treatment of the season and Australian Mangoes were able to attend.



- The calibration is performed by placing all temperature sensors in a hot water vat. Each sensor must sit separately within the vat and they must read within $\pm 0.2^{\circ}\text{C}$ of 47°C .
- Each sensor must be calibrated three times to show repeatability of readings, this involves removing the sensors from the vat and allowing their readings to move away from 47°C before returning them to the vat and re-stabilising to 47°C .
- The temperature of water in the vat must be stabilised to 47°C against a reference thermometer before commencing the calibration test.
- The reference thermometer must be NATA certified every 3 years.



- The temperature probes must be placed in fruit pulp in each of the lower, middle and upper parts of the chamber.
- The treatment must be undertaken in a chamber heated using saturated vapour with an air temperature exceeding 48°C .
- The innermost fruit pulp temperature must be maintained or above 47°C for 15 consecutive minutes.



- Chambers being loaded at the Diamond Star VHT facility under the supervision of MAFF and departmental officers.



- The VHT chamber has a uniquely numbered seal which is required as part of the process.

for mangoes exported from Australia is 250 Gy. This minimum irradiation rate is deemed to be effective for the fruit flies and regulated arthropods of concern for New Zealand. The Department of Agriculture, Water and Environment audits treatment facilities to ensure compliance with Australia-New Zealand Bilateral Quarantine Arrangement requirements.

USA

The importation of Australian mangoes into the USA using irradiation as a quarantine treatment was approved in September 2013. The USA is still a small market with 73,055 kilograms exported last season.

Orchards and packhouses need to be registered and crop monitoring needs to be undertaken for fruit flies, mango seed weevil, bacterial black spot and stem end rots. The minimum treatment rate for mangoes exported from Australia is 300 Gy. This minimum irradiation rate is deemed to be effective for fruit flies and mango seed weevil. In addition to irradiation treatment, each consignment must be inspected and accompanied by a phytosanitary certificate issued by the Department of Agriculture, Water and Environment.