

# MANGO MATTERS

APRIL 2018 / VOLUME THIRTY-ONE

## MONITORING AUSTRALIAN MANGOES THROUGH TO RETAIL IN THE UNITED STATES

*Page 20*

TASTE AUSTRALIA INVITE YOU TO PARTICIPATE!

*Page 11*

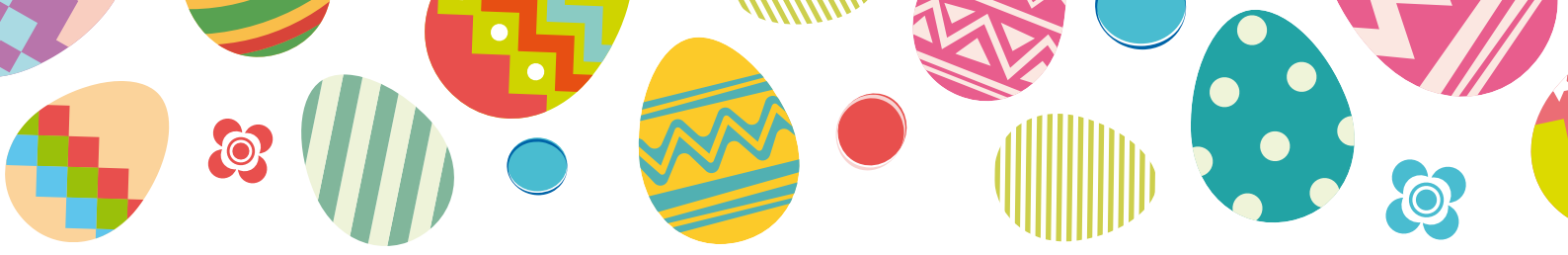
BUILDING AUSTRALIAN MANGOES EXPORT PRESENCE

*Page 12*

MORE PROFIT FROM NITROGEN—PROJECT UPDATE

*Page 18*

AUTUMN  
ISSUE



**WE HOPE YOU HAD A**

**Happy Easter!**



**FROM THE TEAM AT  
AUSTRALIAN MANGOES.**





## PAGE 16

### THE NEW MANGO EMOJI IS TO BE RELEASED IN JUNE

We'll soon be able to text the delicious mango which has been immortalised in the form of an emoji!

#### Australian Mango Industry Association (AMIA) Contact Details

Office Address: Unit 2, The Fresh Centre, Brisbane Markets  
Postal Address: PO Box 376, Brisbane Markets QLD 4106  
Phone: 07 3278 3755 Fax: 07 3278 4761  
Email: [com@mangoes.net.au](mailto:com@mangoes.net.au)  
Australian Mangoes: [www.mangoes.net.au](http://www.mangoes.net.au) AMIA: [www.industry.mangoes.net.au](http://www.industry.mangoes.net.au)

*Mango Matters* has been funded by Hort Innovation, using the mango research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Disclaimer: This publication is produced upon the understanding that no responsibility is accepted by AMIA, its directors and officers and the editor for any opinions, claims or statements made and views expressed in any edition of *Mango Matters* and associated material (for example Conference Proceedings, Industry Reports). Readers should rely on their own enquiries when making decisions concerning their interests. All material in the magazine is copyright. Reproduction in whole or part is not permitted without the written permission of the editor.

# CONTENTS

## 4 CEO & CHAIRMAN REPORTS

## 6 DIRECTOR REPORTS

## 8 AMIA AND INDUSTRY NEWS

Chemical updates

WA visit

Want to become an industry leader? Register your interest now!

Taste Australia invite you to participate!

## 12 PR & MARKETING

Building Australian Mangoes export presence

Consumers, influencers and media enjoy every last bite of mango season

## 18 RESEARCH & POLICY

More profit from nitrogen—project update

Achieving sustainable cultivation of mangoes

Monitoring Australian mangoes through to retail in the United States

Temperature management risks during sea-freight export of mangoes to Asia

Monitoring the temperatures of your fruit—what system to use?

Staying healthy for you!

## 27 PEOPLE & EVENTS

Spotted in WA!

*Publication design by Fresh Republic  
[www.freshrepublic.com.au](http://www.freshrepublic.com.au)*

### WANT TO CONTRIBUTE?

If you would like to submit pictures and story ideas to AMIA, or provide feedback, please contact the AMIA team via the details listed on this page.

# CEO'S REPORT



**Robert Gray**  
Chief Executive Officer, AMIA

Email: [ceo@mangoes.net.au](mailto:ceo@mangoes.net.au)  
Mob: 0418 737 861

**“Australian producers should remain confident with the products they’re delivering to the marketplace and should continue to deliver a quality product to our consumers.”**

Welcome to this edition of *Mango Matters*, we hope you had a happy Easter.

After a huge season, many of you are probably enjoying a short break and starting to prepare for the next one. The AMIA team are currently conducting post season reviews and starting to plan for next season.

In AMIA office news, Supply and Communications Manager, Jessica Mitchell, will be commencing maternity leave in May and is expected to return in early 2019. In Jessica’s absence, please don’t hesitate to contact Samantha, Treena, or myself. We wish Jessica all the best with the safe arrival of her baby and look forward to welcoming a new addition to the mango team!

## **INDONESIA IMPORTING MANGOES INTO AUSTRALIA**

Many of you have raised concerns about Australia importing mangoes from Indonesia.

AMIA will continue to focus on promoting Australian mangoes in the marketplace.

The Australian Government has strict protocols in place for any imported products entering the country and we remain confident in this process.

Australian mangoes will continue to be Australian consumers’ product of choice during the mango season and retailers will as always continue to support the Australian mango industry.

Australian producers should remain confident with the products they’re delivering to the marketplace and should continue to deliver a quality product to our consumers.

We value the opportunities international trade provides, by allowing other countries to import product, it is opening the doors for us to export to other countries.

## **CHEMICAL UPDATES**

The Ministry of Health, Labour and Welfare has advised that they have decided to permit the use of Fludioxonil as a food additive (including as a post-harvest fungicide) on mangoes. This change is scheduled to occur by the end of 2018.

A new permit (PER84963) for Ethephon to manage seasonal vegetative flushes in mango trees has been issued by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Further details about both chemical updates have been included on page 8.

## **MANGO EMOJI**

AMIA and Hort Innovation were very excited to hear 2016/17’s marketing campaign paid off, with Unicode announcing that the mango emoji will be added to the emoji keyboard later this year. A big congratulations to everyone involved! If you missed the announcement, you can read more about it in the marketing report on page 16.

## **WA VISIT**

In January, Samantha and Treena visited Western Australia to participate in the West Midlands Group Mango Industry Summit, and visit growers on farms across the Carnarvon and Gingin regions. They thoroughly enjoyed their time over there. You can read more about the visit on page 9.

# CHAIRMAN'S REPORT



**Greg McMahon**  
Chairman, AMIA

Email: [greg@mcmahongroup.com.au](mailto:greg@mcmahongroup.com.au)  
Mob: 0419 831 899

With the peak of the season behind us, we are looking forward to seeing just how many mangoes the Australian industry has managed to pick, pack and sell over the 2017/18 season. As well as looking at the actual amount of fruit dispatched to market, AMIA will be reviewing the work Hort Innovation and the organisation has conducted this season, to support what I think will be another year of growth for the industry.

We have already started to think about how we can deliver services more effectively to growers and all parts of the supply chain. What we know so far, is that consumers have continued to respond very positively to the flavour profile growers are delivering to them, and retailers are also very positive about the forecasting and the quality standards being maintained. This season we have seen (as in previous seasons) the market responding to peaks in supply, which have been planned in advance, based on forecasting data.

During our review of the forecasting process, we are likely to see that forecast fruit to be delivered tracked below what was actually sent to the market. A mango crop is notoriously difficult to forecast. Many factors can have an impact on what a grower believes his or her farm will deliver—late pest or disease issues, rain, fruit size not tracking as expected, labour and logistics issues, the list goes on. On top of that, a conservative bias when providing a forecast is probably a natural thing to do for most of us. However, these factors do not explain the entire problem of under-forecasting. I fear some growers may still have an issue with providing information about their crop for fear of the information being used against them.



**“Next season we want to continue to find ways to help growers and packers deliver accurate information on their forecasting.”**

As an example, I attended a grower forum (not for the mango industry) several months ago where a grower spoke about forecasting. He was responding to a conversation about technology being developed that would allow crop forecasting to be undertaken more accurately and more often. This grower was happy about the technology being available to individual growers, but was very concerned that it might fall into the hands of the wrong people—he specifically mentioned retailers. The argument the grower was prosecuting is that if the retailers know he will have a large crop, they will drop the price for longer and by more, than would otherwise be the case. He genuinely believed that his crop information, or more accurately the collective data for the crops he and his colleagues grow, is confidential information which gives the growers a competitive advantage against their enemy—the retailers and wholesalers who buy his produce.

The forecasting and objective reporting work which the mango industry has conducted over the last three seasons has shown the opposite to be true. Arming wholesalers and retailers (and the rest of

the supply chain) with accurate information about how much fruit is coming during the season means they can be prepared. And preparation means being able to better manage carton supplies, shelf space, catalogues, promotions and logistics. Without this knowledge rapid changes in supply for a product like mangoes with a short shelf life will spell trouble. In the absence of being able to plan strategic promotions and adequate shelf space, a large wave of supply that is not expected will be met with the only response possible, a significant price cut.

Next season we want to continue to find ways to help growers and packers deliver accurate information on their forecasting. We know it is difficult, especially when the days are long and other priorities are pressing in the middle of a season, but we have enough evidence now that means this task should be given a little extra time by all concerned (including us). More information will follow, on how we can help growers with this important task ahead of the 2018/19 season.

# DIRECTOR REPORTS

## FAR NORTH QUEENSLAND & NORTH QUEENSLAND



*Matt Fealy*

*M: 0402 412 471*

*E: matt@blueskyproduce.com.au*

Another season has finished and it is time for all the post-harvest work to begin. There is no hiding the disappointing returns for many in the Mareeba/Dimbulah region. However, I would like to look at the things that are within our control versus the things that are not.

Out of our control:

1. China border closure; AMIA continue to work on official China protocols to gain access to China and have already made significant steps toward opening other new markets,
2. Regional overlaps; Mother Nature is always a challenge,
3. A very late Chinese New Year.

Within our control:

1. Accurate forecasting; the inaccuracy of the forecasting this year was apparent. The figures do not lie. The same volume of fruit is on the trees whether we communicate with the industry or not.

By accurately forecasting the supply chain can prepare for it. I for one would much rather see our retail partners begin heavy promotion, perhaps even specials, before the fruit turns up. Rather than them having to store and move large volumes of fruit and sell it re-actively, which could cause them to sell it for much less than what any planned promotion would have been.

I cannot think of a single negative impact accurate forecasting can have on our returns, but I can see many strong benefits. So, before we look elsewhere for all the reasons our returns were down this year, pause for a moment and remember that there is at least one very important thing we are ultimately in control of.



*Ben Martin*

*M: 0400 125 928*

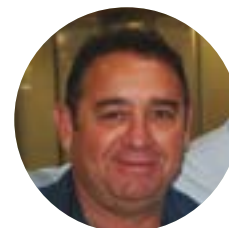
*E: bjmenterprises@live.com*

The topic of imports is a hot issue at the moment. While we may not be happy with the recent announcement about imports, it is a timely reminder that we need to focus on quality and safe produce. As an industry, we need to protect our country from pest and diseases from not only imports but from within our country as well.

The number of abandoned orchards in Australia that breed pests and diseases need to be looked at and addressed in my opinion. We also need to ensure that all checks and audits are thoroughly completed and that protocols are strictly followed. There is no room for error or complacency. We need to ensure that the message—support your local farmers and buy Australian grown mangoes—gets out to the Australian public.

We also need to use this as an opportunity to push the government on better market access protocols to China, Korea, Japan and the USA. I believe that if we had more workable protocols to these countries it would take the industry to the next level.

Like I have said previously, we need to ensure that the quality and safety of our fruit is second to none, and that every mango our consumers eat is a great mango and they come back and buy more.



*John Nucifora*

*M: 0418 193 885*

*E: flossndeb@bigpond.com*

The season has come to an end. I had many complaints from growers in my region, that this season was one they would like to forget. In some cases, prices were disheartening and down on last season by about \$4-\$6 a tray. However, considering that it was one of the largest production seasons we have ever had, prices were reasonable for good fruit.

We are having a big amount of rain at the moment, which hopefully should give us a huge flowering. If that is the case, we will try and prepare for another huge year, and will need marketing to support this. To achieve this, I believe growers need to try and estimate a more accurate forecast on volume. This will prepare wholesalers and retailers for the highs and lows of volumes and therefore they can better prepare themselves and the market accordingly.

*Continued page 7*





Continued from page 6

## NORTHERN WESTERN AUSTRALIA & NORTHERN TERRITORY



**Han Shiong Siah**  
M: 0423 444 598  
E: [han.siah@tropicalprimary.com](mailto:han.siah@tropicalprimary.com)

It been a quiet couple of months, where many famers took a well earned break. A few farms are starting to prepare themselves for the upcoming mango season.

We had impressive rainfall in January and February where Darwin did not see sun for over two weeks. As I am writing this the Bureau of Meteorology has predicted further heavy rainfall in mid to late March which might affect flowering.

Several issues have been raised by local growers including: a shortage of labour; concerns about changes to horticulture award conditions; as well as the recent announcement of possible fresh import of Indonesian mangoes during the Darwin harvest period. These issues have been brought to my attention and the AMIA Board's and we are currently discussing how to minimise any potential impact



**Gavin Scurr**  
M: 0407 714 549  
E: [gavin.scurr@pinata.com.au](mailto:gavin.scurr@pinata.com.au)

Although it has been a few months since the season was completed in Katherine it is pleasing to see there are still mangoes available at retail from other regions. This shows the true length of the mango season which for this year has seen record volumes harvested. I feel the longer we have mangoes on the shelves the more they will become a part of consumer's regular diets, meaning they will make it onto their shopping list more frequently, which will help drive demand.

We have had a pretty good wet season again in the Top End so if we get a reasonable winter we should have another reasonable crop.

Keeping the new growth clean has been a bit of a challenge, however this is not unusual for this time of the year.



**Geoff Warnock**  
M: 0438 884 842  
E: [gullivers@wn.com.au](mailto:gullivers@wn.com.au)

**KUNUNURRA:** This region produced the most fruit it has ever produced in one season. This in turn created difficulties not experienced previously, such as, a shortage of labour for picking and lack of transport to get the product to the market. The prices received were not as high as the previous season, but gave growers a reasonable return.

At present the area is experiencing a very moderate wet season, with below average rainfall to date, but it should be sufficient for producing a reasonable crop for the coming season.

**CARNARVON:** Carnarvon's season is now complete and growers are busy pruning and getting prepared for the next one. Production from this region was up a little on estimations but the prices and return was down on the previous season's. Feedback received indicated that this was largely due to mixed maturity in the marketplace. Industry are focused on improving this by working with growers on refining their maturity and harvest practices next season.

**SOUTHERN REGION:** At the time of writing, growers in this region are now picking, some started in mid-February with select picking. This area has experienced some moderate weather events, including rain, which created some minor disease outbreaks.

## SOUTHERN QUEENSLAND & NEW SOUTH WALES



**Karl Gygar**  
M: 0481 591 470  
E: [kgygar@gmail.com](mailto:kgygar@gmail.com)

At the time of writing, most growers across the region have now finished for another season. Although a few late varieties are still being harvested.

The region has recently seen large rainfall in some areas which was much needed for some growers.

In recent meetings the AMIA Board has highlighted the need for growers to provide accurate forecasting. Accurate forecasting allows the team at AMIA to engage with customers and consumers and prepare the market for fluctuations in seasonal volume. Getting forecasting as accurate as possible will be a strong focus in the coming season for the industry. I strongly encourage growers to review your actual figures against your forecast figures for this season and think about how you went—could you do better next year? What strategy for forecasting worked for you this year? Better data in, translates into better results for every marketing dollar spent.

# AMIA AND INDUSTRY NEWS

## Chemical updates

### FLUDIOXONIL

Following the Conference for Promotion of Food Import Facilitation (Food Safety Group Conference) held at the Ministry of Health, Labour and Welfare (MHLW), the MHLW (a cabinet level ministry of the Japanese government) advised that they have decided to permit the use of Fludioxonil as a food additive (including as a post-harvest fungicide) on mangoes.

As a result, the maximum residue limit (MRL) for Fludioxonil (on mangoes sent to Japan) will be revised from the current uniform standard of 0.01 parts per million (ppm) to 5ppm.

This change is scheduled to occur by the end of 2018. We will keep you updated on implementation of this change and any progress on ongoing work regarding market access improvements for mangoes to Japan.

### ETHEPHON

The following permit has been issued by the Australian Pesticides and Veterinary Medicines Authority (APVMA):

<b>Permit ID</b>	PER84963 (Replaces PER14970*)
<b>Description</b>	Ethephon / Mangoes / To manage seasonal vegetative flushes in mango trees
<b>Date Issued</b>	08-Feb-18
<b>Expiry Date</b>	28-Feb-22
<b>Permit Holder</b>	AMIA

A copy of the permit can be found [here](#). Please note some application rates were inadvertently omitted from this update. This is being reviewed and any further updates will be communicated in our monthly newsletter *The Slice*.

*\*Please note that PER84963 will replace the existing permit—PER14970 which will be surrendered.*

All efforts have been made to provide the most current, complete and accurate information on these permits, however we recommend that you confirm the details of these permits at the following APVMA website: <https://portal.apvma.gov.au/permits>.

Hort Innovation have also advised that a Non-Performance Reporting Form for Horticultural Pesticides\* should be completed when an adverse experience occurs as a result of using the permit. To request a copy of this form please email (please also return this form to the same contact): [jodie.pedrana@horticulture.com.au](mailto:jodie.pedrana@horticulture.com.au).

If you require any 'non-performance' information to be provided to the APVMA, please complete their Adverse Experience Report Form. This can be found at <https://apvma.gov.au/node/311>.

*\*A 'non-performance' is an unintended or unexpected effect on plants, plant products, animals, human beings or the environment, including injury, sensitivity reactions or lack of efficacy associated with the use of an agricultural chemical product(s) when used according to label (or permit) directions.*

Users are advised that while the pesticide can be applied legally under the APVMA minor use permit, there can be a significant delay until the MRL gazetted by the APVMA is adopted in the Australia New Zealand Food Standards Code.

Until this occurs the MRL may not be recognised and a zero tolerance may be imposed for residues of the pesticide resulting from its use according to the APVMA permit.

Please be aware that in the absence of an MRL in the Food Standards Code, the use of the pesticide according to the permit may result in the suspension of the produce in the marketplace. Please check the FSANZ website or the Australian Government ComLaw website: <http://www.comlaw.gov.au/Details/F2014C01358/Download> to confirm if there are MRLs established by the Australia New Zealand Food Standards Code.



# WA visit

In January, Samantha and Treena visited Western Australia to participate in the West Midlands Group Mango Industry Summit (in conjunction with the Southern Mango Growers Group (SMANGO)) and visit growers and their families on farms across the Carnarvon and Gingin regions.

Carnarvon growers were part way through their harvest and the visits provided an excellent opportunity to reinforce the industry strategy and remind growers of our collective commitment to delivering consumers a great mango experience, every mango, every time.

At the Mango Industry Summit AMIA had the opportunity to present the results of our journey so far, the Australian Mango Strategic Investment Plan, and the *Wheel of Velocity and Momentum* (the Australian Mango Industry Marketing Plan). Growers enthusiastically embraced the plan and were very clear about the role they play and the importance of forecasting and picking and packing to the Australian Mango Industry Quality Standards. Considerable time was spent on presenting and discussing the 'decision to pick' and the industry standards for dry matter.

We wish to send a **big thanks** to all the growers who hosted our farm visits, your hospitality and generosity was greatly appreciated. A special thank you to Carolina Brander from West Midlands Group and the SMANGO growers for organising the meeting. The content and professionalism of the presentations coupled with the grower engagement was outstanding.






## Celebrating 30 years as your local super fund

Since 1988, we've been Australia's chosen rural and regional industry super fund. Created by the agriculture and horticulture industries and driven by a team of local Regional Managers, we're proud to support over 100,000 members, 20,000 employers, and nearly 100 industry partners and events.

Find out how AustSafe Super can support you.

 **1300 131 293**  
 **austsafe.com.au**








Read the relevant AustSafe Super Product Disclosure Statement (PDS) available at [austsafe.com.au](http://austsafe.com.au) before making a decision in relation to a product. Austsafe Pty Ltd ABN 96 010 528 597 AFSL 314183 is the Trustee of AustSafe Super ABN 92 398 191 503.



# Want to become an industry leader? Register your interest now!

AMIA together with other peak industry bodies, has secured funding from the Coalition Government's Leadership in Agricultural Industries Fund, to run activities as part of the Leadership Exploration and Development (LEAD) program.

The project will develop leadership capacity in potential and existing leaders for a group of aligned horticultural industries, to collaborate in advocating rural issues to engage with government and other organisations. It will build leadership and mentoring skills in a cooperative way at an industry level through working with existing networks of the Tropical Horticulture Group.

The leadership program will include: pre-workshop self-awareness development; two three day residential workshops; webinars and mentoring development over an 18-month period.

To find out more or if you are interested in applying, contact Samantha Frolov on 0400 810 365 or [ldm@mangoes.net.au](mailto:ldm@mangoes.net.au).

**APPLY NOW**

**HYDRALADA**

Specialised machines for safety, speed and efficiency.

THE CHOICE OF LEADING MANGO GROWERS

PROVEN RECORD FOR REDUCING HARVESTING COSTS

MAXIMISE PRODUCTIVITY BY REDUCING LABOUR UNITS

Available Platform Lift Heights  
6.40m | 5.40m | 4.40m

**HORTICULTURE**

**RELIABLE ON EVERY SURFACE**

1800 124 352  
Email: [sales@hydralada.com](mailto:sales@hydralada.com)  
[www.hydralada.com](http://www.hydralada.com)

# Taste Australia invite you to participate!

Taste Australia is the whole-of-horticulture brand used by industry and Hort Innovation to help increase the profile, sales and consumption of premium horticulture products in key export markets. Hort Innovation manage up to seven trade shows per year under the Taste Australia brand.

All Taste Australia trade events are open to growers and exporters from the mango industry. They are currently seeking interested businesses to attend the following upcoming trade shows in 2018:

- September: Asia Fruit Logistica (AFL) in Hong Kong. The flagship activity in the event calendar—last year more than 200 delegates representing more than 35 businesses and industries (including mangoes) participated. You can find out what people thought of Taste Australia at AFL [here](#).
- October: World of Perishables in Dubai. The only international expo for fresh fruit and vegetables in the Middle East and North Africa (MENA), the show attracts around 8000 key decision makers from the fresh sector.
- November: Fruit and Vegetable Fair in Beijing. Attendance is more strategic with opportunities to engage with Chinese officials and government and support continued market access into China.

## EVENTS ON THE RADAR

China Fruit Logistica in Shanghai will be held in May this year and is run by the same organisation that run AFL and Fruit Logistica Berlin. It is expected that Taste Australia will have a presence from 2019 after evaluating the merits of the show this year.



Treena Welch, Australian Mangoes Marketing Manager, promoting Australian mangoes at Asia Fruit Logistica last year.

Food and Hotel Asia in Singapore will also be held in May this year. Taste Australia will look at developing a food service program over the coming 12-18 months. It is expected Taste Australia will have a presence from 2020.

## ABOUT TASTE AUSTRALIA

Australia has a solid reputation for delivering high-end produce that has undergone the most rigorous food safety

inspections along all stages of the supply chain and the Taste Australia brand builds upon this.

Taste Australia tells the unique story of Australian horticulture products. Our country is known for our blue skies and sunshine, appealing farms and orchards, beaches and beautiful landscapes, and our lifestyle. The story is conveyed through illustrations and supported by beautiful imagery of and key messages about our people, product and place. This premium position sets us apart for our competitors and gives our buyers and consumers a sense of Australia every time they buy and eat Australian horticulture products. Taste Australia export activities include trade shows, trade missions and retail marketing activities.

For more information about how to get involved contact: Julie Willis, Trade Events Manager at Hort Innovation:

[julie.willis@horticulture.com.au](mailto:julie.willis@horticulture.com.au), or 0404 392 311.



Perfection Fresh were part of the Taste Australia stand last year at Asia Fruit Logistica.

# PR & MARKETING

## Building Australian Mangoes export presence

Building new markets takes time and tenacity. It doesn't happen in a single season and it doesn't happen as a result of individual performance. Our ability to create a strong demand for Australian mangoes in new and emerging markets is dependent on our brand reputation. Together we're working, year on year, to create an excellent reputation for Australian Mangoes. A reputation for consistently producing quality mangoes that look and taste superior to any other mango on offer.

During the 2017/2018 season our marketing and promotional efforts in Asia focused on three markets—Korea, Singapore, and Hong Kong. In early September, the Australian Mangoes team attended Asia Fruit Logistica, a three-day trade show in Hong Kong. The annual event was an excellent vehicle for engaging in collaborative planning with growers, exporters, importers, and retailers. From these meetings campaigns were developed specifically targeted to each market and were executed during the peak sales period of November, December and January.

### KOREA

In Korea, the campaign focused on driving awareness and consumer demand for Australian mangoes during November and December using a combination of public relations, social media, in store demonstrations and a major consumer food fair—Café Show.

Recipe development and a media release launched the campaign resulting in several publications printing articles across November and December. These publications reached a wide target audience, including the health and well-

being and lifestyle sectors, encouraging consumers to buy and enjoy Australian mangoes in a variety of different ways.

From 9-12 November, Australian Mangoes were featured at Café Show. The event, attended by many Korean consumers, was an excellent opportunity to increase awareness and encourage people to taste Australian mangoes at the beginning of the peak supply. Mangoes were available for sale and the sampling program converted a large volume of consumers from trying to buying.

*Continued page 13*



Recipe development in Korea led to excellent PR coverage.



Korean Instagram post: How to plate an Australian Mango Turtle.



Korean Instagram post: How to make an Australian Mango Panna Cotta.

Continued from page 12

Homeplus, the second largest hypermarket in Korea and the largest Korean seller of Australian mangoes conducted demonstrations in nine stores across 26 days in the lead up to Christmas. Simultaneously Korea's high-profile bloggers were targeted with all the information and quirky trivia they needed to create some great content. Our efforts were rewarded with awesome blog posts by some of Korea's famous food bloggers demonstrating a variety of delicious recipes. These recipes included; Mango Mousse, Mango Pizza, Mango Cake, and Mango Creamed Shrimp. Consumer awareness, education and engagement was further boosted through a strong social media campaign on Facebook and Instagram.

## HONG KONG AND SINGAPORE

In Hong Kong and Singapore, we worked with retailers Wellcome, Cold Storage and Fair Price, building on the campaigns delivered through these retailers during the previous three seasons.

In late October Australian mangoes were featured as a hero product at 'Cold Storage Day' in Singapore. The event was held at Sun City Convention and Exhibition Centre and was laid out like a giant supermarket. Australian Mangoes had prime real estate and throughout the course of the day we were able to engage, excite, and inspire 2,500 staff, from the chief executive officer to cash register operators.

The day exposed the entire organisation to the great taste of Australian mangoes and the campaign for the coming season.

In early November retail training workshops were conducted in Singapore, with the operations, quality and produce department teams. The sessions were designed to inform, educate, inspire and motivate these teams, so they would engage in best practices for handling and merchandising. They were encouraged to build large, luscious displays in prominent, front-of-store positions and were given quick and easy tips enabling them to connect confidently with their customers.

Continued page 14



Australian Mangoes stand at Cold Storage Day.





Continued from page 13

The newly themed ‘Slice, Dice, Demolish’ Australian Mangoes collateral was well received by all retailers and led to strong store engagement and excellent in store displays. All stores received kits containing point of sale (POS) material including; consumer posters, varietal posters and bunting, varietal header cards and store handling and merchandising guides.

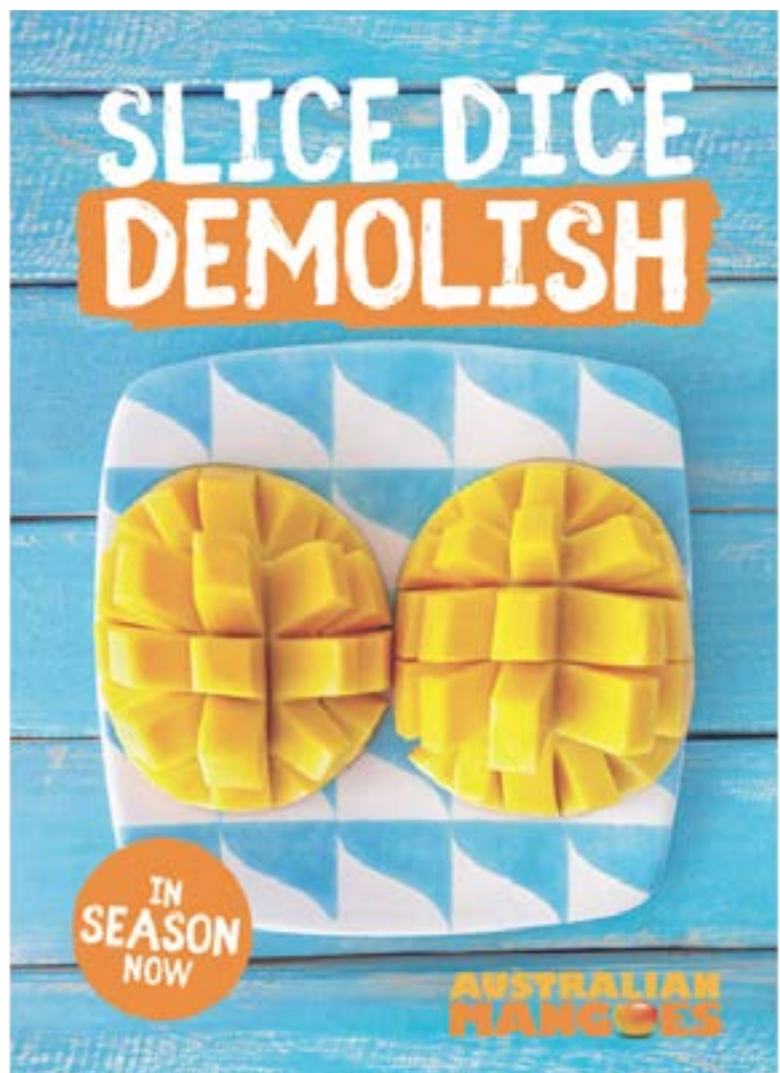
In store demonstrations were conducted in over 40 stores during November, December and January to capture peak supply and optimise the sales opportunities across Christmas and Chinese New Year. The demonstration program was designed to encourage consumers to taste the delicious, juicy, sweet goodness of Australian mangoes giving them the confidence to purchase.

Demonstrators were educated on the differences between R2E2, Honey Gold™ and Calypso™ mangoes and were encouraged to sample and sell to as many consumers as possible. The program was supported by exporters and importers funding the cost of fruit for sampling, and by retailer funded newspapers, online and in store price promotions.

In addition, Hong Kong conducted an Australian Mangoes sales challenge, rewarding stores across a range of criteria including; best sales, best sales improvement and best display.

Our ability to create strong export markets is dependent on our collective commitment to delivering continuity of supply and a quality experience that consistently meets and exceeds the consumer’s expectation. Engaging retailers and consumers is hard work and it requires persistence, endurance, commitment and a single-minded focus on the end objective—to build an insatiable demand for Australian mangoes.

**“The newly themed ‘Slice, Dice, Demolish’ Australian Mangoes collateral was well received by all retailers.”**



For more information contact Treena Welch at AMIA: [marketing@mangoes.net.au](mailto:marketing@mangoes.net.au), or 0417 001 253.



The sweet & simple guide to

# MAKING MORE MANGO SALES

**ALWAYS**

- Keep your display fresh & full
- Leave mangoes in their original carton
- Only display one layer high
- Only have 1 to 2 days of stock on hand

Mangoes bruise easily

**NEVER**  
TIP OUT OF TRAY

Store at room temperature

**NEVER**  
REFRIGERATE

**AUSTRALIAN MANGOES**  
More at [www.mangoes.net.au](http://www.mangoes.net.au)



# Consumers, influencers and media enjoy every last bite of mango season

## MANGO EMOJI

We can't wipe the smiles off our faces because we're thrilled that we'll soon be able to text the delicious mango which has been immortalised in the form of an emoji!

Unicode (a.k.a the Emoji Council) has announced that the king of fruit will be one of 157 new emoji scheduled to be released in June. There are about six billion emoji sent daily and we're pleased that mangoes can now be finally included in text messages and social media updates.

Thanks to everyone who was involved in the #mangoemojiplease campaign who helped push the decision including growers, mango lovers and influencers such as [The Sunkissed Kitchen](#), [Nourish Naturally](#) and [Bonny Rebecca](#).

This news made a huge splash in the media with over 80 outlets reporting it including, [ABC online](#), [news.com.au](#), [The Courier-Mail](#), [hit.com.au](#), [Triple M](#), and [Good Fruit and Vegetables](#). The news was also mentioned on radio stations [ABC Brisbane](#), [Hit 103.1 Townsville](#), [97.3 FM Brisbane](#) and [2GB Sydney](#).



Instagram post from [The Sunkissed Kitchen](#).



Instagram post from [SK Active](#).

## SOCIAL MEDIA AND PR

The summer of Aussie mangoes was rife with juicy mango recipes on social media. From smoothies to salads and from desserts to the fruit in its' natural glory—our #200daysofmangoes hashtag received 1.1 million impressions from January and February alone.

On Facebook, our mango harvest images from across the country were an ongoing hit with fans. Our January and February tiles scored over 12.5 thousand engagements alone. Mango lovers also loved fun quotes such as "When life gives you lemons, ask for mangoes instead." Our content has reached over 600,000 Aussies in the last two months.

Our community was excited to share their own mango creations this season on Instagram. Followers loved the mango filled waffle cone from Queen Victoria Market ([@marketjuice](#)) and a beautifully sliced

R2E2 mango by [@melissasfoodies](#). Among our variety of bright, summer posts, hedgehogs were also a clear winner. When it comes down to it, as long as our Aussie fruit is juicy and delicious, fans love mangoes no matter the variety or how it's sliced or diced!

January was an exciting month when we secured national coverage on [TODAY Extra](#) on Australia Day with an Australian inspired 'Cooking with Mangoes' segment. Our talented chef and influencer [Sarah Glover](#) created delicious summer BBQ recipes on a mango-filled set. Live on-air with hosts Sonia Kruger and Tim Davies, Sarah whipped up delicious Mango and Barramundi Skewers as a savoury dish and followed it up with Juicy Mangoes with Sweet Lime for dessert. The segment can be viewed [here](#).

*Continued page 17*





“January was an exciting month when we secured national coverage on *TODAY Extra* on Australia Day with an Australian inspired ‘Cooking with Mangoes’ segment.”

Continued from page 16

It’s been a huge couple of months for mangoes in the media with the Mango Croissant Puddings, Duck and Mango Noodle Salad, Pulled Pork Sliders with Mango, and Rippled Mango Popsicles being some of the popular recipes being published. Outlets which have printed recipes include *Whitsunday Times*, *Sunshine Coast Daily*, *The Coffs Coast Advocate* and *The Morning Bulletin*.

As we near the tail-end of the mango season, we’ve been encouraging Aussies to freeze their mangoes and what better excuse to freeze a mango than for National Margarita Day! We created a frozen mango margarita recipe and secured coverage on [9Kitchen](#) and [Femail](#).

Grower interviews have also continued to take place—Peter Le Feuvre chatted to *The Burdekin Advocate*, Dale Williams was featured in *Rural Weekly*, and Jill Wilson was interviewed by [Northern Valleys News](#).

## INFLUENCER KITS

Throughout the months of January and February, a few lucky influencers were sent fresh trays of mangoes alongside some extra goodies.

In January, the team sent out an Australia Day kit. Each kit contained a lovely picnic blanket, Australia Day toothpicks,

tongs and our grilled lamb and mangoes recipe. Influencers also received delicious mangoes all inside a drink cooler, perfect for any Australia Day festivities. Influencers got super creative with their mangoes, and created mouth-watering recipes with our kits. Award-winning blogger Sneh Roy from [The Cook Republic](#) grilled mangoes alongside some coconut yoghurt, whilst health blogger Cherie Tu from [Thriving On Plants](#) created a mouth-watering mango and blueberry cheesecake recipe. So yum!

With mango season drawing to a close, it makes it the perfect time to buy and freeze. Throughout the month of February, we sent influencers bespoke freezing kits which contained cocktail stirrers, popsicle makers, ice cube moulds and Aussie mangoes. We also included our juicy mango popsicle and smoothie recipes to enjoy the last weeks of Summer.

Influencers have shared their love for Aussie Mangoes via Instagram, fitness influencer [Melanie Katrine](#) enjoys Aussie mangoes fresh for her afternoon snack, whilst health coach [Relauncher Alison](#) freezes her mangoes for her morning smoothie bowls.

## YOUTUBE

During the mango season, we worked with YouTubers to produce organic content for their channels.

The team sent *Tess Begg* a tray of mangoes and she featured two mango recipes in her [‘What I Eat in a Day’](#) video. Tess starts her day off with a breakfast smoothie which includes oranges, bananas, spinach and frozen mangoes—so refreshing! For lunch, Tess whips up a healthy smoothie bowl which is topped with fresh Aussie mangoes. Tess Begg is a passionate vegan and fitness enthusiast. She has over 300 thousand subscribers on YouTube, and her followers look to her for fitness and food inspiration.

The team also worked with *Greg’s Kitchen* and he re-created our own smoothie recipe. The smoothie is filled with yummy goodness, and simple ingredients you can find in your own home like milk, bananas and mangoes. Greg is one of Australia’s most popular food video content creators based on the sunny Gold Coast. His videos showcase easy recipes that everyone can recreate on a budget. View his delicious creation [here](#).

For more information contact [Elisa King](#) at Hort Innovation: [elisa.king@horticulture.com.au](mailto:elisa.king@horticulture.com.au) or (02) 8295 2332.



# RESEARCH & POLICY

## More profit from nitrogen— project update

The Optimising Nutrient Management for Improved Productivity and Fruit Quality in Mangoes Project, aims to maximise nitrogen use efficiency in the Australian mango industry, to increase productivity, profitability and good environmental management.

An update on this project is now available on the [Hort Innovation website](#).

This update discusses the research questions, methodology, project achievements and initial outcomes

The project is led by the Northern Territory Government Department of Primary Industry and Resources (NTDPIR) in partnership with Queensland University of Technology (QUT).

*Acknowledgments: This project is supported through funding from the Department of Agriculture and Water Resources as part of its Rural Research and Development (R&D) for Profit Program, the NTDPIR, QUT's Institute for Future Environments and Hort Innovation. In-kind support is also provided by AMIA.*

For more information visit [www.crdc.com.au/more-profit-nitrogen](http://www.crdc.com.au/more-profit-nitrogen) or contact: Dr Mila Bristow, Principal Research Scientist, Plant Industry Development, at NTDPIR; [mila.bristow@nt.gov.au](mailto:mila.bristow@nt.gov.au) or (08) 8999 2222.



## WHITTO'S NURSERY

### GRAFTED MANGO TREES

Highly reliable wholesale supplier  
Small and large quantities available

Specialising in R2E2 and KP varieties but can graft any variety onto rootstock  
In the mango industry for over 20 years and provide high quality trees for all orders

Feel free to call for pricing and availability!

**BOWEN QLD 4805 | MATT AND KELLY WHITFIELD | PH 0400 953 313**



# Achieving sustainable cultivation of mangoes

**Achieving sustainable cultivation of mangoes** is out now! Included below is an excerpt from Department of Agriculture and Fisheries, Queensland, Senior Entomologist, Stefano De Faveri's chapter. Other Australian authors also feature in this fantastic book, including Kerry Walsh from Central Queensland University.

## CHAPTER 17

### Integrated pest management and biological pest control strategies in mango cultivation

Stefano De Faveri, Department of Agriculture and Fisheries, Queensland.

1. Introduction
2. Problems with overreliance on insecticides
3. Mango pests
4. IPM options (biological, cultural and chemical)
5. Case studies
6. Future trends and conclusion
7. Where to look for further information
8. References

### 1. Introduction

There have been many definitions of integrated pest management (IPM) over the years. Kogan (1998) reviewed the history behind the establishment of IPM. In the early twentieth century, pest management was based on the set of actions required to avoid, reduce or delay the impact of pests. However in the 1940s, with the advent of organosynthetic insecticides, the focus was on new chemistry to the detriment of biological control. In the 1960s, the term 'integrated control' was conceived where insecticides were used such that their usage did not interfere with natural pest control (Stern et al., 1959). The publication of *Silent Spring* (Carson, 1962) accelerated the acceptance of integrated control. In his review, Kogan (1998) suggested the following definition

for IPM: 'IPM is a decision support system for the selection and use of pest control tactics, singly or harmoniously coordinated into a management system, based on cost/benefit analyses that take into account the interests of and impacts on producers, society and the environment'. This definition considers all relevant stakeholders; ultimately, decisions are based on economics/profit.

The environment may be impacted by the use of broad-spectrum insecticides that could impact waterways or wildlife. The consumer could also be affected by insecticide residues. A simplified definition could be as follows: 'A strategy where a variety of management options were considered and applied harmoniously to manage pests'. Whatever the definition, the ultimate aims are to (1) return a profit and (2) avoid using insecticides wherever possible to benefit the environment, the applicator and the consumer. The aim is to produce good-quality fruits, in our case mangoes, at a minimal cost and with the least impact on the environment.

<http://dx.doi.org/10.19103/AS.2017.0026.21>

© Burleigh Dodds Science Publishing Limited, 2018. All rights reserved.

## BURLEIGH DODDS SERIES IN AGRICULTURAL SCIENCE

### NEW MANGOES TITLE OUT NOW!

#### KEY FEATURES

- Comprehensive review of each step in the value chain for mango cultivation, from breeding new varieties to post-harvest storage
- Coverage of advances in mango genetics and understanding genetic diversity
- Strong focus on understanding and preventing post-harvest losses
- Edited by Dr Victor Galán Saúco, ICIA, Spain and Dr Ping Lu, Charles Darwin University, Australia

#### See chapter excerpt in this magazine:

Integrated pest management and biological pest control strategies in mango cultivation: Stefano De Faveri, Department of Agriculture and Fisheries, Australia



Sign up to our e-newsletter to receive a free copy of the full chapter

Visit [www.bdspublishing.com/Contact-us](http://www.bdspublishing.com/Contact-us) to sign up and see a full list of titles

T (UK): +44 (0)1223 839365

T (US): +1 215-928-9112

[www.bdspublishing.com](http://www.bdspublishing.com)

E: [info@bdspublishing.com](mailto:info@bdspublishing.com)

[@bdspublishing](https://twitter.com/bdspublishing)

[in](https://www.linkedin.com/company/burleigh-dodds-science-publishing) Burleigh Dodds Science Publishing

**burleigh dodds**  
SCIENCE PUBLISHING

# Monitoring Australian mangoes through to retail in the United States—a case study trialling new digital tracking technology

Australian mangoes in the United States (U.S.) are positioned as a premium, high flavour mango. With the long distance involved from, for example, a packing shed in the Northern Territory (NT) to a retailer in Texas (TX), there are risks of either delays or the fruit being subjected to incorrect temperatures in the supply chain. Any delays and incorrect temperatures could impact on the premium quality necessary in this competitive market.

After identifying temperature and quality challenges in the 2016/17 Australian mango season, Northern Territory Department of Primary Industry and Resources (NTDPIR), together with participating growers and exporters and AMIA, reviewed the available monitoring technology in an effort to improve the temperature and location monitoring of Australian mangoes being exported to the U.S.

With support from Telstra and Hort Innovation, two Sendum PT300D devices were acquired by NTDPIR. These devices capture and transmit, in real time, location, temperature, pulp temperature and relative humidity data. This data is transmitted to 'The Cloud' (software and services that run on the internet), and is accessible in real time by registered users. This means that all parties involved with a shipment; growers, exporters, importers, and retailers, can have access to the same real time

information on location and temperature. A particular useful feature of the device is the ability to switch into flight mode, meaning it is airline approved and can be used on export airfreight shipments. All Australian mangoes to the U.S. go by airfreight.

Three trials were conducted in the 2017/18 Australian mango season. One trial was from a mango packing shed in Darwin, NT to an importer in Los Angeles. Another was from a mango packing shed in Bowen, Queensland (QLD) to a retail distribution centre in San Antonio, TX.

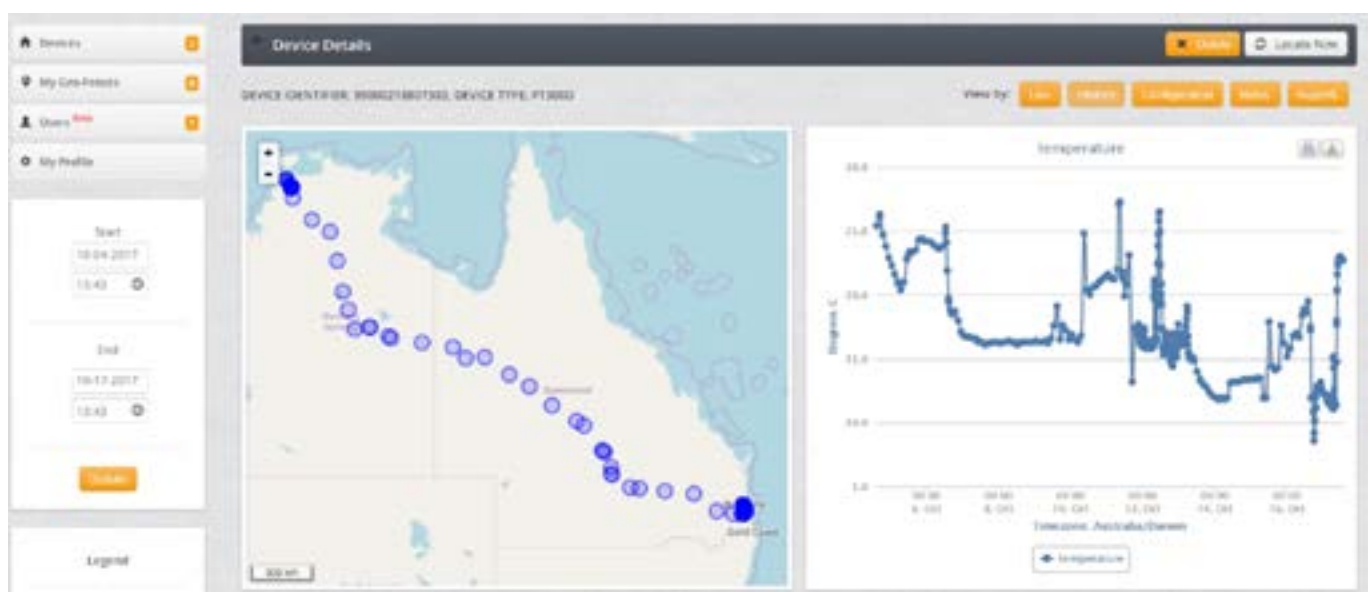
Australian mangoes that go to the U.S. must be irradiated to treat fruit fly and the pallet netted in a fruit fly resistant mesh. The devices were attached to the outside of the mesh, so as not to impact the fruit fly treatment, and on the top of the pallet to reduce the risk of accidentally being knocked off during pallet handling.

Trial one landed safely in Los Angeles and connected to the network but, unfortunately, the device was not then reloaded when it went on to the delivery truck by the importer.

Trial two, unfortunately, was not reloaded by the export treatment facility in Brisbane and therefore no data was recorded on the export flight.

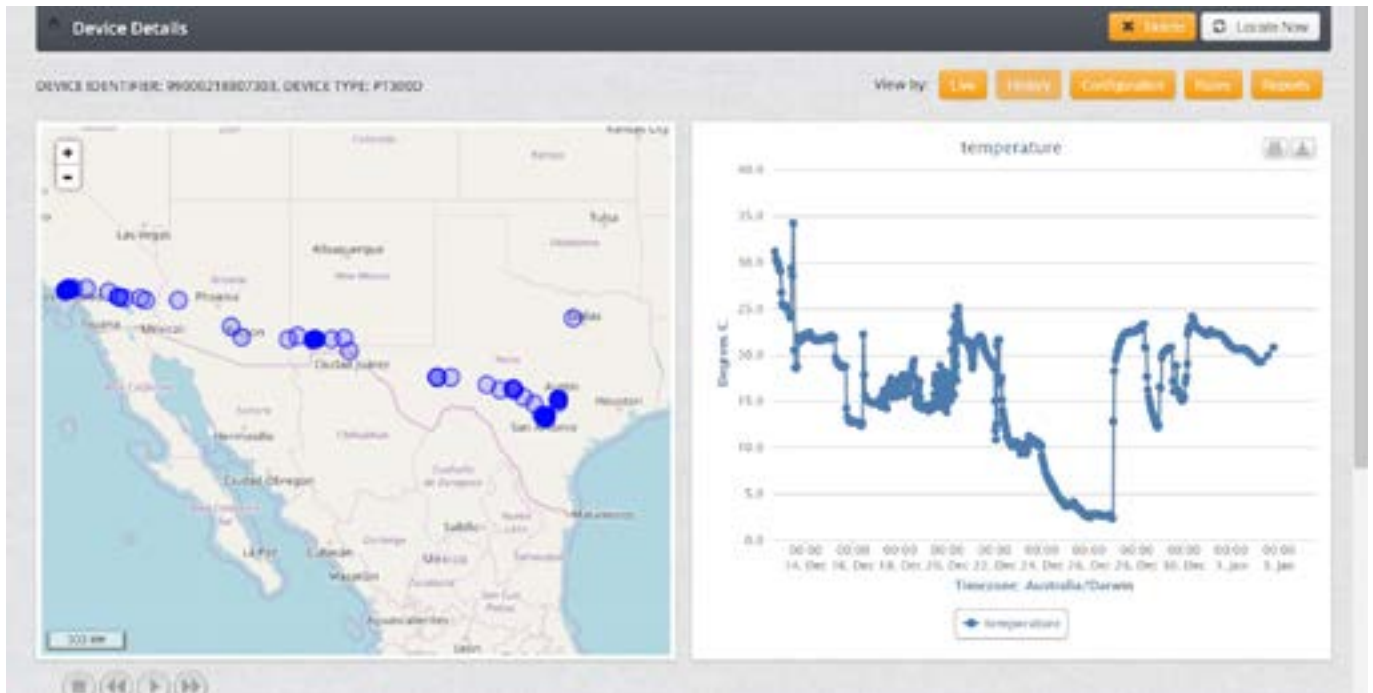
These trials demonstrated that; it is possible to attach a temperature and location monitoring device on mango shipments from the packing shed to the export customer, that the device transmits data in real time as specified, and this data can be accessible to a wide group of shipment stakeholders. The trials also indicated more temperature variations than desirable, and longer delays at some points in the distribution chain than were expected.

*Continued page 21*

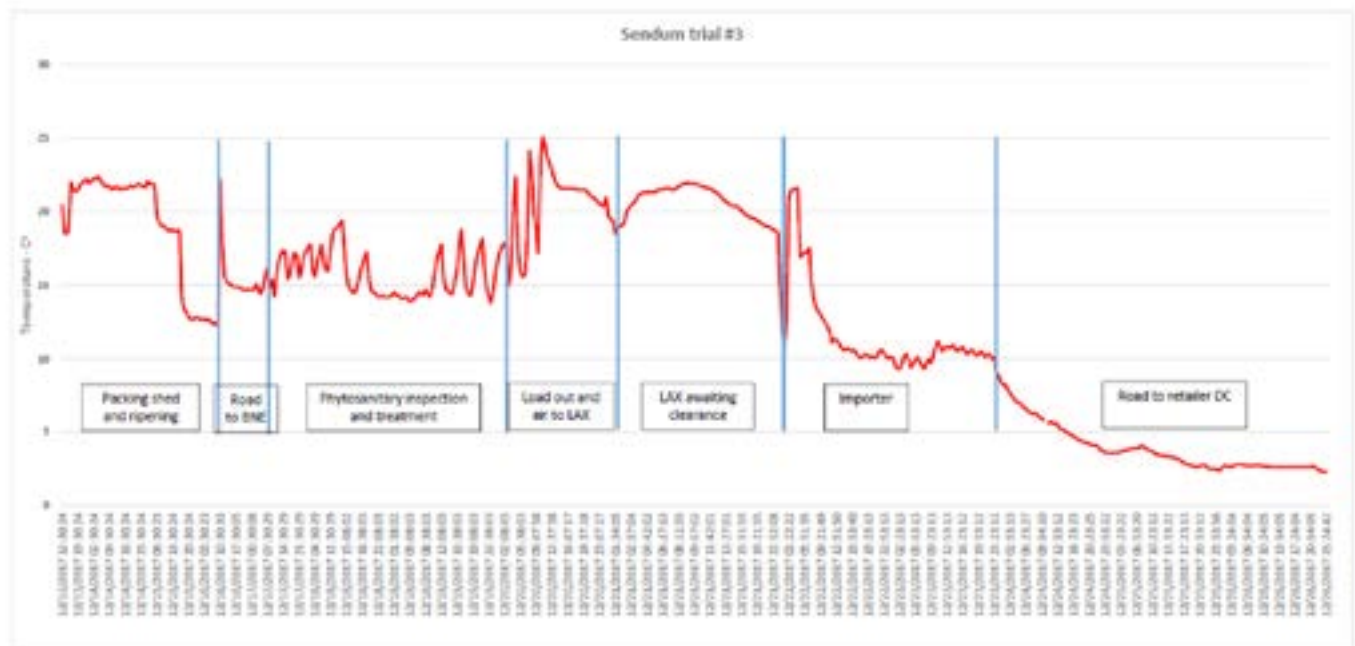


**Trial one:** Device software displaying tracking of the shipment from Darwin to Brisbane and the temperature of the shipment.

Continued from page 20



**Trial three:** Device software displaying tracking of the shipment from Los Angeles to the retail distribution centre in San Antonio, TX. The Australian phase of the trip has been removed from this image for clarity.



**Trial three:** The temperature graph from the packing shed in Bowen, QLD to the retail distribution centre in San Antonio, TX.

**Acknowledgments:** Monitoring mangoes through the supply chain to the USA - 2 (MG16003) has been funded by Hort Innovation, using the mango research and development levy and contributions from the Australian Government. It is also supported by NT DPIR, AMIA and Telstra.

For more information contact: Michael Daysh, Market Development Officer, at NT DPIR; [michael.daysh@nt.gov.au](mailto:michael.daysh@nt.gov.au) or (08) 8999 2300.

# Temperature management risks during sea-freight export of mangoes to Asia

Monitoring of commercial mango export supply chains over the past two seasons has identified a number of instances of poor temperature management that can impact on the fruit quality upon arrival in Asian countries. Poor temperature management can occur at most steps in the supply chain, from farm to retailer, as summarised in the following table.

SUPPLY CHAIN	RISK
<b>Pack shed departure</b>	Uneven cooling of produce during consolidation and storage/cooling on farm. No precooling of trucks before loading
<b>During transport</b>	Inadequate refrigeration capacity or airflow to maintain even fruit temperatures through the load
<b>At freight forwarder</b>	Inadequate or no cooling while coordinating quarantine inspection and loading into air or sea containers
<b>Holding at departure terminal</b>	Inadequate or no cooling
<b>During sea shipment</b>	Uneven temperature differences of up to 5°C between the inside and outside of pallets for around 20 days can trigger significant ripening of fruit deeper inside the load (up to 15°C differences in air shipments)
<b>Arrival, holding at destination terminal</b>	Fruit often stays at the ambient temperatures (often near or below 0°C in e.g. China and South Korea) whilst quarantine inspections are undertaken
<b>At importer</b>	Inadequate or poor temperature management as consignments are split for local buyers and retailers
<b>Transit to retailer</b>	Inadequate management or ambient temperatures depending on mixed nature of loads
<b>In storage or on display at retailers</b>	The local ambient temperature can be quite hot or quite cold depending on the destination and whether the retail stores are air conditioned at night

Figure 1 (page 23) illustrates temperatures at three positions within a pallet after vapour heat treatment and forced air cooling through to arrival in Beijing. Air temperatures around the fruit reached the recommended 12°C following forced air cooling. Temperatures increased in the middle and top of the pallet en-route to the port, and then stayed relatively consistent through the sea journey to Shanghai.

Scott Ledger, Quality and Export Manager at Manbulloo, said that customers usually want seven to ten days shelf life after arrival to allow for sale and distribution to retailers. With the preferred ripeness to be no more than 50% skin yellowing and the fruit to be still firm.

When removed from the container the fruit were riper than expected with an average skin colour of 70% yellowing and the firmness was sprung to firm soft. The temperature monitoring showed that the middle and top of the pallet were 2-3°C higher than optimum, which resulted in the fruit being advanced in ripeness. Fortunately, demand was strong and most of the shipment was distributed within five days of unloading the container.

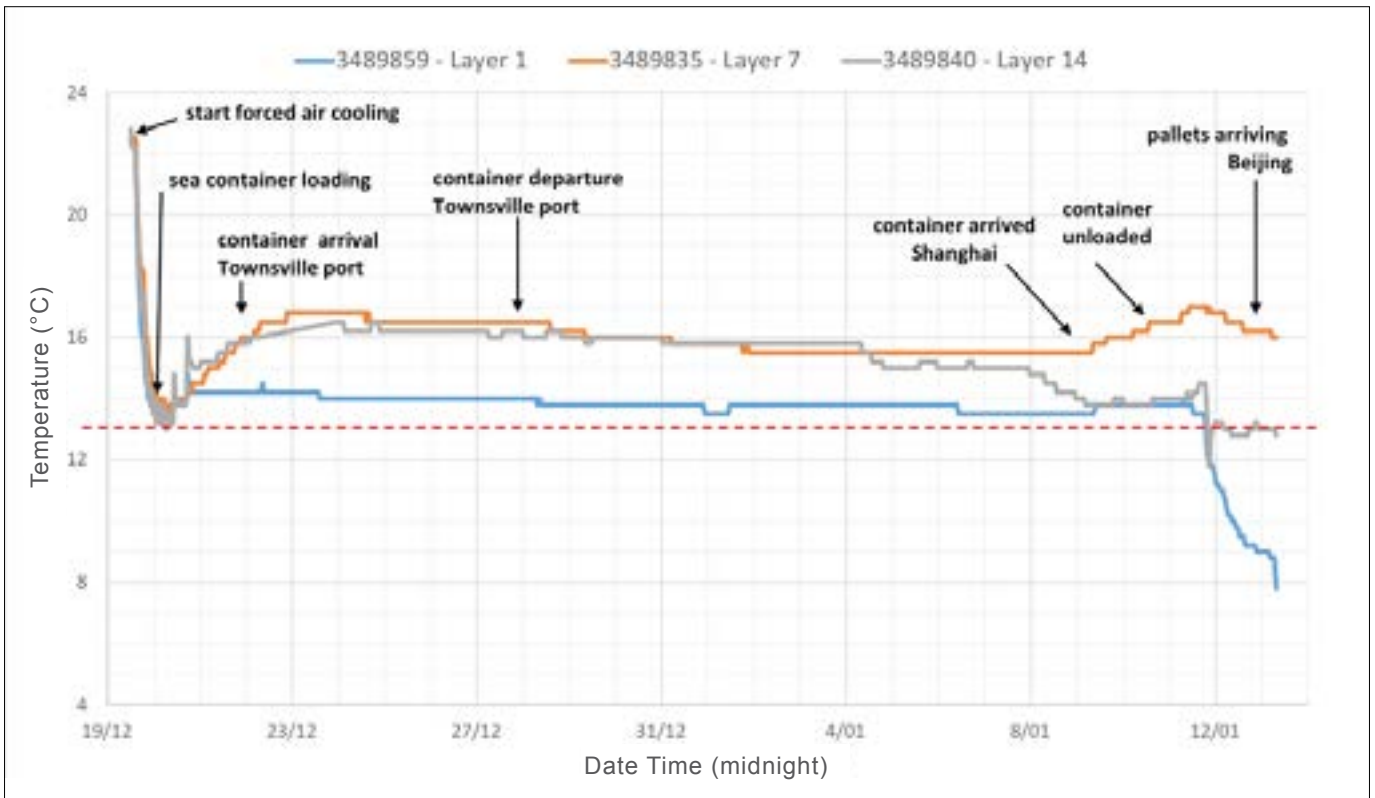
*Acknowledgements: The Serviced Supply Chains project is funded by the Hort Frontiers Asian Markets Fund, part of the Hort Frontiers strategic partnership initiative developed by Hort Innovation, with co-investment from the Department of Agriculture and Fisheries, Queensland (DAF),*

*Department of Economic Development, Jobs, Transport and Resources (Victoria), The University of Southern Queensland, Manbulloo (mangoes), Montague Fresh (summerfruit), Glen Grove (citrus) and contributions from the Australian Government.*

*Article submitted by Noel Ainsworth and Yiru Chen from DAF.*

*For more information contact: Noel Ainsworth, Principal Supply Chain Horticulturist, at DAF; [noel.ainsworth@daf.qld.gov.au](mailto:noel.ainsworth@daf.qld.gov.au) or (07) 3708 8563.*

*Continued page 23*



**Figure 1:** Air temperatures in layer 1 (bottom of pallet), layer 5 (middle) and layer 14 (top) in a seafreight consignment from North Queensland to Beijing (China) via Shanghai (courtesy of Manbulloo). The pallet was unloaded at Shanghai and road-freighted to Beijing.

# VISY BOXES & MORE AND NT PACKAGING

From packaging to transporting mangoes; from the field to the kitchen table; around the corner or around the world, we'll provide more products, more service and more ideas to get your mangoes fresh to the market.



1800 622 626  
visyboxesandmore.com.au



# Monitoring the temperatures of your fruit—what system to use?

While most exporters agree on the importance of temperature monitoring in export consignments, technical limitations and cost have been the main reasons that very little temperature monitoring has occurred through mango export supply chains.

Instead, exporters have relied on pulp temperature checks at select points in the supply chain such as; departure from the packing shed, arrival at the freight forwarder and sometimes arrival at the importer, to manage the risks of excessive heating and cooling on mango quality. This has failed to detect considerable temperature differences within pallets leading to differing ripening rates and chilling/heat damage between trays. This is a particular risk in airfreight transport where temperature management is typically less rigorous.

The emergence of real-time temperature monitoring can now help the exporter estimate produce quality before arrival at the destination market, and advise how the product should be handled.

A recent mango exporters survey found that the top three factors exporters consider when choosing temperature data loggers are the ease of installation, ease of data retrieval and cost of the data logger.

## THERE ARE THREE MAIN TYPES OF TEMPERATURE LOGGERS USED IN MANGO EXPORTS:

### 1. USB logger

The most commonly used temperature logger in the mango industry at present is the USB port logger. These digital loggers sold under a range of brands are cheap to purchase, easy to initiate (just press one button) and easily produce a PDF report of the temperature records. In most cases these self-generate upon plugging the logger into a computer. However, they are often not retrieved, and the data is usually not downloaded unless there is a dispute between an exporter and importer, where the data is used to assign responsibility for a temperature breach.



Picture credit: Department of Agriculture and Fisheries, Queensland.

### 2. Radio frequency logger and communications unit

The last decade has seen the emergence of data loggers that use radio frequency (RF) and a communications unit (CU) located at the importer. The CU retrieves the data wirelessly when the temperature logger is within communication distance of the CU. Hence, there is no need to retrieve the logger to collect the data. The CU is connected to the internet and the data is graphed automatically by the hosting website within several minutes of download, and is available to key stakeholders on a username/password basis. Email alerts can be sent for consignments that suffer from a temperature breach.



Picture credit: <http://www.bt9-tech.com>.

### 3. Sim-card-based system

In the last few years SIM-card-based systems have been released that download data direct to the internet in real time, assuming adequate mobile signal. They generally have the same functionality as RF systems but with the added advantage of real time, and an estimate of logger location based on the mobile signal. The main advantage is that you don't have to physically retrieve the logger to access your data, real time access to the temperature records, and real time tracking of the consignment's location. One current limitation of most SIM-card-based systems is that they are yet to be approved for use for airfreight.



Picture credit: Department of Agriculture and Fisheries, Queensland.

Continued page 25



**“Air temperature loggers placed next to a fruit recorded similar temperatures as the pulp temperature of that fruit during typical transport conditions.”**

Continued from page 24

**Years of experience, and a recent trial comparing twelve available data loggers found that:**

- Most loggers recorded temperature consistently and within 1°C accuracy of a certified reference temperature source, but there were some differences between the loggers that need to be investigated further.
- Air temperature loggers placed next to a fruit recorded similar temperatures as the pulp temperature of that fruit during typical transport conditions. Therefore, pulp probe loggers are not usually warranted given their extra cost compared with air temperature loggers.
- Air temperature can be 4-6°C lower than pulp temperature at the start of forced air cooling because of the large difference between the air and fruit temperature and the high air flow rate. However, these factors have little influence in road, sea or air consignments where air flow over the fruit is much lower.

**RECOMMENDATIONS**

The USB loggers are best to use if an exporter is confident the importer will retrieve the logger and send the data. If this is not the case, and there are difficulties with using a RF system, then the exporter could use real time logger systems (SIM-card-based systems). These systems include LocusTraxx Go Real-Time XL for surface freight, or the Sendum PT300D logger, which has approval for use on a large number of international air carriers, but is also relatively more expensive.

*Acknowledgements: The Serviced Supply Chains project is funded by the Hort Frontiers Asian Markets Fund, part of the Hort Frontiers strategic partnership initiative developed by Hort Innovation, with co-investment from the Department of Agriculture and Fisheries, Queensland (DAF), Department of Economic Development, Jobs, Transport and Resources (Victoria), The University of Southern Queensland, Manbulloo (mangoes), Montague Fresh (summerfruit), Glen Grove (citrus) and contributions from the Australian Government.*

*Article submitted by Noel Ainsworth and Yiru Chen from DAF.*

*For more information contact: Noel Ainsworth, Principal Supply Chain Horticulturist, at DAF; [noel.ainsworth@daf.qld.gov.au](mailto:noel.ainsworth@daf.qld.gov.au) or (07) 3708 8563.*

# GROW YOUR BRAND

## With Quality End-To-End Label Solutions

- Custom & stockline labels & tags
- High quality applicators - automatic, manual, in-line & in-tray
- Track & trace bin tag systems
- Labels for packaging, cartons, punnets, boxes & pallets
- Thermal printers, labels & tags
- Professional label design



 **label press**  
(QLD) PTY LTD  
The Presentation Professionals

98 Cobalt Street, Carole Park Qld 4300 Email: [sales@labelpressaustalia.com.au](mailto:sales@labelpressaustalia.com.au)

[www.labelpressaustalia.com.au](http://www.labelpressaustalia.com.au)

**FREE CALL 1800 773 207**





## Staying healthy for you!

The basic health message is the same for everyone—eat well, don't smoke, go easy on the booze and keep fit.

However, you might find these resources handy for specific things to look out for, depending on your age and gender.

### Men's Health

<https://www.qld.gov.au/health/staying-healthy/men-women/men/ages>

### Women's Health

<https://www.qld.gov.au/health/staying-healthy/men-women/women/ages>

Article prepared with content from [worksafe.qld.gov.au](http://worksafe.qld.gov.au).

# Planting Mango Trees?

Order Grafted Trees **NOW**

Birdwood Nursery is a specialist Fruit Tree nursery supplying wholesale quantities of the highest quality fruit trees to commercial growers throughout Australia.

- Highest quality trees guaranteed
- We deliver to order on time
- Specialist large order supplier
- Efficient palletised transport
- Despatch to all mainland states



Part of the Fleming's Group 

**BIRDWOOD NURSERY**

Telephone: (07) 5442 1611

Email: [info@birdwoodnursery.com.au](mailto:info@birdwoodnursery.com.au)



[www.birdwoodnursery.com.au](http://www.birdwoodnursery.com.au)

# PEOPLE & EVENTS

Spotted in WA!





*Thank you*  
**for another great  
season!**

**AUSTRALIAN  
MANGOES**