

MANGO MATTERS

APRIL 2021 / VOLUME FORTY-THREE

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PAGE 14

Industry supply chains—
2020 / 2021 in review

PAGE 24

Fruit fly research
continues at Mareeba
Research Facility

PAGE 27



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Australian Mangoes engaged and excited in 2020

We have often heard the words “We will always have a mango season, and yet no two mango seasons are ever the same”, and the 2020 season was certainly different to any we have experienced in recent years.

MORE ON PAGE 17

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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.

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CONTENTS

4 CEO & CHAIRMAN REPORTS

6 DIRECTOR REPORTS

8 AMIA & INDUSTRY NEWS

AMIA staff update

Chemical updates

Hort Innovation News

High-Density Mango Canopy Training Field Day

Mango exporters review performance

14 PR & MARKETING

Bold, bright & juicy

Australian Mangoes engaged and excited in 2020

20 BIOSECURITY, RESEARCH & POLICY

Best Practice Resource update (MG17000)

NT Water Use Efficiency Day—Darwin & Katherine

Industry supply chains—2020 / 2021 in review

Fruit fly research continues at Mareeba Research Facility

The Pacific labour solution—what do I need to know?

Picking a mechanical winner

31 UPCOMING EVENTS

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



Brett Kelly
Chief Executive Officer, AMIA
Email: ceo@mangoes.net.au
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"I am very excited to now be a part of the industry and hope to be able to put my experience to good use for all AMIA members."

- Brett Kelly

I would like to introduce myself as the new CEO for Australian Mangoes. I have now been in the role for two months after a thorough handover in March from the previous CEO Robert Gray. I would like to thank Robert for all his help and support with the transitioning of this role. I look forward to getting out and about and meeting our members and growers over the next few months.

Before taking on this role, I was the CEO for Oz Group Co-operative in the Blueberry industry for two years and prior to that as the CEO for Norco Co-operative in the Dairy industry for nine years. In my earlier career, I have held various CEO and senior management positions predominantly in Retail FMCGs (Fast moving consumer goods) and Business Development.

I see huge potential and opportunity for the Australian Mango Industry going forward both domestically and with export in terms of growth, representation, brand positioning, pricing and market share.

I think the three key channels being Mainstream (supermarkets), Route/Food service (independents) and export can be enhanced further for our industry with the right approach. I am very excited to now be a part of the industry and hope to be able to put my experience to good use for all AMIA members.

The last twelve months during the COVID-19 pandemic has been a very difficult time for all businesses, both here in Australia and overseas. We have never experienced this type of challenge before. However, I think the consumer is so much more aware now of just how important the quality, freshness and sustainability of products are that our growers passionately produce. I think with the right ongoing focus and strategies we can build our industry with further success.

The SIP (Strategic Investment Plan) in conjunction with industry stakeholders and Hort Innovation is now being reviewed and finalised for the next five-year plan.

I think the key points of focus now being discussed and reviewed taking into account the previous plan is correct. Going forward and achieving ongoing traction and results that directly benefit our member growers is the key objective.

At the time of writing this report the SIP review meeting in Brisbane (pushed online due to the COVID-19 lockdown) has just been completed and we are now working through the process with Hort Innovation to complete the new five-year plan. The next stage is a review of the first draft in late April with the SIAP committee and AMIA Board. After this fine tuning, the draft will go out to all stakeholders for a final review and sign off. This timing will tie in with a new SIP for five years for our industry being completed and commencing in July 2022.

Please feel free to contact myself, or any of the AMIA team, if you have any queries we can help you with. I look forward to meeting you all in person over the coming months.



PROCESSING

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aussiefrozenfruit.com.au



CHAIRMAN'S REPORT



Ben Martin
Chairman, AMIA

Email: ben@martosmangoes.com.au
Mob: 0400 125 928

Firstly, I would like to introduce our newly appointed CEO, Mr Brett Kelly to our AMIA members. Brett is enthusiastic and will fill an integral role in the development of our industry.

Recently, Hort Innovation has undertaken a review of the industry's Strategic Investment Plan. Initially this was to be undertaken at a forum in Brisbane but was changed at short notice because of the recent COVID-19 lockdown. The review was undertaken via the Microsoft Teams meeting platform with industry and grower representatives participating by remote access. I extend my appreciation to the growers who participated in this review. I expect the draft Strategic Investment Plan to be circulated for comment in May and I urge growers to take the time to review and provide constructive comment on the plan. This will provide a clear and robust pathway for the mango industry for the next five years.

"I urge growers to take the time to review and provide constructive comment on the draft Strategic Investment Plan that will be circulated in May."

- Ben Martin

I also attended a meeting with Minister Mark Furner, Minister for Agricultural Development (Queensland) and Director General Mr Bob Gee to discuss industry issues including the current labour shortages and market access protocols and opportunities. This work is ongoing, and it is vital that current and strategic industry issues are clearly articulated to all tiers of government.

There has been reports of some early flowering in the Northern Territory and hopefully in turn it extends to all regions. The past year has seen a range of natural disasters across our country and our thoughts and support are extended to all impacted growers.



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DIRECTOR REPORTS

NORTHERN TERRITORY & NORTHERN WESTERN AUSTRALIA



Arminio (Nino) Niceforo
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We have seen an excellent start to the year with a solid wet season exceeding 1300mm. NT Water Resources are indicating that a return to full water allocations is likely.

The labour supply challenges caused by COVID-19 are still apparent with labour still in tight supply and southern producers needing as many workers as possible. This is also coupled with melon producers in the north also requiring labour. The challenge before us is to ensure that our labour requirements are met well before this year's harvest.

NT Quarantine arrangements are seeing some changes, with the first of the on-farm Quarantine approvals for a farm in the Darwin region. Should you wish to utilise an on-farm quarantine arrangement, please liaise with NT Farmers.

Given the solid wet, now is the time for focus on our 2021 season pre-work of tree maintenance. Our quality product relies on this. In particular, our fertiliser and spray programs underscore our performance. I know you all will keep up the good work.

A general reminder; don't forget your COVID-19 management plans. I expect that businesses will all be inspected. If you need further information, please contact your Australian Mango Industry Association (AMIA) Industry Development Officers, Sarah or Marine for guidance and templates, as well as your local farming industry bodies and government bodies.

I look forward to seeing great results from all for the coming season.



Geoff Warnock
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First up, I would like welcome Brett Kelly as the new CEO of the board and say thanks to Robert Gray for the time spent in the position for the past few years. 2020 ended up being the year of too many challenges, what with COVID-19 and all the related restrictions associated with it such as access to markets, dwindling worker numbers, etc.

Here is hoping for a much better free flowing upcoming season and let's hope that production can go back to where it used to be.

The indications are that we may be on track for a good result. The "Wet Season" has consisted of good and steady soaking rains with regular falls of between 20-50 mm as opposed to 200 or 300mls in one go which ends up as run-off going down the river.

The trees are looking a lot better for this time of the year than they have for several seasons; most have just finished a very strong flush of new leaf.

We could possibly be in for an early season due to the health of the trees and the cool

night temperatures we are experiencing at present, 5 nights in the past week being between 20 and 22 degrees. The challenge we have to sort through in the meantime is how we will overcome the labour shortage.

Just to finish off, I would like to wish all growers a "fruitful" coming season.



Leo Skliros
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Another mango season on our doorstep. As rains start to ease, NT growers increase their push for early flowering. Many green eating varieties are already having significant success and are looking to be harvested in August. Unfortunately, KP & R2E2 will be looking at the September harvest window before any quantities worth a mention are picked. This will reach a peak in late October in Darwin and mid-to-late November in Katherine. I believe Calypso will be similar timing.

Continued page 7

Labour, labour, labour is top of the list for all industry and political board discussions at both the State/Territory and National level. A great wet season in the NT normally signifies a good volume of fruit but having enough labour for the harvest will be the challenge!

New hopefuls will be our new industry Strategic Investment Plan (SIP) and CEO Brett Kelly working closely with Ben Martin and the new NTMIA board.

FAR NORTH QUEENSLAND & NORTH QUEENSLAND



John Nardi

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At the time of writing harvest has been completed and the last of the fruit is slowly working its way through the retail outlets.

Overall, for the region we saw some real challenges. From weather impacts including frost, rain and hail to major issues with labour supply and retention of labour. The weather conditions during the growing season saw some reduced numbers and quality impacts on fruit. While the early season growers seemed to do well in the market due to the Burdekin crop being later than normal, sales for fruit seemed to hit a wall in the Christmas and early January period which was a real challenge, but late varieties seemed to fare well overall to finish off the season.

Growers will be enjoying a well-deserved break or reduced workload with pruning and pre-winter activities now taking place and planning for next season under way. While we did see reasonable rain early in the wet season, more would be welcome now as it has been relatively dry to date. We always hope for a better coming season and let's hope the weather is kind to us during the growing period this year. I think we really need to focus on putting together a good labour strategy for the coming season as I see this as being one of our biggest challenges going forward.

Finally, I would like to thank our outgoing CEO Robert Gray for his time and efforts while with AMIA and I wish him all the best for any future endeavours. I would also like to welcome incoming CEO Brett Kelly. I am sure Brett's experience will be invaluable to the organisation.



John Nucifora

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I'd like to firstly welcome our new CEO Brett Kelly. I look forward to working with him.

I'd like to thank Robert Gray for his input to the industry over the past years and I wish him well in his next chapter.

Currently we are working on a new 5-year Strategic Investment Plan (SIP) for the mango industry. I was very impressed with the support and new ideas from Brett in the recent workshops held with Hort Innovation.

In this region, last season panned out as average overall. We certainly faced some challenges with the weather. Currently, Mareeba and Dimbulah growers are working on their orchards and preparing for the up-and-coming season. They are also completing all those general maintenance jobs that have to be fitted in.

I look forward to the next season and wish all a successful year ahead.

SOUTHERN QUEENSLAND & NEW SOUTH WALES



Karl Gygar

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The 2020-21 season has been a difficult one for many – low yields in some areas, labour shortages and COVID-19 restrictions have all had major impacts. AMIA has been working with government (both state and federal) to help identify the issues most impacting growers and helping in the development of solutions. It is hoped that with the vaccine rollout and more borders opening, some of the impact will be reduced in the coming season however, a return to "normal" is still some years away. I strongly encourage members to lobby their elected officials to take the labour shortage seriously and throw their weight behind

programs such as the Seasonal Worker Program. It is only with these initiatives that the agriculture industry can survive these trying times.

In recent months, the AMIA has welcomed a new CEO – Brett Kelly. Brett comes with a wealth of knowledge and experience in the Ag industry. I would like to encourage everyone to welcome him and look forward to working with him to bring the next Strategic Investment Plan (SIP) into action.

A new SIP is now being developed in conjunction with Hort Innovation. Once the preliminary SIP is available, the AMIA will review and provide feedback. This document is extremely important as it provides the strategic direction for the industry for the next five years. I strongly encourage all industry members to review this document and provide feedback to the team at Hort Innovation when it becomes available.

SOUTHERN WESTERN AUSTRALIA



David Morcombe

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I'd like to welcome Brett Kelly - our new CEO - and look forward to working with him. Robert's departure as CEO brings a long association with AMIA to a close. He has been involved for an extended period, firstly as a director and later as CEO. AMIA has been a rapidly evolving organisation and it is a credit to Robert that he has been involved with it and has nurtured it to the point where it is ready for the next part of its journey. We all appreciate the professionalism and care taken during the period of finding a successor and the smooth handover.

In the south, we are now in that care, maintenance and planning period between seasons. It was a very light crop so probably a season we'd like to forget about and do all we can to help next season be a successful one. Labour availability looks like being a major issue as we head into the next season so it's probably a good time to start planning for that now as I don't expect the labour supply situation will be resolved any time soon.

AMIA & INDUSTRY NEWS

AMIA staff update

FAREWELL KACIE & WELCOME BACK MARINE

Kacie Buchanan, who had been performing Marine's QLD Industry Development Officer maternity relief, left us in mid-February to take up a permanent position with another business. We thank her for all her efforts over the last six months and wish her the very best in all her future endeavours.

Marine will be returning from her maternity leave on two days per week from May and then she will return to three days a week from the start of the 21/22 season in Spring.

In the interim, if you do need assistance with anything please contact Sarah Hain our NT IDO sarah@mangoes.net.au or 0457 555 939.



COMMUNICATION MANAGER - JESS RETURNS

It is a pleasure to advise that Jess Mitchell has returned from her maternity leave and taken up her role as Communication Manager for Australian Mangoes from 12 April. Jess is easing back into it gently going through a handover period with our temporary team member Jane Richter, and will be fully back on deck working Monday, Tuesday and Friday from late April. We'd like to thank Jane for stepping in to help out just before Christmas and her assistance with getting our new website launched. You can read all about that from page 20.



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Chemical updates

There have been a couple of chemical updates over the past few months. If you are reading the print version of this magazine and need a copy of the permits or other information, please get in touch with Sarah Hain on the details below:

Sarah Hain M: 0457 555 939 E: sarah@mangoes.net.au

PERMITS

METHOMYL

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

Permit ID: PER84427 Version 2

Description: Methomyl / Mango / Redbanded thrips, Chilli thrips, Banana flower thrips & Tomato thrips

Date Issued: 20-Nov-17

Expiry Date: 28-Feb-24

Permit Holder: Hort Innovation

CLOTHIANIDIN

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

Permit ID: PER83944 Version 3

Description: Clothianidin / Mango / Mediterranean Fruit Fly & Queensland Fruit Fly

Date Issued: 27-Nov-17

Expiry Date: 31-Mar-24

Permit Holder: Hort Innovation

Please follow all directions on the permits and the product labels.

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* (available [here](#)) should be completed when an adverse experience occurs as a result of using the permit and returned to: 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: <http://apvma.gov.au/node/311> or <https://portal.apvma.gov.au>.

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: <https://www.legislation.gov.au/Series/F2015L00468> to confirm if there are MRL established by the Australia New Zealand Food Standards Code.

* 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.

NUTRANO PRODUCE GROUP CORRECTION NOTICE:

We would like to issue a correction to the Lady Jane Mangoes advert featured in the Mango Matters October 2020 Volume 41. Please note that Nutrano did not develop the varieties nor do Nutrano hold the plant breeder's right (PBR) globally. Nutrano has exclusive rights to commercialisation, production and marketing of the varieties RA/17 and R10/8.

If you have any queries, please contact Antonella Banno via email antonella.banno@nutrano.com.au.

Hort Innovation News

MEET THE REGIONAL EXTENSION TEAM

Horticulture is rapidly growing as an industry in Australia, with a 40 per cent rise in value over the last five years. Growth is expected to continue with the sector's farm gate production having the potential to increase to between \$20 and \$30 billion by 2030.

To support this growth, Hort Innovation launched an Extension initiative to enhance the coordination, communication, and application of research and development outcomes. The team includes Regional Extension Managers, based in the regions, who will play a linking role within industry.

What extension activities are currently offered through Hort Innovation?

Hort Innovation is currently working with its partners – such as industry groups, universities and government agencies – to deliver hundreds of projects for horticulture levy payers, of which 80-odd investments are dedicated to extension in the form of industry development and communication, and more than 80 investments also involve extension components.

What is the purpose of Hort Innovation's extension initiative?

The extension initiative enhances the coordination, communication and application of research and development outcomes, and includes a team of Regional Extension Managers, who work in the regions. These managers play a linking role and bring broad coalitions together to share skills and capacity, to solve identified regional problems. Service providers benefit from building their technical and extension skills and knowledge via across industry networks. Collaborative approaches to solving regional problems enable tangible outcomes for growers to use on farm.

Does this service replace other extension activities?

No. Extension activities offered through Hort Innovation are important to the industries they service. The Extension Framework complements and adds to other work to ensure growers have the best possible access to outcomes from their levy investments.

Where are Regional Extension Managers based and what will they do?

Regional Extension Managers operate in six horticulture regions that have been identified for targeted extension, capturing 94 per cent of horticultural activity in Australia by employment and production value.

Find out more at <https://www.horticulture.com.au/hort-innovation/our-work/extension/meet-the-regional-extension-team>



Head of Extension based in Brisbane – Jane Wightman



Based at Murgon covering NSW to Rockhampton - Wendy Thorsborne



Based in Perth and covering WA up to Carnarvon - Bronwyn Walsh



Based in Cairns and covering Northern Australia – Olive Hood



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High Density Mango Canopy Training

FIELD DAY TUESDAY 23RD MARCH - REPORT

Thirty growers, researchers and agronomists attended the High-Density Mango Canopy training field day held at the Department of Agriculture and Fisheries Walkamin Research Facility on Tuesday 23rd March.

The field day provided visitors with background information, strategies and demonstrations of training and pruning mangoes for high density intensive orchards. The day showcased the large research trials being undertaken by the strategic partnership initiative, *National Tree Crop Intensification in Horticulture Program (AS18000)*, which is part of the Hort Frontiers Production Systems Fund.

Presentations and demonstrations were given by Dr Ian Bally, Dr Geoff Dickinson, Dale Bennett and Zac Scobell from DAF's Horticulture and Forestry Science group based at Mareeba. Information from

other DAF supported projects including the adoption of higher density systems within commercial mango farms (CRCNA - Transforming Mango Futures project) and advances in new satellite/machine vision imaging and robotic harvesting technologies (Rural R&D for Profit - Multi-scale Monitoring Tools project) were also presented.

The field day was well received with 94% of participants finding the day worthwhile and 75% indicating they had increased their knowledge and understanding of canopy management practices.



Good turnout at the recent field day. Photo credit: Queensland Department of Agriculture and Fisheries.



Zac Scobell pruning mango trial trees. Photo credit: Queensland Department of Agriculture and Fisheries.

Planting opportunity New mango varieties

Two new mango varieties (RA/17 and R10/8) developed by an expert mango breeder in the Northern Territory, offer consumers an exceptional eating experience with a rich sweet flavour and a bright red blush.

Nutrano has the exclusive rights to commercialization, production and marketing of these two varieties and we are seeking mango growers to participate in the planting program.

If you are interested in planting these varieties or would like to find out more information, please contact Antonella Banno via email antonella.banno@nutrano.com.au.



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Mango exporters review performance

Thirty-three mango growers, exporters, supply chain partners and industry representatives attended the *Mango Export Performance Review* held on Thursday 4th March 2021 at the Fresh Centre at Brisbane Markets.

The thrust of the day was to share experiences in consistently delivering quality fruit to customers. This included discussing the barriers to good cold chain management and how these could be overcome.

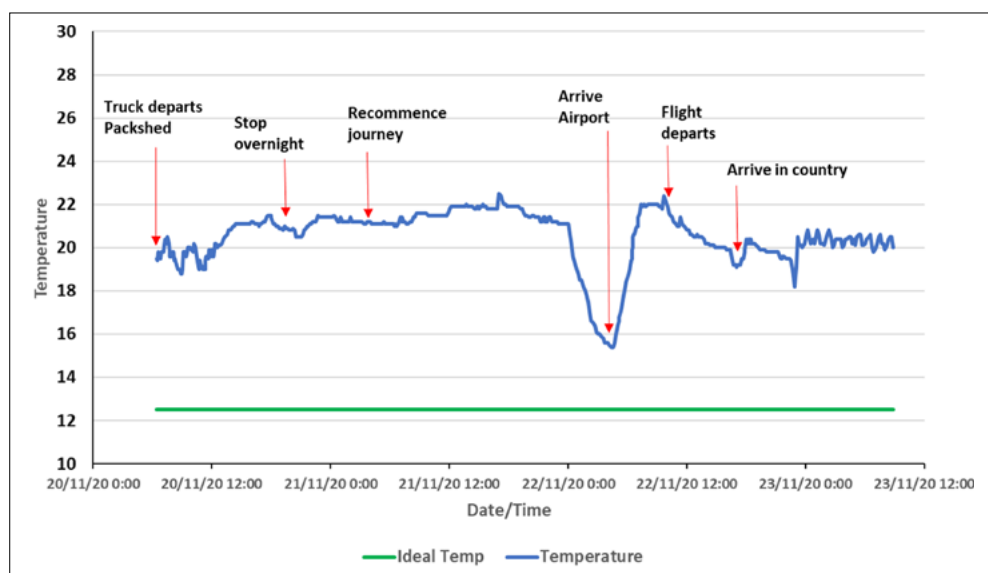
Results and learnings from monitoring the temperature of several mango export consignments (sea and air freighted) during the 2020-21 season were presented by John Agnew (DAF).

Temperature monitoring messages:

- Air freight represents a short supply chain, but is prone to breaks in the cool chain (Figure 1) increasing the risk of fruit arriving at the importer with limited shelf life
- Recommended pack shed dispatch and transport temperatures are 12-13°C
- Sea freight extends the supply chain transit time, but generally offers good temperature control (Figure 2) for preserving shelf life

- For R2E2 mangoes, the fruit can handle a maximum of 9 days at 13°C in a refrigerated shipping container and up to 20 days when controlled atmosphere is used
- It does not matter which tool you use to monitor supply chain temperature, provided you can access and view the data
- SIM-loggers enable users to see temperature and location data in “real-time”; provided there is cellular signal

Continued page 13



Air freight represents a short supply chain, but is prone to breaks in the cool chain...

Figure 1 – Mango shipment temperature (road and air freighted).

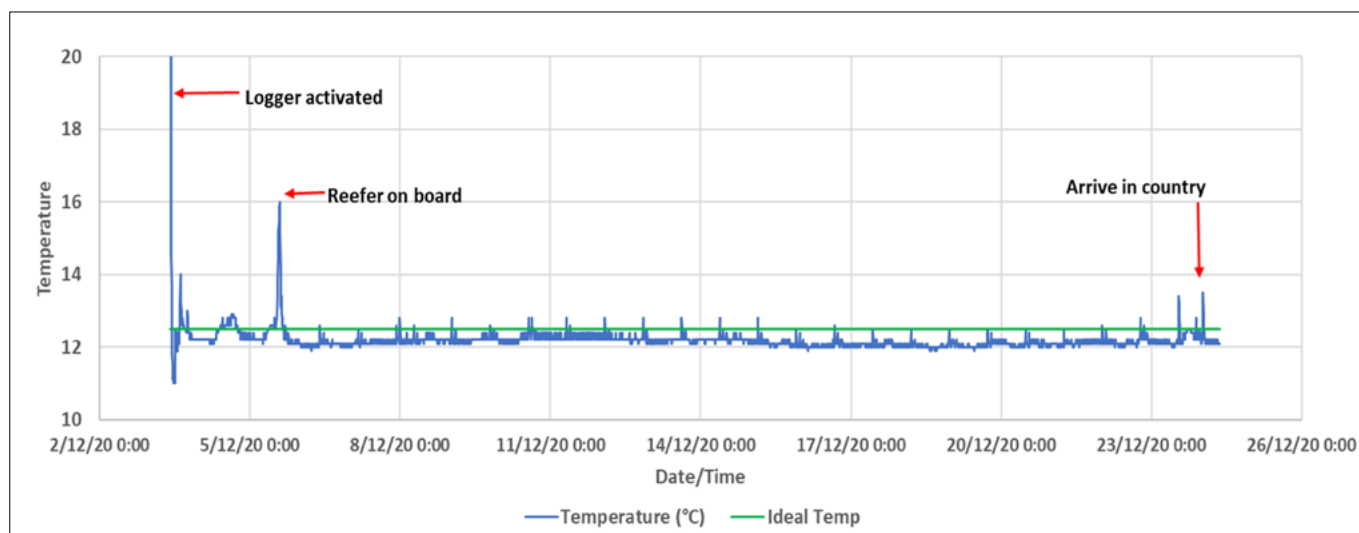


Figure 2 – Mango shipment temperature (sea freighted).

Continued from page 12

- Logger battery life is an important consideration as some devices may only record for 15 days which limits their use for sea freight

Feedback from participants:

- 77% of participants found the event useful, very useful or extremely useful
- 65% of participants monitored temperature of consignments in 2020-21 season
- 70% of participants said they intend to make changes because of the event including:
- Engaging in temperature monitoring, conducting more consistent temperature monitoring, trialling SIM-loggers, using controlled atmosphere containers for longer journeys and working closer with export partners.

Want more information:

Contact John Agnew on 0436 849 357 or john.agnew@daf.qld.gov.au



John Agnew (DAF Supply chain Horticulturist) presenting at the Mango Export Performance Review. Photo credit: Queensland Department of Agriculture and Fisheries.

The Serviced Supply Chains project is funded by the Hort Frontiers Asian Markets Fund (project AM15002), part of the Hort Frontiers strategic partnership initiative developed by Hort Innovation, with co-investment from the Department of Agriculture and Fisheries (Queensland), Department of Jobs, Precincts and Regions (Victoria), Manbulloo (mangoes), Montague Fresh (summerfruit), Glen Grove (citrus) and the Australian Government.



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HORTICULTURE

PR & MARKETING

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The 2020/21 mango season saw the successful execution of an integrated creative campaign called *'This Season's Must-Have'* that was seen or engaged with over 124 million times.

The goal of the campaign was to position mangoes as the ultimate guilt-free indulgence by highlighting the health benefits and cementing their iconic role as the 'must-have' spring/summer fruit through fashion-focused content.

The concept also encouraged urgency to purchase while getting new and existing audiences to re-evaluate the humble mango as the ultimate item to purchase this season.

Through a multichannel approach, which included Print/Online, TV, Radio, Social and Digital media, the campaign's objective was to drive mass awareness, while encouraging Aussies to buy more mangoes.

This generated a massive 481 pieces of coverage in outlets including 9, 7 News and 10, News.com.au, Daily Telegraph, Herald Sun and Courier-Mail – reaching a total of 109 million. On social, the campaign generated 13 million impressions and 824K engagements on Instagram, Facebook and YouTube.

Following the launch of Australian Mangoes first paid digital campaign, the 15-second YouTube advertisement has been viewed over 3 million times.

MANGOES GO DIGITAL

The digital strategy utilised retargeting tools that tracked consumers who viewed the content and then retargeted them additional Aussie mango social content that further reinforced the message that mangoes are in season and enticed them to buy as the summer's must-have item.

MANGO CHARITY CALENDAR



The success of the mango charity calendar continued to exceed expectations following launch after the campaign clocked up a total **252 pieces of coverage with over 46 million reach across print, online and broadcast.**

The campaign also raised much-needed funds and awareness for Australian Mangoes and Hort Innovation charity partner, Foodbank Australia, which went towards Christmas hamper packs for families in need.

Foodbank Australia said in a release, "...with your kindness, fewer people were left to wonder 'will I eat?' this Christmas. We appreciate your support so much."

Continued page 15

MANGO MOOD FOOD

To continue momentum in between our major campaign moments, we developed a proactive and reactive press office program to keep mangoes on the news agenda and front of mind.

This included the launch of the Good Mood Food report commissioned by Hort Innovation that showcased the nutritional benefits of eating mangoes: helps combat stress, improves general mood, provides longer lasting energy, and supports healthy gut function.

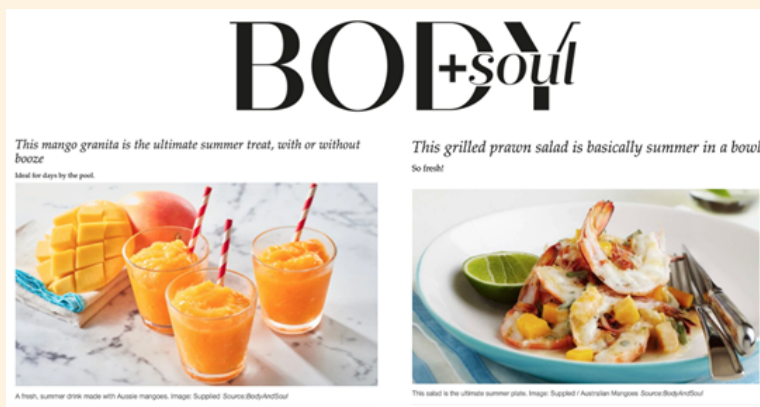
The research report and expert commentary generated coverage across print and online media, including in lifestyle publications Body+Soul, The Carousel and MiNDFOOD, reaching over **2.8 million people**.



NEW YEAR, NEW ME

Leveraging the millions of Aussies who kickstarted the year with New Year health resolutions, we shared healthy Aussie mangoes inspired recipes accompanied by nutritionist commentary to profile mangoes as the ultimate guilt-free superfood.

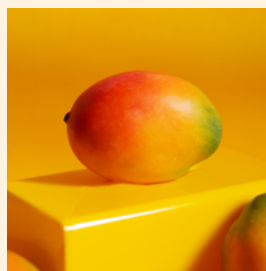
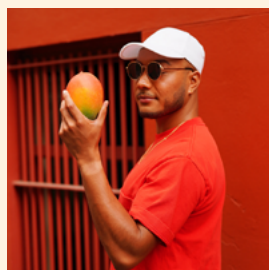
Throughout the season, our recipes were featured in leading online health and lifestyle publications, including Body+Soul, The Carousel and Prevention Magazine, reaching over **3.3 million people**.



MANGOES ON SOCIAL

Facebook and Instagram were a focus for executing 'This Season's Must-Have' campaign and positioning Aussie mangoes as fashionable, on trend, and in demand for summer fruit.

Through new photography and videography, we were able to access new audiences with bright-coloured, fashion-inspired content that was viewed or engaged with **13 million** times via Aussies' personal news feeds.





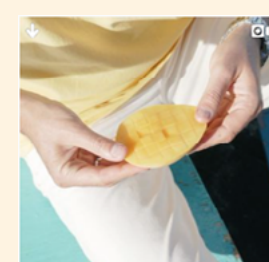
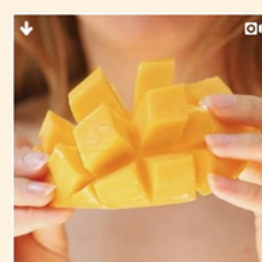
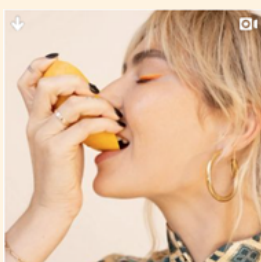
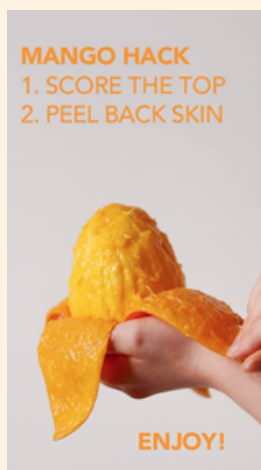
“A huge thanks to every grower who’s helped in pulling together this year’s activity.”

MANGOES ON SOCIAL

Continued from page 15

For the second time, we utilised Instagram Stories as a new medium for engaging with our followers and reaching new consumers. That saw the use of Instagram’s new tools having followers interacting directly with the content.

We also introduced more video and GIF content based on our ‘Serving Suggestion’ content pillar, which has increased engagement with our content on social media. This style of content has consistently driven increased engagement rates, focused heavily on showcasing consumption occasions with copy that highlighted the delicious flavour profile of mangoes.

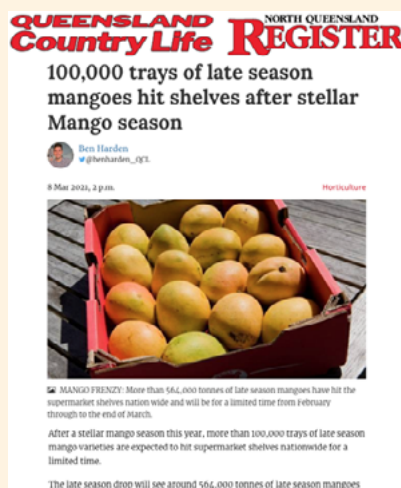


OUT WITH A BANG

To close out a successful season and drive awareness and sales of the late season varieties, we highlighted the late season mangoes across press office and social media.

To encourage purchase and to educate Aussies on late varieties as the season came to an end, we secured coverage across Queensland Country Life and North Queensland Register.

The features profiled each late season mango, giving a spotlight to each variety’s best features, and calling on Aussies to get in quick while they’re available for a limited time.



THANK YOU

A huge thanks to every grower who’s helped in pulling together this year’s activity. The interviews, information and even accessories have made this campaign a leap forward for Aussie Mangoes.

For further information on the consumer marketing plans, please contact Hort Innovation Marketing Manager, Tate Connolly on P: 0427 145 642 or E: Tate.Connolly@horticulture.com.au.

**Hort
Innovation**

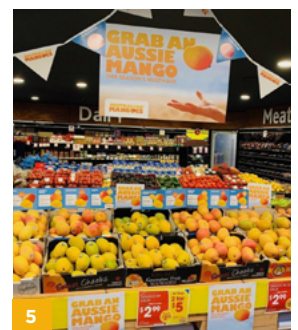
Australian Mangoes engaged and excited in 2020

We have often heard the words “*We will always have a mango season, and yet no two mango seasons are ever the same*”, and the 2020 season was certainly different to any we have experienced in recent years. It moved to a beat and a rhythm all of its own, defined by a later start, lower volumes, no real peaks, less export, and the constant dance with COVID-19. It was a difficult season to sink our teeth into.


In spite of these obvious challenges the mango industry was united in its quest to ensure “Australian Mangoes” maintained its iconic status as the ‘King of Fruits’ and was seen by consumers everywhere as **this season’s must have!**

Celebrating the launch of the season, retailers rolled out exciting marketing campaigns with large, front-of-store displays supported by point-of-sale material, and strong advertising across multiple channels.

Continued page 18



Images 1 to 3: Coles Mango Sales Challenge store displays. Images 4 & 5: Metcash IGA Sales Challenge store displays.



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“At every opportunity Australian mangoes were celebrated as the ‘hero’ of the produce department...”

Continued from page 17

And as the season unfolded, they continued to pump out those hot summer vibes, increasing the size of their displays to feature multiple mango varieties, turning up their TV, Radio, and Print advertising, and inspiring customers across the country with delicious recipes and images in Catalogues, Magazines and across their digital channels including On-Line Shopping, Facebook, Instagram, websites and YouTube.

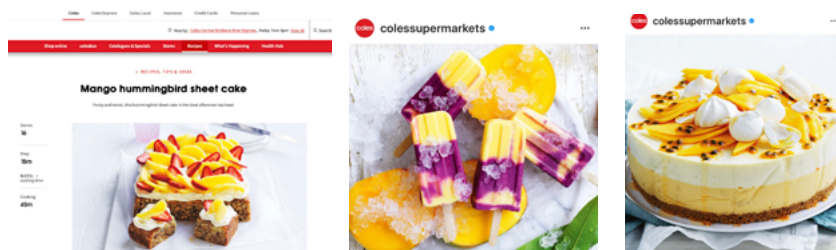
At every opportunity Australian mangoes were celebrated as the ‘hero’ of the produce department featuring strongly in campaigns wrapped around key events like Halloween, Christmas and Australia Day. The seasonality of mangoes was further highlighted as we moved from region to region and each variety - Kensington Pride, R2E2, Calypso, Honey Gold and our late season varieties like Keitts, Palmers and Brooks were in the spotlight whenever they were at their abundant best. And throughout, the sales velocity and momentum was fuelled by great tasting mangoes across all regions and varieties.

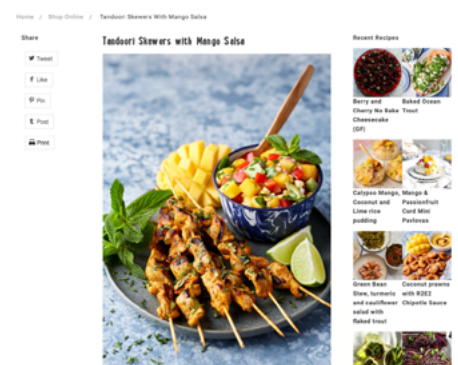
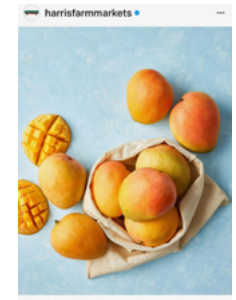
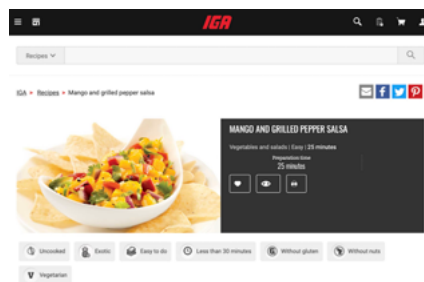
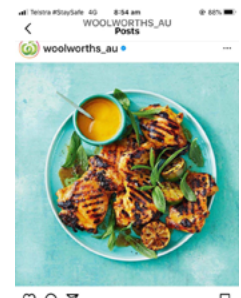
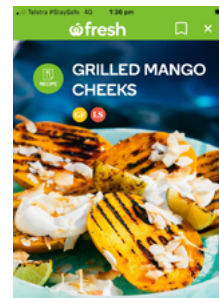
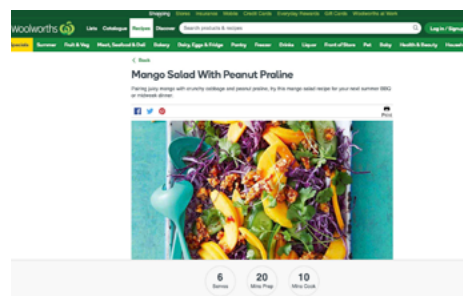
As the sun set on the 2020 season, we had firmly stamped our position into the hearts and minds of consumers. We had given our audience plenty of reasons to smile, creating millions of mango-licious memories as consumers everywhere enjoyed their favourite taste of summer, the iconic Aussie Mango.

For more information on the Australian Mangoes industry marketing plans, contact Treena Welch, Australian Mangoes Marketing Manager on P: 0417 001 253 or E: marketing@mangoes.net.au

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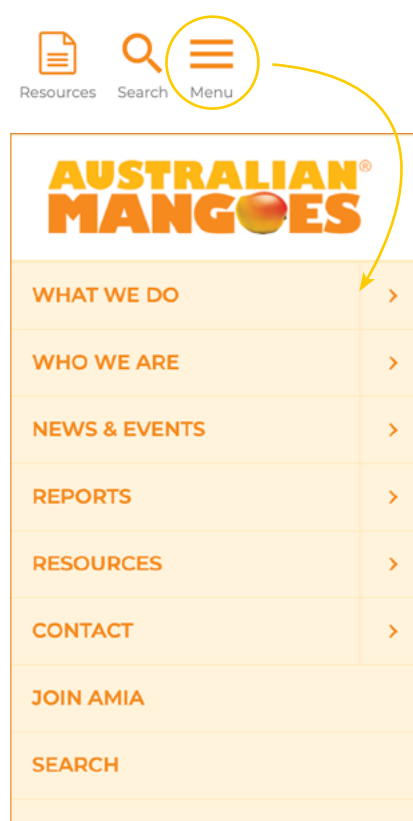


BIOSECURITY, RESEARCH & POLICY

Best Practice Resource update (MG17000)

As discussed in the last edition of Mango Matters, a component of the larger Building Best Management Practice Capacity for the Australian Mango Industry (MG17000) project is the Best Practice Resource (BPR). This aims to provide a single point where growers can source information about recommended production and postharvest practices. This single point is now part of the new Australian Mangoes website which launched recently.

The new website should still look familiar as the design incorporates all of the parts from the existing site but has a brand-new Resources section. To access the core parts of the site, click on the **menu icon** and browse the sections.



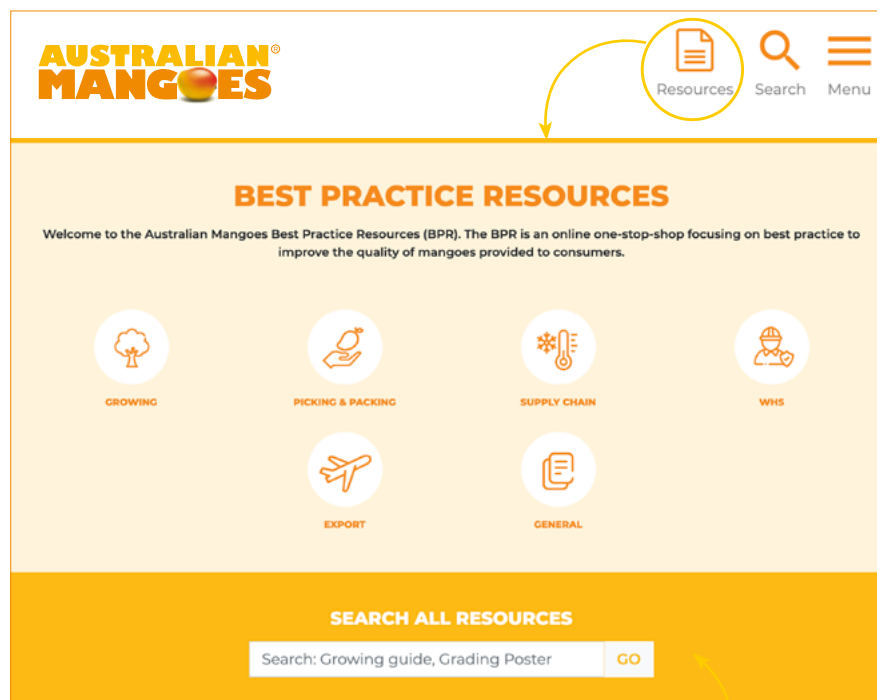
If you are looking for past editions of *My Mango*, you will find these under **NEWS & EVENTS > MY MANGO**. If you'd like to look at the last season's final crop flow report, you'll find it under **REPORTS > CROP FORECAST**.

What types of resources are available and where can I now access this information?

This resource collection now hosts a large number of resources and will be continuously evolving to accommodate new tools and research for growers and the industry as these are developed. Users can now find webpages, fact sheets, videos,

manuals and online interactive tools all through a single location at the Australian Mangoes website (www.industry.mangoes.net.au/resources/overview/).

The Resources collection can be accessed from the top corner menu and the collection has been grouped into SIX major categories:



You can choose to browse each category to explore the resources available in each section or you can use the **SEARCH** functionality to jump straight to the resource you are seeking.

Continued page 21

Continued from page 20

When you browse, within each category by default the resources are presented with the most recent item at the top. The **CATEGORY** allows you to see what section the item has been listed under and the **TYPE** icon on the far-left hand side tells you what kind of resource the item is; for example;

-  a linked page
-  a section
-  a downloadable PDF
-  an article
-  or a video

From each Resource category, you can easily jump to another category by using the buttons in the **RELATED PAGES** bar at the bottom of the screen.

You can also jump straight to the full resource library by selecting **RESOURCES > RESOURCE LIBRARY** from the menu.


From this screen, you can either type in your search terms in the Search box in the top left-hand corner of the screen, or choose a category to Filter by or even sort items based on other criteria like Popularity, Type or Date.

At any point, if you'd like to return to the home page of the website, you can do so by clicking on the Australian Mangoes logo:



We encourage you to browse the new website and provide any feedback to Jess, Sarah or Marine. We will be adding new resources on an ongoing basis, and we will update growers through our e-newsletters or this magazine when major new items are available.

VISIT industry.mangoes.net.au



GROWING RESOURCES









RESOURCES / GROWING

ABOUT THE GROWING SECTION

This section of Best Practice Resources collects together all the available research outcomes, fact sheets and guides in one single location - covering major topic areas including **Orchard Management, Irrigation, Nutrition and Pest & Disease Management**.

The resources that have been collected together here represent the combined outputs from a series of levy-funded projects designed to empower growers to access the latest research outcomes and tools.

LATEST GROWING RESOURCES

DATE	TITLE	CATEGORY	TYPE
16.03.21	Farm Biosecurity	Growing / Orchard Management / Biosecurity	
04.03.21	Flowering in Queensland	Growing / Orchard Management / Flowering	
04.03.21	Flowering in Western Australia	Growing / Orchard Management / Flowering	
04.03.21	Flowering in the Northern Territory	Growing / Orchard Management / Flowering	
20.02.21	Disposing of empty chemical containers	Growing / Pest & Disease / Chemical Management	
20.02.21	Chemical Stewardship	Growing / Pest & Disease / Chemical Management	
20.02.21	Resistance Management: Insecticides	Growing / Pest & Disease / Chemical Management	
20.02.21	Resistance Management: Fungicides	Growing / Pest & Disease / Chemical Management	

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RESOURCE LIBRARY







The Best Practice Resource Library enables you to search our resources by category, or search for keywords. Our Advanced Filter (in green) also allows you to view resources by sub-categories.

RESOURCES / RESOURCE LIBRARY

Search Clear

Type here...











Filter By Clear

-  Growing v
-  Picking & Packing v
-  Supply Chain v
-  WHS v
-  Export v
-  General v

Sort By Clear

- ☐ Popularity
- ☒ Date
- ☐ Category
- ☐ Type

Showing 20 of 80 items Page 1 of 4 >

DATE	TITLE	TYPE	ADVANCED FILTER
18.3.2021	Growing	VIEW 	Growing
16.3.2021	Farm Biosecurity	VIEW 	Growing / Orchard Management / Biosecurity
4.3.2021	Flowering in Queensland	VIEW 	Growing / Orchard Management / Flowering
4.3.2021	Flowering in Western Australia	VIEW 	Growing / Orchard Management / Flowering
4.3.2021	Flowering in the Northern Territory	VIEW 	Growing / Orchard Management / Flowering
20.2.2021	Disposing of empty chemical containers	VIEW 	Growing / Pest & Disease / Chemical Management
20.2.2021	Disposing of unwanted or obsolete chemicals	VIEW 	Growing / Pest & Disease / Chemical Management
20.2.2021	Chemical Stewardship	VIEW 	Growing / Pest & Disease / Chemical Management
20.2.2021	Resistance Management: Insecticides	VIEW 	Growing / Pest & Disease / Chemical Management
20.2.2021	Resistance Management: Fungicides	VIEW 	Growing / Pest & Disease

NT Water Use Efficiency Field Day— Darwin & Katherine

The Darwin and Katherine NT Water Use Efficiency Field Days were held on the 23rd and 25th March. These events were jointly hosted by Australian Mangoes, Northern Territory Farmers Association, Northern Territory Department of Industry, Tourism and Trade (DITT) and Irrigation Australia as part of the levy funded MG17000 Building Best Management Practice Capacity for the Australian Mango Industry project through Hort Innovation.

The Darwin field day was held at Arnhem Mangoes in Lambells Lagoon while the Katherine day was held at the Godinymayin Yijard Rivers Arts and Culture Centre and included a field visit to the Katherine Research Station (KRS).

Paul Willmott from Irrigation Australia conducted the training for the field days. He covered a jam-packed agenda including:

- basic irrigation scheduling
- determining irrigation water requirements
- basic troubleshooting
- system maintenance strategies.

He also conducted field monitoring techniques to measure distribution uniformity, line pressure, flow rates and assessing soil texture in the orchards at Arnhem and KRS.

Darwin had 39 attendees and 21 exhibitor companies and Katherine had 48 attendees with 19 exhibitor companies.

The organisers received positive feedback from attendees and exhibitors alike. Attendees and organisers were grateful for the efforts of the exhibitors to travel all the way to the Northern Territory. They provided valuable product displays and expertise for the latest equipment and technological systems and conducted some farm visits in between field days.

Australian Mangoes has subsequently instigated an affiliated membership with Irrigation Australia. All Australian Mangoes (AMIA) members will be able to access the benefits of being a member of Irrigation Australia such as discounts on training, certification, conferences, merchandise and advertising.

Please contact your Regional IDO or Irrigation Australia if you would like more information.

Tracy Martin

National Membership & Regions Manager
Irrigation Australia Ltd

T: (08) 6263 7774 | M: 0407 701 513

E: tracy.martin@irrigation.org.au

www.irrigationaustralia.com.au

Further events will be held in the Mareeba/Dimbulah and Bowen/Burdekin regions at the end of July 2021 and the details of these events will be advertised soon.

Continued page 23

DARWIN FIELD DAY



KATHERINE FIELD DAY



The days provided the opportunity for growers to hear from experts in Irrigation as well as learn about products directly from industry suppliers in a convenient single field day format.



Paul Willmott demonstrating field monitoring techniques. Photos credit: Sarah Hain



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Industry supply chains – 2020 / 2021 in review

Over the last two seasons Australian Mangoes, with the assistance of Escavox, has tracked domestic mango consignments to gain a better understanding of supply chain performance across the industry and gain insights into the issues that impact fruit quality.

Overall supply chain performance across the industry improved however significant work still needs to be done in all legs of the chain to achieve optimal management of fruit.

In this report, individual grower's data has been aggregated to provide a snapshot of industry performance. This information is being used to help inform and guide industry in the development of best practice resources to achieve more consistent product performance.

In the 2020/21 season, fruit from 18 participating growers from six production regions was tracked through to all major markets – Sydney, Melbourne, Brisbane, Adelaide, and Perth. In total, there were 104 tracks (the data collected by a tracker about the journey of the fruit from the packhouse to the end location) completed.

In the previous season, 2019/20, a total of 21 growers were involved in tracking fruit and 82 tracks were completed.

TRANSIT TIMES

In 2020/21, the average transit days from packhouse to ripening increased for all regions measured in the 2019/20 season, except for fruit moving out of Darwin. Overall, this equated to an average 0.5 day increase in transit time across all regions. Transit time for Darwin fruit, however, reduced from 4.1 days (2019/20) to 3.4 days (2020/21).

Comparisons of transit times from packhouse to ripening for key regions is shown in Graph 1.

TEMPERATURE PERFORMANCE

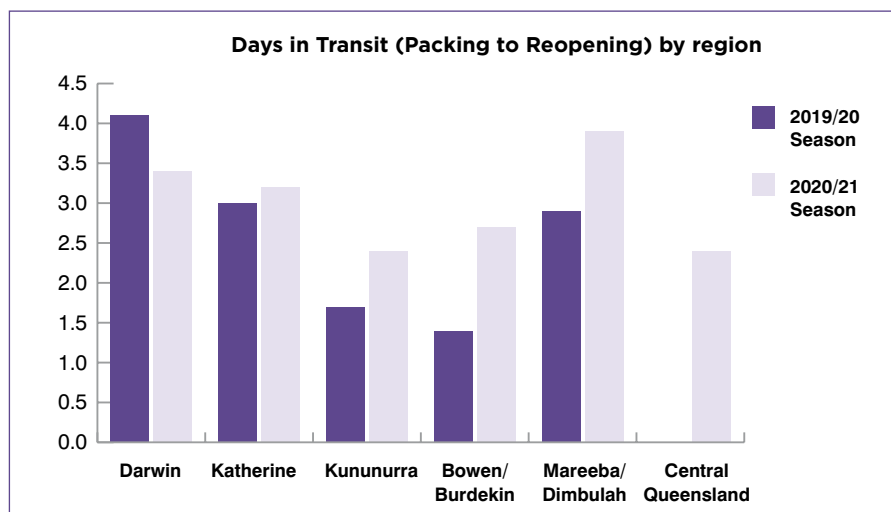
Each track was assessed against the industry recommended temperature range for three key legs of the supply chain:

- At packhouse: minimum 12°C^[1]
- Packhouse to ripener (via transport): 12°C-18°C
- At ripener (storage and ripening process): 12°C-22°C.

The data shows supply chain performance across the tracks ranged from very poor,

Region	2019/20 season	2020/21 season
Darwin	2	5
Katherine	2	1
Kununurra	2	2
Bowen/Burdekin	7	5
Mareeba/Dimbulah	8	3
Central Queensland	0	2
TOTAL GROWERS	21	18

Table 1: Participating growers in each region for 2019/20 and 2020/21 season.



Graph 1: Average transit time from each major region for 2019/20 and 2020/21 season.

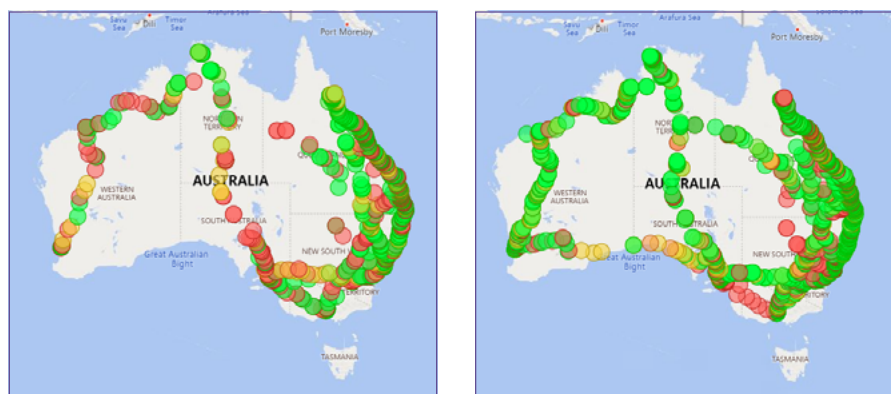


Figure 1: Comparison of 2019/20 (left) and 2020/21 (right) tracking heat maps showing performance of mango supply chains. * Source: Escavox platform.

*Key: Green dots represent product being managed in optimal temperature and red dots represent product being managed out-of-temperature

Continued page 25

Continued from page 24

where the product was not pre-cooled and travelled outside optimum conditions for the complete journey, through to perfect tracks.

Heat maps provide a quick visual representation of how supply chains are performing against nominated temperature standards for each leg of the chain, where green dots represent optimal temperature management and red dots indicate the product is being managed out-of-temperature.

It is evident in the heat maps (Figure 1), which show tracking over the last two seasons, that there is an improvement in supply chain performance with less 'red' or out-of-temperature dots in 2020/21 compared to the previous year.

Of the 104 tracks, 11% are considered to be perfect, with fruit staying within the recommended temperature range throughout the whole journey. This compares to 15% of the tracks which were considered perfect in 2019/20 season. Although the number of perfect tracks decreased, overall the industry performed better with a significantly higher number of tracks in the 'Good to very good' range and less in the 'Very poor to poor' range in 2020/21 (38%, 35%) compared to 2019/20 (22%, 49%).

A summary of the assessment of 104 tracks completed in 2020/21 season is provided in Table 2 and compared with track assessments from the 2019/20 season.

PACKHOUSE

Lack of pre-cooling of fruit prior to dispatch from packhouse continued to be a key issue in 2020/21 as it was in the 2019/20 season, with more than half of tracks showing loads where not sufficiently pre-cooled. Only 43% of tracks left the packhouse within the optimal range (12-18 °C).

Pre-cooling is critical to help preserve quality and prolong shelf life. Even if fruit is to be partially ripened in-transit, it should be cooled to 18°C, prior to dispatch.

Continued page 26

Track rating	2019/20 season % of tracks	2020/21 season % of tracks
Very poor to poor	49% (40 of 82 tracks)	35% (36 of 104 tracks)
Average	15% (12 of 82 tracks)	13% (14 of 104 tracks)
Good to very good	22% (18 of 82 tracks)	38% (39 of 104 tracks)
Perfect	15% (12 of 82 tracks)	11% (40 of 82 tracks)

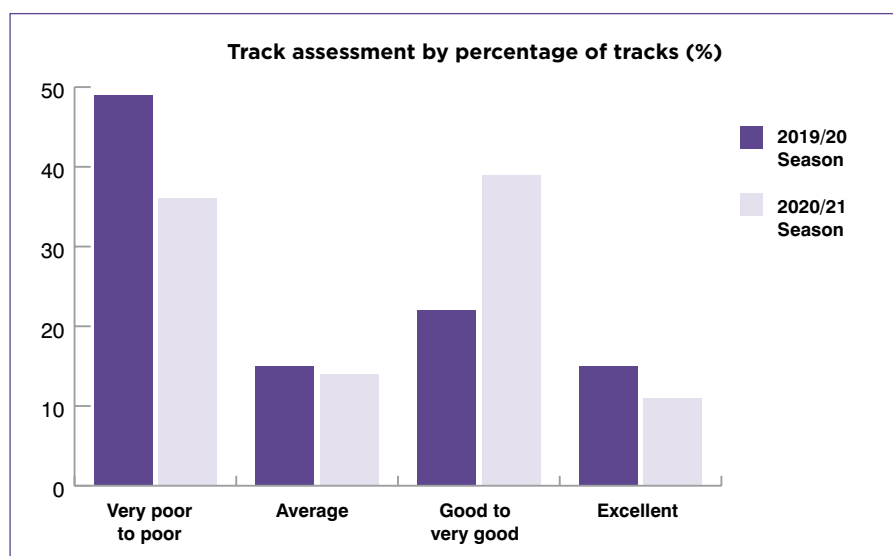
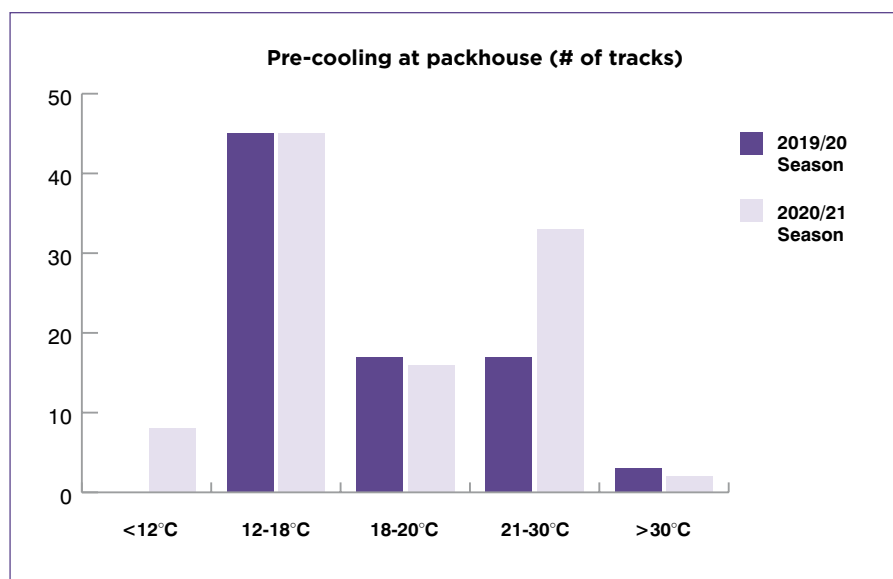


Table 2 & Graph 2: Summary of the assessment of track performance for 2019/20 and 2020/21 season.



Graph 3: Tracks temperature at time of dispatch from packhouse for 2019/20 and 2020/21 season.

TRANSPORT AND RIPENING

In the 2020/21 season, tracks showed that the performance of transport was again challenged, with almost half of all tracks performing poorly to very poorly. However, there was a noticeable improvement in performance in the ripening leg.

A comparison of the previous two seasons for transport and ripening is provided in the graphs to the right (Graph 4 and Graph 5).

TRACKING AND ANALYSING DATA

By monitoring temperature across existing and new supply chains, it is possible to identify where supply chain practices could be improved to achieve best practice.

To participate next season, contact your local Industry Development Officer (IDO).

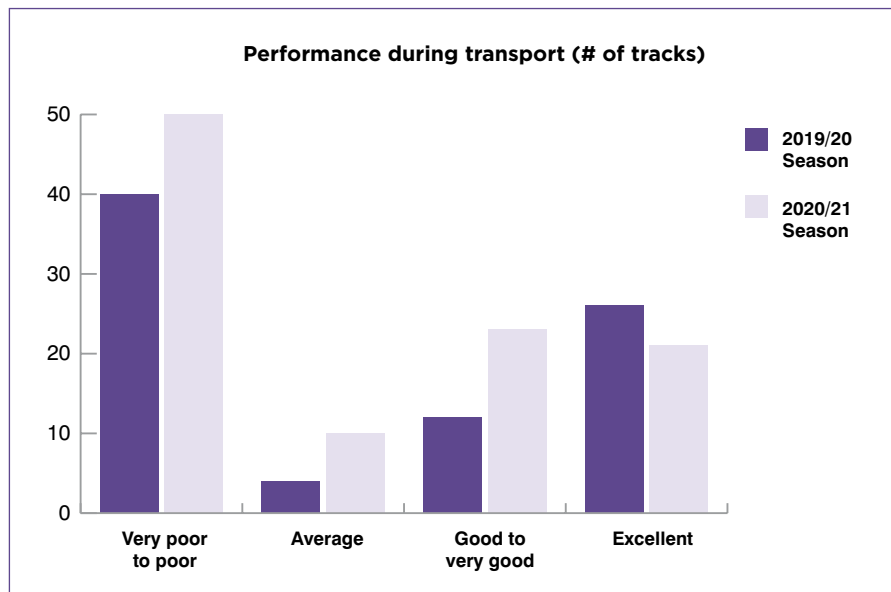
Participating growers/packers receive their own reports on the performance of their supply chain. There are procedures in place to protect your data, knowing that some data is commercially sensitive.

This activity is being undertaken as part of MG1700 Building Best Management Practice Capacity for the Australian Mango Industry which is being funded by Hort Innovation, using the mango industry 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.

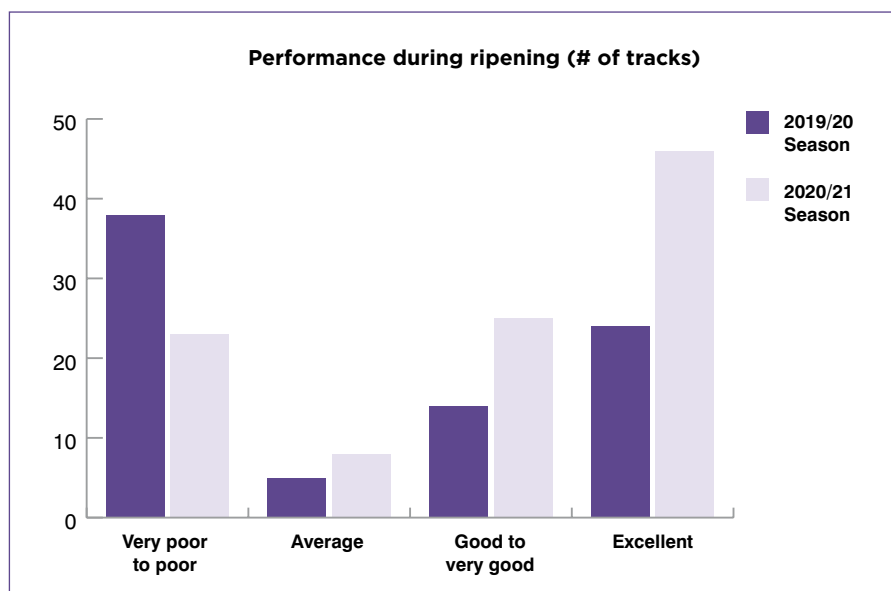
**Hort
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Strategic levy investment

**MANGO
FUND**

[1] Note: In measuring performance of the supply chain, a maximum of 40°C is used as the upper limit for temperature in the packhouse leg of the supply chain. This recognises the practical limitations of the supply chain in that fruit is unavoidably exposed to ambient conditions at different times in the packhouse.



Graph 4: Performance during transport for 2019/20 and 2020/21 season.



Graph 5: Performance during ripening for 2019/20 and 2020/21 season.



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Fruit fly research continues at Mareeba Research Facility

Project: Development of area-wide management approaches for fruit flies in mango for Indonesia, Philippines, Australia and the Asia-Pacific region (ACIAR)

The Queensland Department of Agriculture and Fisheries (DAF) entomology team in Mareeba have been hard at work on several fruit fly projects with early results looking promising. Research conducted as part of the DAF led Australian Centre for International Agricultural Research (ACIAR) project 'Development of area-wide management approaches for fruit flies in mango for Indonesia, Philippines, Australia and the Asia-Pacific region' has been looking at area-wide management of fruit flies, more effective male lure technologies, and increasing the efficacy of protein baits whilst limiting damage to mango fruit. Here is the latest research update.

REDUCING MANGO BLEMISH FROM PROTEIN BAITS

The research team has identified one protein bait that causes virtually no blemish on mango fruit. They have tested at least 15 different protein baits and have also tested methods such as adjusting pH to solve the issue of protein bait blemish on mango skins. Protein baits are an important component in fruit fly control. Protein baits attract immature adult flies that require a protein feed to mature and in the case of females, to develop eggs. A toxicant is added to the baits to kill the flies. However most commercial protein baits cause a reaction to mango skins.

ATTRACTING FRUIT FLIES TO PROTEIN BAITS

Trials have also been conducted to determine the efficacy of the protein baits to attract fruit flies. Protein baits must also be attractive to fruit flies. A bait that doesn't cause blemish is useless if it doesn't attract the target fruit fly species. The team have tested 12 protein baits for efficacy against several Australian fruit fly species. A further six new formulations will be tested this year.

COMPARING PROTEIN BAIT TOXICANTS

The team are researching and comparing bait toxicants to be used in protein baits. Currently the number of registered toxicants is limited. Relying on one or two products is an issue as insecticides are regularly under review and at times chemical companies may withdraw a product from



Stef De Faveri, Senior Entomologist DAF and Professor Matthew Siderhurst Chemist, Eastern Mennonite University, USA setting up a field trial with a new male lure.

registration. For example, dimethoate is now banned from use in several crops and fenthion has been withdrawn from registration in Australia. Four insecticides were compared against one of the standard registered products. All toxicants performed as well as the standard product in laboratory tests.

TESTING TOXICANTS ON EXOTIC FRUIT FLY SPECIES

In collaboration with the collaborating scientists in Indonesia and the Philippines, the project team will test toxicants on exotic fruit fly species that have the potential to cause significant damage to tropical fruit crops if they reach Australia. Oriental fruit fly (*Bactrocera dorsalis*) and Carambola fruit fly (*B. carambolae*) are found throughout South East Asia and Occipitalis (*B. occipitalis*) occurs mainly in the Philippines. They are a serious threat to fruit production in these tropical and subtropical regions.

AREA-WIDE MANAGEMENT OF FRUIT FLY

The ACIAR project team is successfully using area-wide management (AWM) to maintain fruit fly populations at approaching eradication levels within the smallholder orchards (as small as 24 hectares) in Indonesia. Fruit fly infestation levels within the AWM areas are below 1% compared to

25% in other commercially treated areas, thus demonstrating that a system of male annihilation, protein baiting and sanitation is more successful than a calendar-based spray program. This project has provided the opportunity for the team to understand the movement and migration patterns of these pests. They also gained experience with managing the exotic fruit flies. The project is providing Australian researchers the opportunity to gain valuable knowledge that would benefit the Australian mango industry should this exotic pest arrive on our shores.

DEVELOPING EFFECTIVE BAIT STATIONS

The development of effective bait stations would overcome the blemish issues in mangoes. They will also result in reduced residues in mangoes, as there is no contact between the toxicant and the fruit. New research is investigating the volatile compounds that are released by the protein baits. These volatiles are critical in attracting the flies to the baits. The team hopes to combine the most attractive volatiles into a bait station that would attract fruit flies. With the addition of a toxicant the flies would be attracted to the station and die from the toxicant.

Continued page 28

Professor Matthew Siderhurst and Theo Yoder, from the Eastern Mennonite University in Virginia, USA are the US collaborators in the ACIAR project. To date they have analysed six protein baits with more to come. There are consistent compounds in all proteins, however there are differences between the protein baits. The next step in the process is to determine which compounds elicit a response from the different fruit fly species in specific lab tests. The attractive compounds will then be tested in various blends. Further laboratory testing will follow and eventually the best blends will be field tested.

IMPROVING MALE LURES

Male lures are powerful attractants of certain species of fruit flies. Cue lure is the male lure that attracts Queensland fruit fly. Cue lure is used to detect fruit flies in monitoring and quarantine detection. It is also used to reduce male populations in what is called male annihilation. The team are testing a cue lure analogue (slightly different chemical structure of cue lure) developed by Prof Siderhurst that is more attractive than cue lure, which results in higher capture or kill rates depending on what the lure is used for. However, the new lure breaks down very quickly, which results in very low residual activity.

The team are working on methods to increase the residual activity of the lure. To date they have been successful in maintaining residual activity for at least one month by containing the lure in special 'carbon black' plastic bags. The team, in collaboration with Dr Bhesh Bhandari from the University of Queensland, are testing microencapsulated formulations of the lure that have been produced by Dr Bhandari's lab. Initial lab and preliminary field trials have shown that at least one formulation has been able to maintain activity for two months at this stage. This trial is still underway.

PROTEIN BAITS AND MALE ANNIHILATION ARE PROVEN FRUIT FLY CONTROL METHODS FOR GROWERS

Although there is an issue with baits blemishing fruit, mango growers should still consider protein baiting and male annihilation as a method to control fruit flies. A previous Hort Innovation funded project that was led by the DAF team demonstrated that protein baiting mango trunks was effective in fruit fly population reduction and therefore control.

This method of protein baiting avoids contact with fruit and therefore reduces the risk of fruit blemish. One grower in Bowen is successfully controlling fruit fly using this system.

Project: Other fruit fly research

The Mareeba QDAF entomology team are working on three components of a national fruit fly project to help fill important knowledge gaps. The 'Phenology, demography and distribution of Australia's fruit flies' project is funded through the Strengthening Australia's Fruit Fly System Research Program. Funding for the program is provided by the Australian Government, with contributions matched from state and territory governments. The project aims to build a better understanding of fruit fly phenology, population dynamics, behaviour and ecology, and will facilitate more effective management of fruit fly nationally.

Article provided by Stef De Faveri and Dale Bennett, DAF, Mareeba. For more information contact: Stef De Faveri (Stefano.defaveri@daf.qld.gov.au).

PLANTING MANGO TREES?

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Jodie Cheesman, Senior Experimentalist DAF explaining protein bait research with Dale Bennett, Development Horticulturist, DAF and Dr Geoff Dickinson, Principal Horticulturist, DAF.



Mai Nantawan, Experimentalist DAF setting up fruit fly lab trials.

The Pacific labour solution— what do I need to know?

With the dwindling number of backpackers, the increased use of Pacific workers seems to be the only viable solution on the table to solve the workforce crisis in the near future. That said, accessing these workers is expensive and far more complicated than employing a traditional backpacker. This article aims to give a basic summary of the programs for those who have not used them before.

There are two programs that facilitate Pacific workers in Australia and both issue workers with Subclass 403 visas. It is important to understand that these programs are part of Australia's aid program to the Pacific and not just schemes to provide workers. All participating workers have the same rights and protections as Australian workers. There is speculation that the two programs will soon be administered by the same department which will be a good thing.

Both programs require potential employers to become an Approved Employer (AE) prior to being able to recruit workers. AEs must be able to guarantee work for the worker and provide accommodation that meets certain standards as well as pastoral care for these workers. Both growers and labour hire companies can become Approved Employers.

Becoming an approved employer is a time-consuming process and for many growers the best way to access these workers is through a labour hire company that is an existing AE. You can view the list of current AEs at any time at <http://bit.ly/SWP-AE>. Please also be aware that competition for these workers is fierce.

Each State has a different approach to quarantining these workers and who pays. In NSW, AEs are expected to pay half of the cost per worker whereas the Tasmanian government has fully subsidised the quarantine costs. Queensland is using an on-farm quarantine model but is looking into large quarantine facilities in regional areas. The NT Government are also offering an on-farm model with costs borne by the farms. At the time of writing, the WA government are yet to offer any additional support for farms.

WORKING FOR ANOTHER EMPLOYER

Workers in the Seasonal Worker Program or Pacific Labour Scheme are normally only allowed to work for one Sponsor/Approved Employer, unless the Department of Home Affairs gives them permission to change.

During the COVID-19 period, they can move between Sponsors/Approved Employers providing they have secured permission in advance. If an individual wants to move between Sponsors/Approved Employers, the employer must contact:

- the Department of Education, Skills and Employment, for SWP workers
- the Department of Foreign Affairs and Trade, for PLS workers.

Continued page 30

Scheme Name	Seasonal Worker Program (SWP)	Pacific Labour Mobility Scheme (PLS)
Objectives of the scheme	Assist employers in agriculture and accommodation industries to fill employment gaps unable to be met by the Australian workforce. Contribute to the economic development of 9 participating Pacific Island countries and Timor-Leste.	Designed to help Australian businesses address chronic labour shortages and deliver a stable and productive workforce where local labour is not available. Enables citizens from 9 Pacific Island countries and Timor-Leste to take up low-skilled and semi-skilled work opportunities in all sectors in rural and regional Australia for up to 3 years.
Administered by	Department of Education, Skills and Employment (DESE)	Department of Foreign Affairs and Trade (DFAT)
Visa subclass	Temporary Work (International Relations) visa (subclass 403) Seasonal Worker Program stream	Temporary Work (International Relations) visa (subclass 403) Pacific Labour scheme stream
Length of Visa available	Maximum 9 months	One to three years
Skill levels	Unskilled and low-skilled	Low-skilled and semi-skilled
Participating nations	Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu	Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu
Industries	Agriculture, accommodation (in select locations)	All sectors in rural and regional Australia
Age of workers	21+	21-45
Find out more	https://www.dese.gov.au/seasonal-worker-programme	https://pacificlabourmobility.com.au/

“Only registered organisations that have a visa holder’s permission can check visa details.”

Under these temporary arrangements, employers are still required to abide by all relevant Australian workplace laws and workers will continue to have the same rights under Australian workplace law as all other employees.

As a consequence of COVID-19, the Australian government has created a new subclass of visa called the Temporary Activity visa (subclass 408) also known as the Pandemic Visa. With this visa you can remain in Australia if you have no other visa options and are unable to depart Australia due to COVID-19 travel restrictions or remain in Australia to work in critical sectors including agriculture during the COVID-19 pandemic.

Under the 408 visa the visa holder is bound by the conditions of the original visa they came in on. That means that Pacific workers who entered under a 403 visa must remain with their Approved Employer unless given specific permission to move

to another Approved Employer. **If you are not an Approved Employer, then it is unlawful for you to employ these workers whilst they are on a Pandemic visa.**

Some workers who entered on a 403 visa are “claiming asylum” and applying for protection visas ([Protection visa \(subclass 866\)](#)). Any worker who is still on a valid 403 or 408 visa is legally bound by the conditions of that visa until that visa expires. **If you are not an Approved Employer, then it is unlawful for you to employ these workers until their current visa expires (not the date they claim asylum).**

The Department of Home Affairs is cracking down on these arrangements. It is important for the workers to understand that approximately 90% of the applications for a Protection visa (subclass 866) are rejected and that following that rejection, they will not be allowed back into Australia again –

under any circumstances. **Please report any absconding workers to** <https://www.homeaffairs.gov.au/help-and-support/departmental-forms/online-forms/border-watch>

HOW DO YOU CHECK SOMEONE’S VISA DETAILS WITH VEVO?

Only registered organisations that have a visa holder’s permission can check visa details. The organisation must register for an ImmiAccount. You can then access VEVO through your ImmiAccount.

You can only check the visa conditions of non-Australian passport holders. You cannot check Australian passports in VEVO.

<https://immi.homeaffairs.gov.au/visas/already-have-a-visa/check-visa-details-and-conditions/check-conditions-online-for-organisations>



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Picking a mechanical winner

No one sprays their trees by hand anymore, and only a very small operation would pack fruit without use of a packline, yet every fruit of the entire Australian mango industry is harvested by hand coping with summer heat, mango sap burns and labour availability and management.

Now bulk horticultural produce like potato and carrots have long been mechanically harvested and dry tree fruit such as almonds can be shaken from trees. Soft fruit of course present more of a challenge for mechanical harvesting. Mechanical harvesting of soft fruit is being implemented first in the more 'structured' protected environments of glass and polyhouses, with systems moving up and down aisles for selective picking of fruit such as strawberries or capsicums as they colour up. But mechanical harvest of tree fruit in the 'unstructured' real world of an orchard is another task entirely, in terms of the environmental conditions and the complexity of the fruit position (behind branches or trellis, etc).

However, given labour cost and availability, the incentive is there to mechanise, and attempts are underway to commercialise systems, particularly for apple (e.g., FF Robotics, Abundant Robotics). However, while slight modifications can see a

harvester used across different grain types, each horticultural commodity is quite different. The mechanism required to pick a blueberry is quite different to that required to pick an apple is quite different to that required to pick a mango. In many ways, however, mango is a good subject for mechanical harvest – it is a large, firm fruit, and can be positioned largely on the outside of the canopy.

Machine vision technologies developed for estimation of mango fruit load have been repurposed into a prototype mango autoharvester (patent 2020102993). The Mk2 unit developed during the 2020/21 season features an improved gripper system and more industrial electronics than the Mk1 unit fielded in the previous season. It is built in a module of 4 arms under control of one camera. Multiple modules could be used simultaneously to produce a harvest aid with 4, 8, 12 or more arms. Grippers are spaced 15 cm apart in a horizontal array, and open to cover the entire horizontal space. If the camera detects a fruit in the plane of the arms it assigns the appropriate arm to move the measured distance to the fruit, clamp onto the fruit, rotate 180 degrees, retract to starting position and release the fruit. This process takes approximately 6 seconds, and multiple arms can operate



simultaneously if fruit are present. The modules sit on an elevator frame that lifts the platform of arm up, across the face of the tree. The current system has arms with a 1.5m reach. As for anything mechanical, the system will work best within certain constraints, e.g., it will not do well in dense canopies with internal fruit.

To move from curiosity to practical implementation is a large one, however, and the team is hoping for commercial partnership to enable this progression into the coming mango season.

This project is being delivered by Hort Innovation – with support from the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit program – and Central Queensland University

UPCOMING EVENTS

NORTHERN AUSTRALIA FOOD FUTURES 2021 CONFERENCE— 17 TO 20 MAY, DARWIN

Widely regarded as Australia's leading conference on agricultural development in the North, the popular Food Futures Conference will feature over 40 speakers and eight panel sessions and will deliver key insights into the future of agriculture in the north.

The Food Futures program features State, Territory and Commonwealth agricultural ministers, presentations by leading environmental researchers as well as workshops and discussions on emerging crops.

The event will be held from 17 to 20 May at the Darwin Convention Centre. To view the program and register, visit foodfuturesntfarmers.org.au

ROTARY FNQ FIELD DAYS— 26 TO 28 MAY, MAREEBA

The Rotary FNQ Field Days has grown exponentially since its conception in the mid 1980's. Run by the combined Atherton and Mareeba Rotary Clubs, the community event continues to raise record amounts each time the event is run. On average 8,000 people come through the gates each day. Held over three days on a biennial basis, the award-winning field days are the largest community event on the Tablelands.

For more information visit fnqfielddays.org.au

HORT CONNECTIONS— 7 TO 9 JUNE, BRISBANE

AUSVEG, PMA Australia-New Zealand (PMA ANZ) and a growing number of industry partners including Growcom will once again deliver the premier event in the fresh produce industry. This year's Hort Connections Conference and Trade Show will be held at the Brisbane Convention and Exhibition Centre from 7-9 June, and we cannot wait to welcome you to the event! Additionally, Hort Connections will also cater for delegates who are unable to attend in person by offering a virtual registration alternative.

Find out more and secure your registration now at:
hortconnections.com.au

As you register, remember to select 'AMIA' as your industry association.





LEADING THE WAY IN FUTURE FARMING

Farm in One is a complete multi-tool farm management app that facilitates day-to-day mango farming and enables more accurate and informed decision making. It utilises a web-based platform and its patented hardware to communicate across multiple devices and machinery. Eliminating the need for multiple software solutions or having to buy all new equipment. Using mobile technology, Farm in One allows remote access, maximises crop performance, and reduces input costs. It is not hard to understand why farmers are embracing technology. Farm in One is unique in the market when it comes to technological advancement in agriculture.

Brothers Steven and Bryan Schincariol are based in Dimbulah, North Queensland and farm mangoes and lemons. Steven has been using the app and been involved with the development of Farm in ONE through to commercial use. Steven said, "I really value the spray schedule module as it allows me to see where the problem areas are on my farm and record them on the farm map." He said, "with traditional paper records, pest scouts only provided an average of problems across the block, whereas Farm in ONE reveals all the problem areas precisely; this allows for target spot spraying instead of band spraying the whole area" and therefore saves him money on chemicals, time and wages. OH&S, HARPS and Freshcare are a major part of their daily farm operations and record keeping is crucial. Steven commented that "using the traditional paper method was time consuming and records sometimes were misplaced. Farm in ONE can input and update data automatically.



Farm in ONE offers a complete visual display of your mango farm showing all blocks and devices through the integrated mapping platform which allows the user to manage multiple mango farms in different locations.

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