

MANGO MATTERS

JANUARY 2021 / VOLUME FORTY-TWO

THIS SUMMERS' MUST HAVE HAS BEEN MASSIVE

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A new pest identified in Queensland -
Serpentine Leafminer

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Queensland tree crop mapping -
are your orchards on the map?

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SUMMER
ISSUE

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Best Practice Resource update

The new industry website will collate existing resources and package them in a centralised, online format to make them widely accessible to the Australian mango industry.

MORE ON PAGE 21

Cover image: Loretta Bowen from Sandy Cove Mango Plantation. Photographer: [Andrew Rankin](#).

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
 Australian Mangoes: www.mangoes.net.au AMIA: www.industry.mangoes.net.au

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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
Mob: 0418 737 861

“It is critical that we have both a clear plan for our industry and the networks and relationships in place to deliver against the plan.”

- Robert Gray

The current COVID pandemic, the effects of a changing climate, global political tensions across Asia, the US and EU have all highlighted that whilst many aspects of being a successful mango producer are in the control of each commercial operator, factors outside our immediate control also have dramatic impacts on our ability to achieve our goals.

A strong and successful industry is able to effectively influence and manage these external challenges which then allows its individual businesses to continue to achieve their goals.

I would like to highlight some of the mango industry bodies which help us to achieve this outcome with a view to increasing awareness of their role and to encourage more active engagement.

Regional groups such as Mareeba District, Bowen Gumlu, and Bundaberg Fruit and Vegetable Growers-to name a few-highlight the specific issues of their regional areas.

State based bodies such as NT Farmers, Northern Territory Mango Industry Association (NTMIA) and Growcom have been instrumental this year in helping to manage many of the state/territory led responses to the COVID crisis in areas of labour and health plans, for example.

Nationally, many horticulture industries including Australian Mangoes now come together as part of the 'Hort Council' which is a full member of the National Farmers Federation (NFF) and provides national agri-political action and national policy development and delivery. Originally formed in early 2018, the Hort Council

is a nationally representative, dedicated and united body representing the best interests of Australia's production and ornamental horticulture sectors. The body was established to 'strive for more efficient, effective, cohesive horticulture policy and advocacy that affects all Agriculture at the national level'. There are currently 22 full members of the Hort Council which includes most of the large horticulture PIBs, with other smaller peak industry bodies represented via their membership of a state body that has full membership.

Plant Health Australia exists to develop and manage Biosecurity plans protecting us from exotic pests and managing incursions when they arise.

There are also specific national councils such as the National Fruit Fly Council (NFFC) whose focus is developing and implementing a national fruit fly plan.

The Horticulture Export Industry Consultative Committee (HEICC) engages with the Federal Department of Agriculture to provide direction on export and international trade, and to facilitate effective operations between the department and our industries and growers.

Hort Innovation, through the development and implementation of the mango Strategic Investment Plan (SIP) and through participation in its advisory mechanisms such as the Mango Strategic Investment Advisory Panel (SIAP), Industry Trade Advisory Panel (TAP) which collectively enable the effective investment in Research, Development and Extension and Marketing, both domestically and for export markets.

The focus of our organisation, Australian Mangoes, is to engage across this network to specifically focus on meeting the needs of the mango industry and its stakeholders. Having a clear plan as to what we as an industry are aiming to achieve and having the networks and relationships which allow for this plan to be delivered is critical. As we have seen again this last year, many of the big influences on our industry can only be effectively resolved by engaging with these regional, state and national bodies which allow for policy to be positively influenced and solutions to mango industry issues to be found.

This complex web requires participation. I encourage you all to both support those who hold direct positions in these organisations and to consider yourself participating yourself when an opportunity arises. It also requires productive positive relationships to be developed and maintained across these networks so we can call on each other to find solutions to problems, effectively and in a timely manner.

In my time over the last 30 years in the mango industry I have had the opportunity to participate across this full spectrum of organisations and bodies and can very strongly confirm that for all of us to achieve our own goals we need to both work on our own businesses but also engage effectively across the networks outside of our business walls. Not only will this help you to achieve your business goals but also enhance your own personal growth and development.

CHAIRMAN'S REPORT



Ben Martin
Chairman, AMIA

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

A new year is upon us and with this is an opportunity to review past achievements but also a time for industry members to define the pathway for the next 5 years. The development of the next 5-year Strategic Investment Plan (SIP) for the mango industry - in conjunction with Hort Innovation - will commence in early 2021 and there will be lots of engagement with our members to allow you to contribute. I urge all AMIA members to participate in the development of this SIP which is our industry's future pathways document. The collective input from our members will draw on past experiences and knowledge to form the strong base of this next 5-year SIP

This mango season has seen a slight to moderate decrease in production across many regions and this has resulted in stronger pricing throughout the season in most cases. Later season regions and varieties are welcoming strong market pricing, however, this has been mixed with some adverse weather conditions in areas

due to the early onset of widespread heavy rainfall.

All regions have experienced varying levels of impact relating to labour shortages. This is an industry issue for the wider agricultural sector to resolve and Australia's reliance on backpacker labour is an issue for industry and governments combined to find a practical solution. While there are many examples of regional incentive programs or local recruitment drives, the challenge remains to find a long-term secure outcome. It is not just a matter of finding any old labour, but more a task of securing a workforce with good work ethics.

A further matter for consideration by government and industry is the security of our export markets. It is essential for the mango industry to recognise the need for strong export demand. We cannot afford to lose our place in these valuable markets, which will ultimately see our position taken by others. Export opportunities and demand this season have been significantly impacted by COVID-19.

As I mentioned in my October report, I have taken the matter of both the labour shortages and the export challenges to our Federal Government and State Government Ministers and these conversations are continuing in 2021. It is the responsibility

of the AMIA to ensure the industry position is clearly understood by our Agricultural Ministers in all governments and it remains high on their respective agendas.

Again in 2020, I was fortunate to meet with Kerry Walsh from CQ University to view on-farm the progress with his automated mango picker and the mango yield mapping program. While there is further work to be undertaken with the automated mango picker, it is an interesting concept and one which will ultimately have good outcomes for our industry.

The Australian Mango Industry Association CEO, Robert Gray has advised of his intention to resign from his position to pursue other interests. During Robert's time in this role, he has been committed to the ongoing development of both the AMIA group and the mango industry in general.

Robert has been a guiding force within the industry and his knowledge and experience will certainly be missed. There is currently a recruitment program seeking a replacement for the CEO role.

I acknowledge the support and guidance Robert has given to me throughout and on behalf of the Board and our members, I wish Robert good health and success for the future.

"Robert has been a guiding force within the industry and his knowledge and experience will certainly be missed."

- Ben Martin

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DIRECTOR REPORTS

NORTHERN TERRITORY & NORTHERN WESTERN AUSTRALIA



Arminio (Nino) Niceforo
M: 0417 834 185
E: nino67@live.com

To say it has been an interesting season for all the NT growers this year is somewhat of an understatement! Well done to you all.

The labour supply challenges caused by COVID-19 were significant and as we can see are not over yet. The restart of the Seasonal Workers Program (SWP) took away some of the pressure, however there are issues that the Government still needs to address to ensure the agricultural sector has a stable supply of labour going forward.

The season itself has seen some mixed results. The flow on effects resulting from last season's poor wet and some unseasonal winds this year have caused issues for some. We have now seen a great start to the wet and are looking forward to it continuing as we commence our 2021 season pre-work of tree maintenance. Continued focus on our trees is the key to our quality product. Keep up the good work.

Just a reminder again, don't forget your COVID-19 management plans for your employees. Our businesses will all be inspected at some stage. If you need further information please contact your Australian Mango Industry Association (AMIA) Industry Development Officer, Sarah or Kacie for guidance and templates, as well as your local farming industry bodies and government bodies.

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



Geoff Warnock
M: 0438 884 842
E: gullivers@wn.com.au

The picking season in this region is finished and now the growers are proceeding with pruning and orchard maintenance.

The season was drawn out, with some early fruit in small quantities, but overall production was only about 50% of a normal year's production. The availability of labour to pick and pack was a problem, this may have had an upside as the fruit presented was well filled out and ate very well. Maybe because of the time it took to get the crop off.

Prices started stronger than usual and maintained a good level throughout. The "Wet Season" has already started which is well in front of the last 2 years and a good indicator that the coming season will be an improvement on the last.

We trust the people of the Industry have had an enjoyable Festive Season and that this year is not as challenging as 2020 has been!



Leo Skliros
M: 0407 919 942
E: sklirosleo@gmail.com

Many growers will be happy to see the back of 2020. Losses due to weather with the added issues brought by COVID, predominantly labour and compliance, affecting the bottom line. We have experienced some slightly higher prices to soften the blow. Tackling labour is especially important with dwindling numbers of workers demanding upwards of \$30 per hour. Good luck to those still harvesting and we are working on making the best out of this situation.

The NT put on our first Mango Madness Festival attracting around 6,000 people to the waterfront. We received fantastic local and national coverage, hopefully assisting with sales in late October early November. Thanks to the NTMIA board who put on the event, sponsors and, of course, the event MC's Treena Welch and Matt Brann from the ABC Country Hour.

FAR NORTH QUEENSLAND & NORTH QUEENSLAND



John Nucifora
M: 0418 193 885
E: flossndeb@bigpond.com

The season is well and truly underway. Some growers in Dimbulah have already finished harvesting their KPs. So far, the weather has been favourable but lots of rain is on the way. The weather is very warm and this is bringing fruit on very quickly. So far, we are hearing prices have done well and of course, we hope that keeps up for all growers for the remainder of the season.



John Nardi
M: 0408 334 266
E: johnn@favcoqld.com.au

At the time of writing, most Dimbulah growers are well through their harvest on early varieties or very close to finishing. Mutchilba growers are well into harvest as well or finishing and Paddy's Green and Mareeba growers are just getting going. The market was strong for the early part of the season, but the late harvest of fruit volumes from the Burdekin has had an impact for those in the mid-season harvest range.

The crop was very mixed and fruit size was on the smaller range for most growers as well. Unfortunately, a few growers were also impacted by storms and hail and as a result have seen a lot of damage to fruit or fruit drop due to strong winds. For most we have not seen significant rainfall during harvest yet. On top of all of that we are now seeing the resurgence of COVID-19 in NSW which is starting to have an impact on the market there as well. How this ends up depends on whether the outbreak is contained or not. It has also been a difficult year for exports with limited and expensive airfreight. I think every grower has had some level of difficulty finding and keeping

"Just a reminder again, don't forget your COVID-19 management plans for your employees. Our businesses will all be inspected at some stage."

- Nino Niceforo

quality staff as well. All round, it has been a difficult season to manage for most. Let's hope the markets do respond well post-Christmas and we end up with a good result.

I think generally retailers have worked well with industry to take up the fruit volumes and market at fair prices for both growers and consumers given the difficulties (and lower crop volumes for some).

SOUTHERN QUEENSLAND & NEW SOUTH WALES



Karl Gygar
M: 0481 591 470
E: kgygar@gmail.com

Although many growers have now finished their season, the CQ and NSW region is only just starting to ramp up. Forecasts suggest that rain might play a key factor in this season, with La Niña in full effect. I wish all growers the best with their harvesting.

Labour is still a challenge for many growers with the numbers of backpackers and travelling workers still well down. New internal border restrictions will only make this problem worse, with many travellers now stuck. Although there is no easy solution to this problem, the AMIA are lobbying government to open up the Pacific Islands scheme to allow more workers to enter the country and help move workers, who are in the country, to the areas where they are needed.

The market has been difficult this season, with export impacted by China. Domestic sales have been ok but certainly economic impacts are being felt at the checkouts of our retailers. Hort Innovation and their marketing team have been working hard to ensure mangoes are at the top of mind for consumers and the AMIA has been pushing to make sure the marketing levy is being well spent.

SOUTHERN WESTERN AUSTRALIA



David Morcombe
M: 0414 240 709
E: dw.morcombe@gmail.com

I hope 2021 has started out well for everyone. I expect that by the time you read this Carnarvon will be winding down picking and Gingin planning to start. Both regions have experienced a warm winter which resulted in variable flowering and picking. In Carnarvon, the KPs were much earlier than usual and the crop has been lighter.

In Gingin, there is a variable crop as a result of multiple / extended flowering events. There has been significant early fruit drop. In November a localised hailstorm caused significant damage to some West Gingin orchards. December was hotter than average with several high heat stress periods. We are expecting a variable pick probably starting early February through to the end of March.

It was good to see Sarah Hain and Treena Welch in Carnarvon and the southwest for the roadshow in mid-December. The energy they bring to the industry and supporting growers is great.

During the Carnarvon roadshow we visited the Gascoyne Research Station and had a look at the progress there. It is good to see that after several years of not a lot happening that there are some new mango trials under way. A significant shade structure has been erected to trial the effect of various densities of shade on growth and yield quality with a number of varieties being trialed. Evaluation of the cost vs benefit outcomes from using these types of structures will be a part of the learnings hoped to be achieved.

I hope that 2021 is a prosperous and safe year for all of us given that we still have some COVID-19 headwinds along with the usual uncertainties in our industry ahead of us.

HORT INNOVATION NEWS

Following a request made by Perfection Fresh, an Extraordinary General Meeting (EGM) of Hort Innovation members was held virtually on Friday, 9 October 2020. At the meeting, members voted to change the company's Constitution in respect to how Directors are appointed to the Hort Innovation Board, and how long they can serve.

Under the updated Constitution, [available on their website](#), all new Directors will be elected to the Hort Innovation Board by voting members going forward. This is a change from the previous Constitution, which saw the Board made up of a mix of Directors elected by voting members and appointed by sitting Directors. Under the new Constitution, the only time Directors can be appointed by the Board itself will be to cover casual vacancies of one year or less.

The updated Hort Innovation Constitution, as determined by company members, also set a new maximum service period for Directors. All new elected Directors will have a maximum service period of two consecutive terms of three years (six years total), where under the former Constitution, Directors could serve up to three consecutive terms for a total period of nine years.

With the new Constitution in effect, Hort Innovation members elected three new Directors to the Board at the company's Annual General Meeting (AGM) held in November. Directly following the AGM, the newly constituted Board met to appoint the positions of Hort Innovation Chair and Deputy Chair.

Mr Brand thanked outgoing Chair Mr Snell, outgoing Deputy Chair Dr Mary Corbett and outgoing Director Jenny Margetts for their hard work, commitment and contributions to Hort Innovation and the horticulture sector.

The new Directors elected by members are:

Tony Kelly

Tony Kelly is backed by some 33 years of experience in the horticulture sector, working across exporting, importing, wholesaling, transportation, distribution and logistics. He has extensive experience as a board director, including as Deputy Chair of Brisbane Markets Limited.



Michael Nixon

Michael Nixon grew up in agriculture and is one of the largest horticulture growers in the Carnarvon area of Western Australia. He's held board positions within horticulture industry bodies, and is heavily involved in horticulture initiatives and organisations at the community level.



Victoria Taylor

Victoria Taylor has more than two decades of experience in agricultural policy, governance and communications. She's an experienced board member, the former executive officer of the National Horticulture Research Network, and also a small business owner.



The new Chair and Deputy Chair are:

Julie Bird

Taking over from former Chair Selwyn Snell, will be Julie Bird. Ms Bird has been a Director of Hort Innovation since 2018. She has worked in various roles across the horticulture sector for the past 25 years, including in director and executive positions within a number of horticulture and agriculture-related organisations.



Paul Harker

Hort Innovation's new Deputy Chair is Paul Harker, who has been a Director of the company since 2016, having been re-elected by members at last year's AGM. Mr Harker has more than 20 years of experience in retail, and is the current Director of Buying and Group Replenishment at Woolworths.





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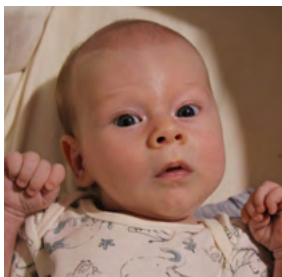


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AMIA & INDUSTRY NEWS

AMIA staff update



CONGRATULATIONS MARINE!

Australian Mangoes Industry Development Manager for Qld and NNSW Marine Empson welcomed bouncing baby boy Louis Victor Calcino on the 6th of November 2020. Louis was born to proud parents Marine and Paul at 6.31am and weighed in at a very healthy 3.4kg and measured 50cm.

Both Mum and bub were so healthy that they went home the same day! Kacie Buchanan continues to provide cover whilst Marine is enjoying her maternity leave.



COMMUNICATION MANAGER UPDATE

For personal reasons, Niamh Sullivan had to step aside from the role of Communication Manager in early December. The role has been picked up temporarily by Jane Richter until Jessica returns from her maternity leave later in 2021. Jane and her husband currently operate a small horticulture farm in the Glass House Mountains area of Queensland, but her background is in commercial marketing and she has worked in both the UK and Australia across a long career. She currently provides communication consultancy for several horticulture industries including passionfruit and all the berry categories.

Jane can be reached on com@mangoes.net.au or 0458 803 220.



ROBERT GRAY STEPS ASIDE FROM CEO ROLE

After more than 6 years as CEO, and prior to that 3 years as a director of Australian Mangoes, Robert Gray has resigned from his position as CEO. The industry has started the process to renew its Strategic Investment Plan and he believes it is perfect timing for him to step down and for a new CEO to come on board to both participate in this process and to lead the implementation of the Plan which will shape the direction of the Australian Mango industry over the next 5 years.

"I have very much enjoyed my time with the mango industry which has spanned more than 30 years! It started with my involvement with the Australian Mango Export group, followed by commercialising the Calypso variety, and more recently, 3 years on the board of AMIA and becoming the CEO for the last 6 years," said Robert.

"Over that time, I have seen enormous growth in the industry in terms of production and sales, but more importantly in the capacity of the industry - through its people - to create and maintain a sustainable and profitable industry that is truly the king of fruits."

The recruitment process for the next CEO has already commenced and Robert will work with Ben as chairman, and the rest of the board, to ensure a smooth transition. Robert will finish up once his successor has been appointed so there will be full continuity for the industry.

"Thank you all for your support over the years and best wishes for your mango future"

- Robert Gray

Western Australia roadshow and grower visits

On the 14th December, Industry Development Officer Sarah Hain, Marketing Manager Treena Welch and Southern WA board member David Morcombe travelled to the Carnarvon and Gingin regions to visit a number of growers. Growers in the Carnarvon region had already begun some select harvesting of early season fruit and NIR dry matter testing had already been conducted on many farms. Many grower visits were conducted around the region.

A roadshow presentation was held on Tuesday 15th December at the WA DPIRD Carnarvon Research Station which was attended by both growers from the region and stakeholders in the wider industry. During the roadshow, the Australian Mangoes team presented industry updates such as the extension of the marketing and engagement plan for the 2020/21 season and the Building Best Management Practice Capacity for the Australian Mango Industry project. The team from WA DPIRD presented and hosted a field walk to demonstrate new research projects being conducted such as a variety trial, high density plantings under net and soil moisture sensing equipment.

After three days in Carnarvon, the team then travelled down to the southern region and visited growers in Harvey, Dandaragan and Gingin. These regions appeared to follow a similar trend to other production regions in the rest of Australia with inconsistent and staged flowerings,

resulting in a low crop load for many growers. The southern parts of the region around Gingin again set a proportion of nubbins due to the long, cool flowering and fruit set period.

Growers in the Carnarvon region had been experiencing mild weather but after our visits, were hit with two 46 degree days a week apart which lead to losses and downgrading of sunburnt fruit. In the Gingin region, isolated hailstorms and hot dry conditions have led to fruit drop and nubbins after a long, cool flowering period as well as battling large bushfires.

These regions followed the trends of other regions in Australia with decreases in production, particularly KP mangoes, compared to previous seasons, smaller sized fruit and little internal fruit. Decreases in production compared to previous seasons were variable between growers with some growers similar or more than previous seasons' volumes.



Jacques Du Preez, Orchard Manager of AGRIFresh, Dandaragan tasting some of the new NMBP mango varieties



David Morcombe, Sarah Hain & Treena Welch from AMIA visiting AGRIFresh at Dandaragan.



David Morcombe (AMIA board member), Andy Svilicich (Carnarvon grower), Sarah Hain (IDO).

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HORTICULTURE

Chemical updates

There have been a number 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 one of the Industry Development Officers:

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

Kacie Buchanan M: 0457 555 838 E: kacie@mangoes.net.au

PERMITS

TETRANILIPROLE

The following **Emergency Use Permit** has been issued by the Australian Pesticides and Veterinary Medicines Authority (APVMA):

Permit ID: PER 90367

Description: Tetraniliprole (Vayego 200 SC Insecticide) / Mango / Mango Seed Weevil (NSW, NT & QLD)

Date Issued: 23-Nov-20

Expiry Date: 30-Nov-23

Permit Holder: Hort Innovation

To view this permit [click here](#).

TRICHLORFON

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

Permit ID: PER 12450 Version 7

Description: Trichlorfon / Specified Fruit Crops / Queensland Fruit Fly & Mediterranean Fruit Fly (ACT, NSW, NT, QLD, SA & WA only)

Date Issued: 6-Oct-11

Expiry Date: 30-Nov-25

Permit Holder: Hort Innovation

To view this permit [click here](#).

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.



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It's time for a new Strategic Investment Plan

Hort Innovation was formed in 2015 as the grower-owned, not-for-profit research and development corporation for Australia's horticulture industry, and its primary function is creating value for horticulture growers and those across the horticulture supply chain by investing in R&D, marketing and trade programs on behalf of industry. Hort Innovation's investments are funded by grower levies and Australian Government contributions, as well other industry contributions and co-investment.

In order to provide a long-term view to guide investment for each industry, Hort Innovation and the respective industries went through a consultation and planning process to produce a document known as the Strategic Investment Plan (SIP). Each levy paying industry had a SIP and the majority covered the period from 2017 to 2021.

Hort Innovation are just commencing the process to renew those plans and

provide a roadmap for the next 5 years for each industry. This is a great opportunity for individual growers or larger farm businesses to influence the direction of investment in R&D, marketing and trade activities for the next five years.

Here's an overview of the likely process and the opportunities to get involved. All timings are approximate and subject to confirmation as the process is firmed up.


Timing	Mechanism	Purpose	Participants
Ongoing	Contact with Industry Development Officers	Gather information through the course of normal IDO activities and capture these for feed into the process at formal touchpoints	All industry growers and stakeholders
1 March	Mango SIP Renewal Workshop 1— Full Day Zoom Meeting	Review the existing SIP, identify areas where progress is yet to meet objectives and identify any new strategic priorities	All industry growers
8 March	Mango SIP Renewal Workshop 2— Half Day Zoom Meeting	Recap on the information and engagement gathered in Workshop 1 and confirm strategic priorities	All industry growers
5 April	Mango SIAP Meeting— Zoom Meeting	Seek advice on Mango SIP FY22-FY26, including prioritisation of strategies	Mango SIAP
April-June	Procurement process operated by Hort Innovation	To select Service Delivery Partners for newly identified SIP priority projects	Hort Innovation Industry Strategic Partner & R&D Managers
July-August	New SIP plan overview and key highlights shared in <i>Mango Matters</i> magazine with links to full SIP plan online	To ensure that all mango industry growers and stakeholders are fully aware of the renewed industry priorities and plans	All industry growers and stakeholders

If you have any questions about the SIP process, or would like to find out more about how you can get involved, please contact Australian Mangoes Industry Development Officer Sarah Hain on: sarah@mangoes.net.au or 0457 555 939.




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PR & MARKETING

Cheek Chic

This year is an extension of the existing Aussie Mangoes marketing strategy. Our campaign focus is about encouraging medium frequency buyers of mangoes to buy more often, growing the size of our lucrative ‘wedded buyer’ group. With such a change in the environment in which we’re operating, updates have been made to our communications to ensure they are relevant, timely and have the right level of investment. This communication review has included a new creative campaign for the season; *This Season’s Must Have*.

THIS SEASON’S MUST HAVE

Aussie Mangoes have staked their claim as a spring/summer essential. It’s something consumers simply cannot be seen without! The marketing campaign reinforces that Australian Mangoes are **#ThisSeasonsMustHave** and brings a little spruce of fashion to the world of Mangoes. It’s a playful way for our creative to cut through the noise of the fresh aisle and make mangoes stand out amongst the intense competition.

The campaign theme is designed to be different and stand out amongst other products hence the ‘**This Season’s Must Have**’ message features at every possible touchpoint across point of sale, press office, social media and digital advertising.

Here’s some of the activity that has brought the campaign to life so far...

Fashion hit the Farms for our Must-Have Grower Calendar

As we hit the peak of mango season, our press office activity ramped up to put Aussie Mangoes into the headlines as the summers must-have fruit. This year, with no annual Mess-tival taking place and in the spirit of our fashionista campaign, Aussie Mangoes launched our very own charity calendar starring growers to align with fruit volumes in December. The activity has generated a whopping **229 pieces of coverage** with over **41 million reach across print, online and broadcast**.

If you would like to purchase one of the calendars, please head to the Foodbank website at <http://bit.ly/AM-Cal>. \$15 of the \$25 price goes directly to Foodbank, with the remaining \$10 covering printing and postage costs. Don’t forget to check out the behind-the-scenes video on the Aussie Mangoes Facebook page: <https://fb.watch/35SBuhUMGa/>.

Thanks again to our wonderful volunteers who took part in the shoot. With the travel restrictions and limited resource, we couldn’t get round to every farm or

region, but it was a fantastic day, and we couldn’t have asked for more enthusiastic and camera-friendly faces!

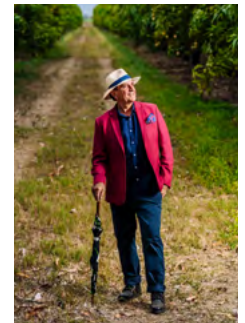
Always-on Press Office

The Aussie Mangoes press office runs all season long, helping to put mangoes in the headlines through reactive stories, collaborations, recipes, spokespeople and sharing mango madness moments with press. If there’s ever an unusual mango story happening near you, be sure to share it with Tate at Hort Innovation.

The press office has so far generated 466 pieces of mango news which has a combined reach of over 100 million!

This Season’s Must Have – Creative and Content

The Aussie Mangoes peak season paid advertising plan is running live across social, digital and YouTube. Excitingly, this is the first time Aussie Mangoes have supported the marketing plan with paid advertising. The flexibility of digital advertising will allow us to reach our target market when they are viewing selected content online. Once viewed, the consumer will be retargeted with additional Aussie Mango content reminding them on the path to purchase about this season’s basket essential. Ultimately it aims to drive awareness of Aussie Mangoes and keeping them top of mind through using our fun



and engaging campaign message. At the time of writing the 15 second advert had received over 1 million views.

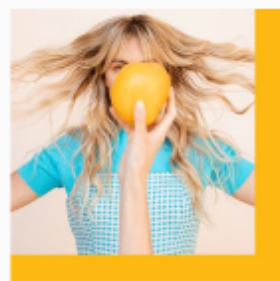
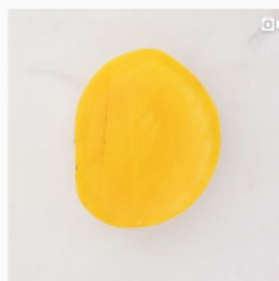
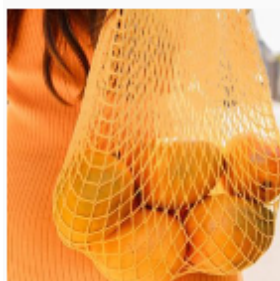
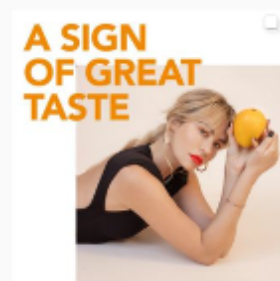
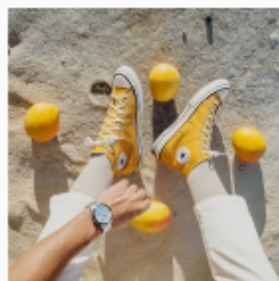
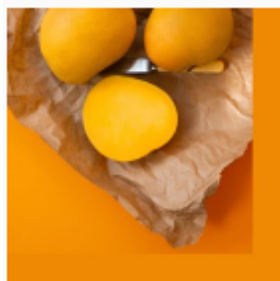
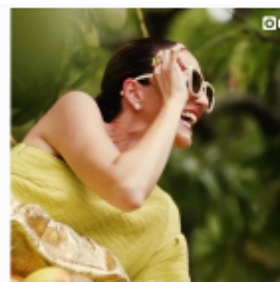
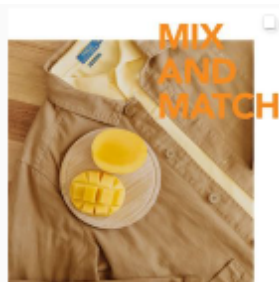
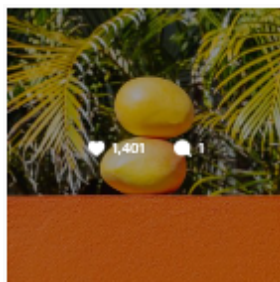
The Aussie Mangoes always-on Instagram and Facebook pages, with this year's new look and feel, also continue to drive awareness, education and inspiration for mango buyers this season. Make sure you're following [@AussieMangoes](https://www.instagram.com/AussieMangoes).

Messina Goes Mangoes

The coolest collaboration of the season is still in stores, with two iconic must-haves, Australian Mangoes and Messina, joining forces to create the gelato flavour of the season; Mangoes & Cream. Messina have 13 stores across [NSW, VIC, QLD and ACT](#) so see if there's one nearby next time you're in the city and you can have a taste of their heavenly hero flavour.

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.

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Exporting the taste of Australian summer

While travel plans across the globe were put on hold and international travellers banned from experiencing an Australian summer, target export markets were still able to treat their customers to a taste of summer downunder with juicy, sweet Australian Mangoes.

The Australian Mangoes Export strategy has four criteria for the investment of marketing dollars. The first is that we will invest in a mix of protocol and non-protocol markets. Secondly, we will invest in a mix of established and emerging markets. Thirdly, any market where we do invest must be supported by a robust supply chain that can consistently deliver the quality experience consumers are expecting. And fourthly, we invest in markets where we have the ability to work with retailers that target affluent consumers who are prepared to pay a premium for an Australian Mango.

As we moved towards the start of the mango season, concerns and uncertainty grew around the availability of flights for export and the associated increase in costs. In consultation with industry, it was decided to focus our investment in the 5 key markets where strong, collaborative relationships between growers, exporters, importers and retailers had been developed over a number of years.

The 5 markets selected were New Zealand, South Korea, United States, Hong Kong and Singapore. These markets have proven supply chain capability and importantly, we have established relationships with retailers capable of extracting a premium price for Australian Mangoes.

We worked closely with stakeholders in each market to determine what marketing activities could be executed given the prevailing COVID restrictions unique to each market. In each of these countries, in-store demonstrations have been integral to campaigns implemented in previous years. With a ban on all forms of in-store 'sampling' we needed to find new creative ways to raise awareness and encourage the purchase of Australian Mangoes including on-line and at-home shopping, as well as influencing the purchasing decision of buyers en route to bricks and mortar stores.

Continued page 17



"Australian Mangoes are FINALLY here", that was the headline capturing shopper's attention as they made their way into stores in the United States.



COVID restrictions on display space and size did not dampen the enthusiasm of Produce Managers in the United States intent on creating eye-catching displays incorporating purpose-built mango bins, spill-over displays, mango balloons and an Aussie kangaroo or two!

United States On-Line retailer Harry & David's advertising Australian Christmas Mangoes.

Continued from page 16

Decisions on specific promotional activities were made as close as possible to the time of implementation, always working on the latest supply and market specific information. While the promotional mix for each campaign differed slightly the promotional activities included in-store POS (point of sale) material; button badges for store staff; catalogues; out-of-home advertising; sales challenge competitions; social media and influencer; on-line shopping; and home shopping via TV. At the time of writing this article the campaigns are still underway however the images here will give you a flavour of what's been happening.



United States retailer Gelson's continued to support their Australian Mangoes loose fruit offering with a fresh cut format sold from dual locations i.e. it was featured in the 'fresh cut' refrigerated cabinet and on ice within the loose mango display.



United States – Gelson's catalogue featuring Australian Mangoes – R2E2, Calypso & Kensington Pride.



In South Korea, consumers were encouraged to buy Australian Mangoes from the comfort of their own home, they simply turned on the TV, watched, listened and started shopping.



Out of home advertising targeted shoppers en route to Countdown Supermarkets in New Zealand reminding them to 'Grab an Aussie Mango'.



Countdown New Zealand Catalogue featuring Australian Mangoes R2E2 and Calypso.



Despite no sampling being permitted, education and point of sale was still possible across Homeplus stores in South Korea.

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

**Hort
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BIOSECURITY, RESEARCH & POLICY

Defending against Fall Armyworm

Since its detection across northern parts of Queensland, Northern Territory and Western Australia in February 2020, fall armyworm (*Spodoptera frugiperda*) has been quick to establish in these locations, but Plant Health Australia (PHA) has announced new resources to assist in defending crops against the pest.

Stuart Kearns, National Manager for Preparedness and RD&E at PHA, said that the threat posed by fall armyworm prompted concerted efforts to find out about its likely effects in Australia and how best to manage it.

"As fall armyworm is new to Australia, we are relying on information and experience from overseas until locally generated data is developed to bolster this information."

In unmanaged situations, fall armyworm has been known to decimate crops overseas, specifically maize, sweetcorn and sorghum, but in all, the pest has been observed on 350 different plant species with 11 crop industries potentially at risk.

"We have sourced knowledge from around the world to develop a new reference guide on the pest, together with a series of podcasts, that will help industry manage the invasive moth species," Stuart said.

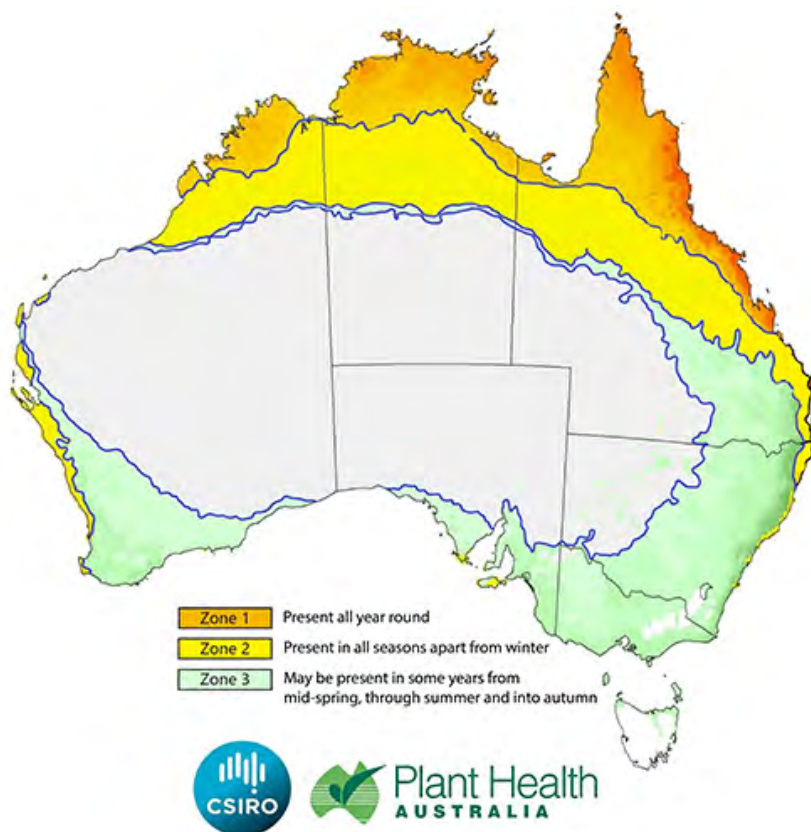
"The information assembled includes how to scout for and recognise the pest, its lifecycle and biology, estimated areas at risk, and management practices that will help to limit the damage it causes."

The Fall Armyworm Continuity Plan for the Australian Grains Industry was a Grains Research Development Corporation investment initiative led by cesar with project partners PHA, Centre for Agriculture and Bioscience International, and the Queensland Department of Primary Industries.

The 75-page document is intended for use as a reference guide that provides a basis for designing area wide management plans, crop specific management manuals and strategies to avoid resistance to chemical controls.

The other resource, a series of podcasts, aimed primarily at agronomists and growers, will prepare farm businesses for potential impacts.

Funded by Plant Biosecurity Research Initiative (PBRI) members and produced



by PHA, the podcasts are available for free from the PBRI website and will also be made available through Apple Podcasts, Google Podcasts, Spotify and Fireside. Each episode runs for about 30 minutes.

Stuart Kearns urges industries, agronomists and producers to find out about fall armyworm, and the risk it poses to their businesses, since it has been determined that it is unfeasible to eradicate.

"Unfortunately, this moth is here to stay. After it was detected in the north of Australia earlier this year it has spread rapidly southwards on prevailing winds," he said.

"While these northern areas are likely to host fall armyworm populations in crops, pastures and weeds, it is difficult to know just how significant a pest fall armyworm will be in the regions further south."

Stuart says early detection is critical to controlling populations which can build up quickly if unchecked. He advises actively monitoring the presence, population, and movement of the new pest in your region.

"No one knows exactly how this new pest will behave in crops and regions in Australia, but it's best to get on the front foot and prepare for its arrival," Stuart said.

The podcast project, coordinated by PBRI was co-funded by the Cotton Research and Development Corporation, AgriFutures Australia, the Grains Research and Development Corporation, Hort Innovation and Sugar Research Australia.

Serpentine Leafminer is here

As part of our commitment to represent the biosecurity interests of the Australian mango industry, Australian Mangoes (AMIA) will bring you more regular information about pests and diseases to look out for on farm. We will now provide you with an article in each edition of *Mango Matters*.

This edition we look at an exotic pest newly discovered in Australia. Information has been sourced from Plant Health Australia & Business Queensland. For more information visit <http://bit.ly/PHA-SLM> or <http://bit.ly/BQ-SLM>.

WHAT IS IT?

Serpentine leafminer (*Liriomyza huidobrensis*) is a small fly whose larvae feed internally on plant tissue, particularly the leaf, causing distinctive mine damage. It has a wide host range of over 40 species and spread occurs with infested plant material. The damage is caused when fly larvae tunnel within leaf tissue, which is why they are called leafminers.

WHAT TO LOOK FOR?

Detected through the presence of mines in the surface of leaf tissue. Leaf mines usually appear white or pale green with black and dried brown areas. Leaf mines are typically serpentine or irregular in shape and increase in size as the larvae mature.

Adult: Small fly, 1–2.5mm, black with yellow head and yellow spots on thorax, brownish-yellow antennae with dark end segments.

Eggs: Slightly translucent and off-white. Tiny, barely visible to the naked eye. Laid under the leaf surface.

Larvae: Transparent when they first hatch before turning pale yellow-orange then solid yellow-orange as they mature. Develop inside leaf tissue and vary in size but can reach up to 3.2mm.

WHAT DAMAGE DOES IT CAUSE?

Mines in the surface of leaf tissue are typically the first signs. Leaf mines are usually white or pale green, with black and

dried brown areas. Leaf mines are typically serpentine or irregular in shape and increase as the larvae mature.

Mining activity by the larvae causes loss of healthy leaf tissue, affecting the plants ability to photosynthesize. The damage caused when the fly lays its eggs, or during the mining process of the larvae, can lead to diseases caused by fungi and bacteria. In severe infestations leaves can wilt and die, causing defoliation.

WHAT SHOULD I DO IF I DETECT THIS PEST?

Check your orchard frequently and if you see this pest, or anything unusual, call the Exotic Plant Pest Hotline on 1800 084 881.



Photo credit: Central Science Laboratory, Harpenden, British Crown, Bugwood.org



Photo credit: Merle Shepard, Gerald R. Camer, and P.A.C. Ooi, *Insects and their Natural Enemies Associated with Vegetables and Soybean in Southeast Asia*, Bugwood.org

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NT water efficiency workshops



Learn techniques to improve water use efficiency and maximise crop yields

Presented by Dept of Industry, Tourism and Trade, NT Farmers Association, Australian Mangoes and Irrigation Australia, this field day will bring growers up to speed with the latest in irrigation technology and teach you how to improve water use efficiency, maximise crop yields and quality, resulting in saving money and water consumption.

Topics covered:

-  Basic irrigation scheduling
-  Determining irrigation water requirements
-  Basic irrigation system trouble shooting
-  Developing system maintenance strategies
-  Checking pressure and flow rates
-  Conducting a water application distribution test
-  Collecting data to determine irrigation uniformity and efficiency
-  Assessing soil texture and root zone depths

Dates:

Darwin

Tuesday 23rd March 2021

8.30am – 4.30pm

Venue TBA

Address TBA

Katherine

Thursday 25th March 2021

8.30am – 4.30pm

Godinymayin Yijard Rivers Arts & Culture Centre

Lot 3238 Stuart Hwy, Katherine East NT 0850

(Field demonstrations will be held at alternate site close by)

Attendees will gain a better understanding of relevant local water regulations and how this impacts their business, as well as field demonstrations and presentations on soil, plant, water relationships and irrigation scheduling. Manufacturers display of latest technologies

\$25.00 per person + GST

Morning Tea / Lunch / Afternoon Tea will be provided

Registrations are required for either event, please register for

Darwin

or

Katherine

Best Practice Resource update (MG17000)

OVERVIEW

As a component of the larger Building Best Management Practice Capacity for the Australian Mango Industry (MG17000) project, the Best Practice Resources (BPR) aims to provide a single point where growers can source information about recommended production and postharvest practices and will provide them with a mechanism to review and benchmark their current practices. The BPR will collate existing resources and package them in a centralised, online format to make them widely accessible to the Australian mango industry.

AMIA is working closely with its partners; Queensland Department of Agriculture and Fisheries, Northern Territory Department of Industry, Tourism and Trade, Western Australia Department of Primary Industries and Regional Development, Northern Territory Farmers Association and Central Queensland University to produce this resource hub.

What topics will be covered by the BPR hub?

Category	Topic/s
Orchard management	<ul style="list-style-type: none">• Canopy management• Nutrition• Irrigation
Harvest practices	<ul style="list-style-type: none">• Pest and disease management• Water hygiene• Forecasting
Temperature management throughout the supply chain	<ul style="list-style-type: none">• During harvest• Postharvest

What types of resources will be available and where will I be able to access this information?

This resource collection will host a large number of resources and will be continuously evolving to accommodate new tools and research reports for growers and the industry. Users will be able to find webpages, fact sheets, videos, manuals and online interactive tools. Some of this information will be translated into languages other than English. The information will be grouped under the major categories and topics of the project but there will also be a comprehensive search function to catalogue and facilitate access to the resource collection.

There will also be an updated Mango Field Guide, detailing a comprehensive list of pests, beneficials, diseases and disorders of mango orchards.

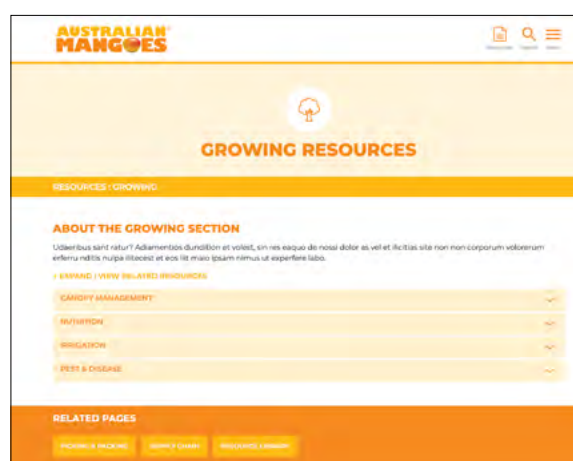
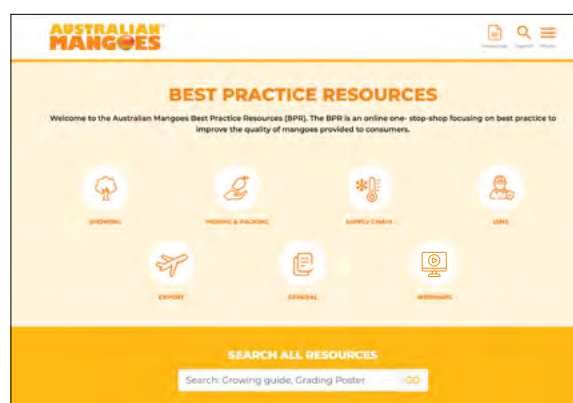
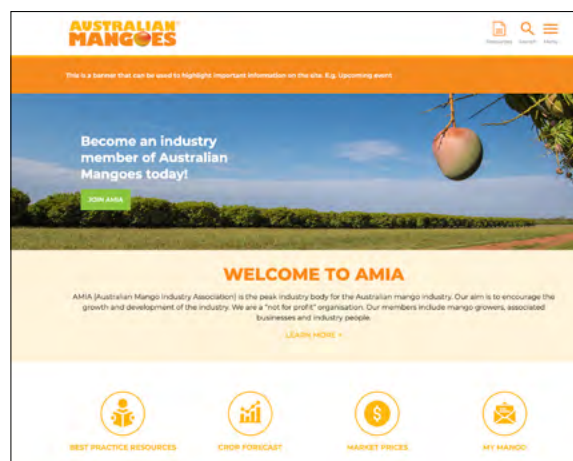
The BPR resources and information will be accessible from the updated Australian Mangoes website which is currently under development. The website, and subsequently the resource collection, is expected to be launched early this year.

Workshops

Alongside the online and print resources available to the industry, this project will be hosting a number of field days and workshops centred on these key BPR topics.

The first events are the NT Irrigation Masterclasses that will be held in Darwin (23 March) and Katherine (25 March). The two workshop-style days will cover a wide range of practical irrigation topics and there will be a product showcase from representatives of the leading irrigation companies. You can find full details of these two events on Page 20.

Events for WA and QLD are still to be confirmed for later this year.



Screenshots of the new industry website, currently in development.

National tree crop mapping – Queensland updated

‘The Multi-scale monitoring tools for managing Australian tree crops’ initiative funded by the Federal government and supported by Hort Innovation is now in its second phase. This includes a significant increase in the validation of remote sensing for the mapping and prediction of mango yield across the Northern Territory and Queensland, and the update of national tree crop maps of all commercial orchards in collaboration with industry.

For the latter, the University of New England’s [Applied Agricultural Remote Sensing Centre \(AARSC\)](#) have now completed the update of the map for Queensland, which shows 7,887 hectares of commercial mango orchards across the state. This information, essential for natural disaster and biosecurity responses has been updated in a variety of theme-based web applications, all available from the Industry Applications and Maps webpage: www.une.edu.au/webapps.

The ‘Dashboard’ app is a great tool for understanding the distribution of each tree

crop, as it summarises the extent (area) of each tree crop by state/territory or local government area (LGA) in the pop-up. Panning and zooming around the map will update the statistics interactively, on-the-fly.

Geographically by LGA, the largest totals of mango orchards are in the Mareeba Shire (2,846ha), Burdekin Shire (1,350ha) and Whitsunday Regional Council area (1,045ha).

To help maintain and update the national map, stakeholders are encouraged to contribute by completing a ‘[Land Use Survey](#)’ or reviewing the draft mapping in

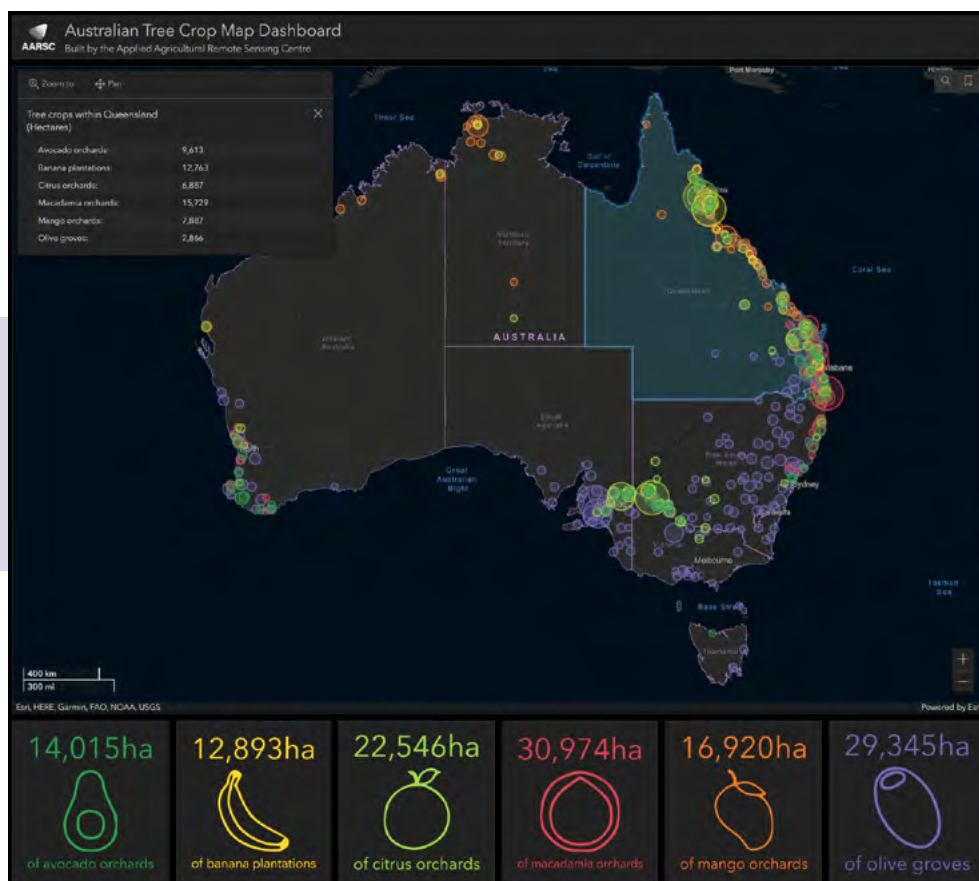
the ‘[Industry Engagement Web App](#)’. Input from industry experts is extremely valuable, especially for mapping new crops which are not yet visible in satellite imagery.

Importantly, no personal or commercial information is acquired or presented within this map, and the map adheres to the national standards of the [Australian Collaborative Land Use and Management Program](#).

Our national mapping program is now focused on updating the growing regions in Northern NSW.

Continued page 23

The ‘Dashboard’ app is a great tool for understanding the distribution of each tree crop...



Australian Tree Crop Map Dashboard example.

ATCM: SEVERE WEATHER APP

In response to increasing severe weather events, especially now Australia is in a *La Niña* phase, the AARSC has developed the [Australian Tree Crop Map: Severe Weather App](#). The app is built upon the national map of commercial tree crops, overlaid by Bureau of Meteorology data, including a satellite image of Australia which is updated in near-real time (every 10 minutes).

It will assist growers and their industries to respond to severe weather events, including tropical cyclones, thunderstorms, hazardous winds, hail and rain. It's a practical example of how the AARSC, in collaboration with industry, is using satellite imagery, engagement and ground-truthing to support Australia's multibillion dollar tree crop industries.

"With many of our most lucrative tree crops concentrated in small geographical regions, the impact of a single severe weather event can be significant", says AARSC founder and director Professor Andrew Robson.

The severe weather app has already been useful in identifying the path and orchards at risk of impact from Tropical Cyclone (TC) Imogen, which crossed the Queensland coastline just north of Karumba on 3rd January. It was downgraded to a tropical low as it tracked east toward the major horticulture growing regions of North Queensland.

MAPPING NON-COMMERCIAL MANGOES IN THE CAPE

To further assist the mango industry to be better prepared for future biosecurity threats, particularly those coming from our northern neighbours, the AARSC, together with AMIA and state (Department of Agriculture and Fisheries) and federal biosecurity agencies (Northern Australia Quarantine Strategy, Department of Agriculture Water and the Environment), are undertaking a challenging project to map all non-commercial mangoes in the Cape York Peninsula.

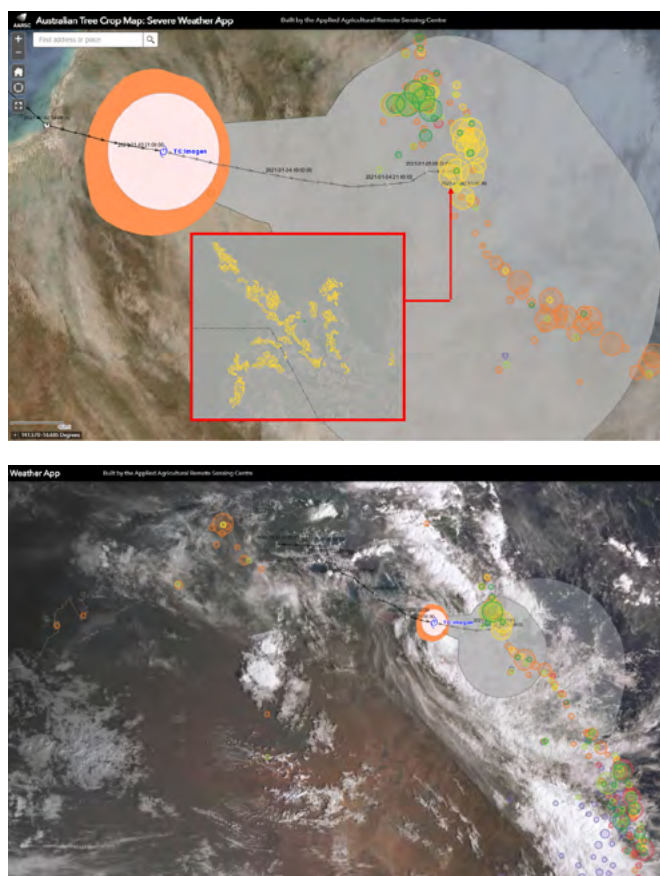
The project has commenced with the collation and geocoding of existing data as shown in the heat map, which features 1,580 observations. This information will be interpreted against high-resolution imagery in combination with other ancillary data, to compile a draft baseline map, prior to field validation and peer review. The AARSC will develop more location-based tools (apps) to engage experts in contributing to this project. Once developed, the mapped location of non-commercial mangoes can be monitored both on-ground and using remote sensing for potential biosecurity threats.

For more information

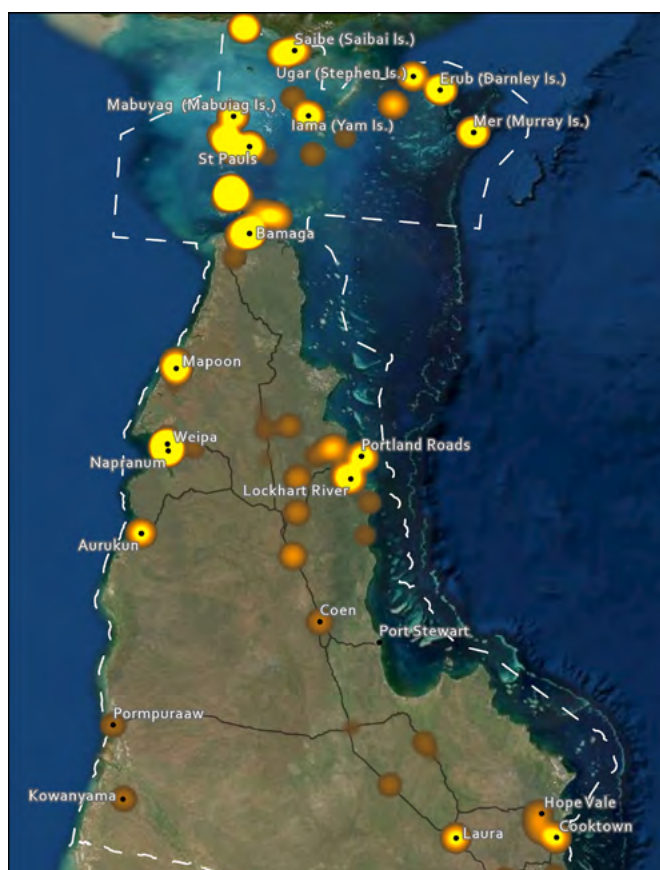
Contact: Craig Shephard
E: cshepha2@une.edu.au
W: une.edu.au/aarsc

Acknowledgement

The *Multi-scale monitoring tools for managing Australian tree crops* initiative is led by the University of New England, and supported by Hort Innovation under the [Australian Government's Rural Research and Development for Profit program](#).



ATCM Severe Weather App featuring "TC Imogen" (4th Jan 2021).



Heatmap of non-commercial mangoes, Cape York and Torres Strait Islands.

Australian mango industry crop forecasting – how is it going?

This update provides information from ‘ST19013 Multiscale monitoring tools for managing Australian tree crops – Phase II’ managed in part by the Department of Agriculture and Fisheries, Queensland. This forms part of the overarching program ST19000 which is continuing the development, trial and extension of technology-based crop mapping and monitoring tools to help growers in predicting fruit quality and yield and monitoring tree health – including the early detection of pest and disease outbreaks.

The Australian Mango Crop Forecasting program has been underway for six seasons. The aim of yield estimation and crop forecasting is to provide seasonal data on fruit volumes and quality entering the supply chain, so that growers, wholesalers and retailers have some lead-time to take action for managing under- and over-supplies of fruit entering the marketplace.

An accurate forecasting system can help growers by minimising large price drops through unexpected periods of market oversupply and help wholesalers and retailers by enabling greater time to prepare marketing and sales activities.

THE REVIEW

A recent review of industry yield estimation and crop forecasting systems has been positive. This review was conducted as part of a Hort Innovation-led Rural R&D for Profit research project (See Acknowledgements section for details).

Key findings from the program, including analysis of the 2019/2020 season were:

- The forecasting program is capturing approximately 85% of actual national mango volumes.
- Forecast volumes provided 1-2 weeks before harvest by growers are on average 10% higher than actual dispatch volumes.
- Earlier forecast volumes and harvest dates (e.g. collected at flowering, fruit set or 4-6 weeks from harvest) were less accurate but provided highly valuable insight of seasonal flows.
- The current system is a relatively simple, manual process which relies heavily on the efforts and effective relations between Industry Development Officers (IDOs) and growers.

AUSTRALIAN MANGOES CROP FORECASTING PROCESS

IDOs send an excel spreadsheet to individual growers at fruit set. Forecasting information is then entered by growers including estimated tray volumes (7kg) by variety and class for each week of their harvest. Key timings for the forecast program are at fruit set and at 1-2 weeks prior to harvest. Additional updates may also be made during fruit development at 4-8 weeks prior to harvest. All forecasting information is collected by the IDOs and updated into the Australian Mangoes weekly crop flow report. Each week during a grower's forecast harvest period, an automatic text is sent to growers requesting actual dispatch data, which is then incorporated into the crop flow report each week.

Continued page 25

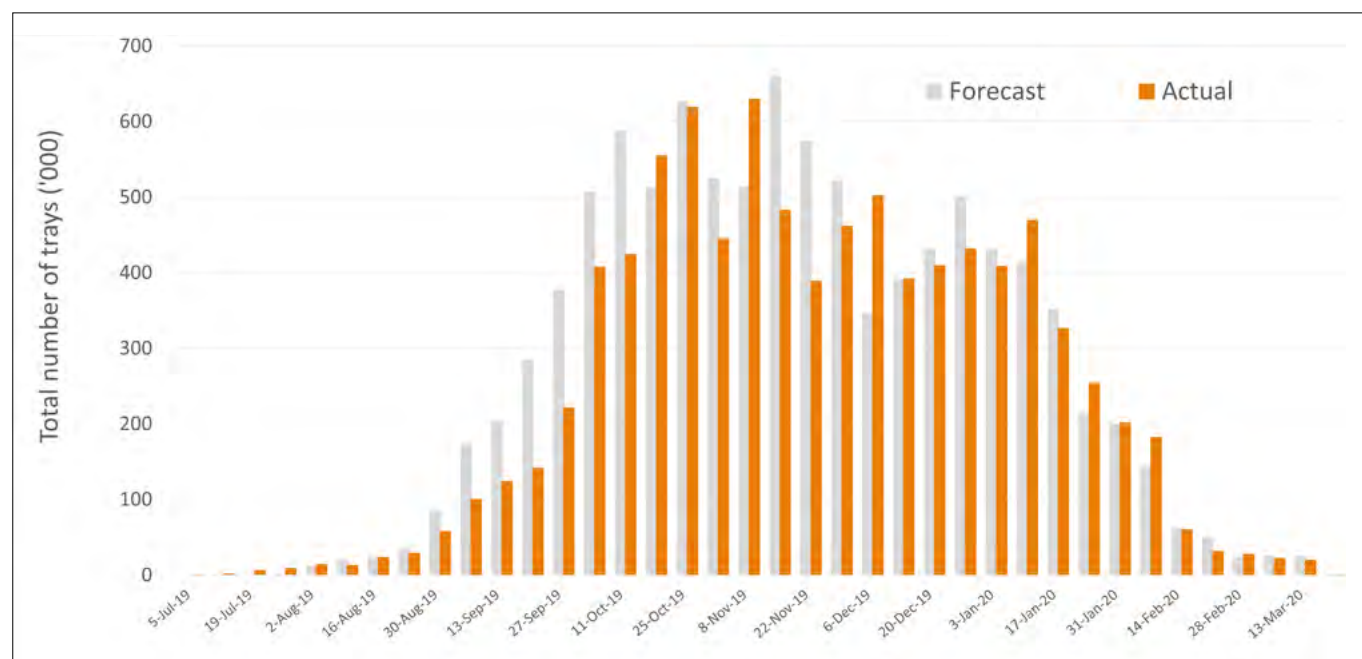


Figure 1: Comparison of mango forecast volumes compiled 1-2 weeks prior to harvest vs weekly grower dispatch data (2019/2020 season).

2020/2021 CROP FORECAST - DISPATCH TO THE MARKETS
UPDATED 19 JANUARY 2021

ACTUAL TRAYS DISPATCHED TO MARKET: 146,000.

WEEK ENDING (FRIDAY)	3 JUL	10 JUL	17 JUL	24 JUL	31 JUL	7 AUG	14 AUG	21 AUG	28 AUG	4 SEP	11 SEP	18 SEP	25 SEP	02 OCT	09 OCT	16 OCT	23 OCT	30 OCT	06 NOV	13 NOV	20 NOV	27 NOV	04 DEC	11 DEC	18 DEC	25 DEC	01 JAN	08 JAN	15 JAN	22 JAN	29 JAN	05 FEB	12 FEB	19 FEB	26 FEB	05 MAR	12 MAR	19 MAR	TOTAL
CLASS 1 TOTAL	1	8	2	3	4	9	16	14	18	34	74	125	150	257	259	351	349	226	198	227	185	288	295	301	304	250	190	209	113	164	173	95	50	41	22	10	8	2	5025
CLASS 2 TOTAL	0	2	1	1	3	4	7	7	4	12	36	70	76	131	148	192	206	88	115	79	67	73	147	107	118	64	36	42	33	17	19	14	11	12	12	1	1	1	1957
TOTAL VOLUME* (XND TRAYS 000'S)	1	10	3	4	7	13	23	21	22	46	110	195	226	388	407	543	555	314	313	306	252	361	442	408	422	314	226	251	146	181	192	109	61	53	34	11	9	3	6582

DARWIN (2.6 million)

WEEK ENDING (FRIDAY)	3 JUL	10 JUL	17 JUL	24 JUL	31 JUL	7 AUG	14 AUG	21 AUG	28 AUG	4 SEP	11 SEP	18 SEP	25 SEP	02 OCT	09 OCT	16 OCT	23 OCT	30 OCT	06 NOV	13 NOV	20 NOV	27 NOV	04 DEC	11 DEC	18 DEC	25 DEC	01 JAN	08 JAN	15 JAN	22 JAN	29 JAN	05 FEB	12 FEB	19 FEB	26 FEB	05 MAR	12 MAR	19 MAR	TOTAL	
RP CLASS 1 (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	2%	5%	9%	13%	19%	31%	31%	31%	31%	31%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
R2E2 CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CALYPSO CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
HONEY GOLD CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
OTHER* CLASS 1 (%)	0%	2%	1%	1%	1%	1%	2%	2%	4%	7%	9%	8%	11%	10%	9%	9%	4%	5%	4%	4%	3%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
CLASS 1 TOTAL	1	8	2	3	4	9	16	14	18	34	74	125	149	253	258	351	349	226	198	227	185	288	295	301	304	250	190	209	113	164	173	95	50	41	22	10	8	2	5025	
CLASS 2 TOTAL	0	2	1	1	3	4	7	7	4	12	36	70	76	131	155	177	27	49	67	127	49	23	24	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUME* (XND TRAYS 000'S)	1	10	3	4	7	13	23	21	22	46	110	195	226	388	407	543	555	314	313	306	252	361	442	408	422	314	226	251	146	181	192	109	61	53	34	11	9	3	6582	

*Other includes mostly green eating varieties such as Ham Dink Mal, Folan and Neve Savoy

KUNUNURRA (36,000)

WEEK ENDING (FRIDAY)	3 JUL	10 JUL	17 JUL	24 JUL	31 JUL	7 AUG	14 AUG	21 AUG	28 AUG	4 SEP	11 SEP	18 SEP	25 SEP	02 OCT	09 OCT	16 OCT	23 OCT	30 OCT	06 NOV	13 NOV	20 NOV	27 NOV	04 DEC	11 DEC	18 DEC	25 DEC	01 JAN	08 JAN	15 JAN	22 JAN	29 JAN	05 FEB	12 FEB	19 FEB	26 FEB	05 MAR	12 MAR	19 MAR	TOTAL					
RP CLASS 1 (%)													0%	2%	14%	30%	8%	17%	9%	9%	4%	2%	1%	0%																				
HONEY GOLD CLASS 1 (%)													4%	2%	0%	24%	4%	44%	9%	13%	5%	2%	0%	0%																				
R2E2 CLASS 1 (%)													0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																				
CLASS 1 TOTAL													1	1	2	6	2	5	2	2	1	<1	0	0																				
CLASS 2 TOTAL													0	0	1	4	2	4	1	1	1	<1	0	0																				
VOLUME* (XND TRAYS 000'S)													1	1	3	10	4	9	3	2	<1	0	0																					

KATHERINE (1.2 million)

WEEK ENDING (FRIDAY)																																									
	3 JUL	10 JUL	17 JUL	24 JUL	31 JUL	7 AUG	14 AUG	21 AUG	28 AUG	4 SEP	11 SEP	18 SEP	25 SEP	02 OCT	09 OCT	16 OCT	23 OCT	30 OCT	06 NOV	13 NOV	20 NOV	27 NOV	04 DEC	11 DEC	18 DEC	25 DEC	01 JAN	08 JAN	15 JAN	22 JAN	29 JAN	05 FEB	12 FEB	19 FEB	26 FEB	05 MAR	12 MAR	19 MAR	TOTAL		
RP CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
R2E2 CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CALYPSO CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
HONEY GOLD CLASS 1 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
OTHER* CLASS 1 (%)	0%	2%	1%	1%	1%	1%	2%	2%	4%	7%	9%	8%	11%	10%	9%	9%	4%	5%	4%	4%	3%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
CLASS 1 TOTAL	1	8	2	3	4	9	16	14	18	34	74	125	149	253	258	351	349	226	198	227	185	288	295	301	304	250	190	209	113	164	173	95	50	41	22	10	8	2	5025		
CLASS 2 TOTAL	0	2	1	1	3	4	7	7	4	12	36	70	76	131	148	192	206	88	115	79	67	73	147	107	118	64	36	42	33	17	19	14	11	12	12	1	1	1	1	1957	
VOLUME* (XND TRAYS 000'S)	1	10	3	4	7	13	23	21	22	46	110	195	226	388	407	543	555	314	313	306	252	361	442	408	422	314	226	251	146	181	192	109	61	53	34	11	9	3	6582		

*Other includes other R2E2 varieties such as Lady Jane and Lady Grace

BOWEN/BURDEKIN (1.3 million)

WEEK ENDING (FRIDAY)	3 JUL	10 JUL	17 JUL	24 JUL	31 JUL	7 AUG	14 AUG	21 AUG	28 AUG	4 SEP	11 SEP	18 SEP	25 SEP	02 OCT	09 OCT	16 OCT	23 OCT	30 OCT	06 NOV	13 NOV	20 NOV	27 NOV	04 DEC	11 DEC	18 DEC	25 DEC	1 JAN	8 JAN	15 JAN	22 JAN	29 JAN	05 FEB	12 FEB	19 FEB	26 FEB	05 MAR	12 MAR	19 MAR	TOTAL					
RP CLASS 1 (%)															0%	0%	0%	0%	1%	1%	1%	18%	22%	23%	21%	12%	0%	0%	0%	0%														
R2E2 CLASS 1 (%)															0%	2%	4%	9%	7%	9%	18%	13%	10%	12%	8%	8%	0%	0%	0%															
HONEY GOLD CLASS 1 (%)																		0%	0%	0%	0%	0%	0%	2%	21%	9%	26%	29%	13%															
CLASS 1 TOTAL															1	11	19	44	37	44	89	141	136	153	143	95	25	29	13															
CLASS 2 TOTAL															0	1	3	19	11	13	20	38	64	73	63	26	3	4	2															
VOLUME* (XND TRAYS 000'S)															1	12	22	63	48	57	109	179	200	226	206	121	28	33																

Figure 2: An excerpt of a weekly crop flow report (dated 19.01.2021).

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Figure 3: Manual fruit counts for paddock yield estimation on Calypso trees at Dimbulah.

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GROWER FORECASTING METHODS (BMP SURVEY RESULTS)

The 2020 Best Management Practices Survey found that Aussie mango growers had lower confidence in their methods for estimating yields and forecasting fruit volumes, compared with their other growing practices. The methods used by growers to estimate volume of production involved transect fruit counts with orchard variability accounted for (50%), informal observations and random counts (39%), and gut feel and past experience (11%). The majority of growers (89%) used multiple methods to predict harvest dates and the decision to pick including; flowering date, heat sum units, internal fruit colour, fruit shape and NIR dry matter percentage.

WHERE TO FROM HERE?

The mango crop forecasting system is still relatively young compared with other forecasting programs in industries such as avocado and citrus. There are opportunities to address barriers, increase participation, streamline processes and improve value to all stakeholders in the supply chain.

Three key aspects that should be addressed:

1. Provide better information to clearly demonstrate the value proposition of crop forecasting to growers and the wider industry. This includes having data flow both ways, perhaps through weekly updates by wholesalers and retailers of marketplace trends, how much is being stored in cold rooms and better information on how volumes are impacting on price.
2. Explore specific regional issues around forecast accuracy, supply overlaps between regions, and the practicalities of achieving more accurate, earlier volume estimations (e.g. 4-6 weeks prior to harvest) rather than one week prior to dispatch.
3. Develop more standardised, accurate, yield estimation tools and data collection protocols with growers, IDOs and pack-house managers to improve efficiency, streamline data collection and reporting. This includes improvement of existing manual yield estimation methods, development of new multi-scale yield and maturity monitoring technologies, and improved digital record keeping in pack-houses to enable easier supply of forecast data.

Acknowledgments

This review was conducted as an activity within the project 'Multiscale monitoring tools for managing Australian tree crops – Phase II'. The project is being delivered by Hort Innovation – with support from the Australian Government Department of Agriculture as part of its Rural R&D for Profit Program and Central Queensland University, University of New England, Australian Mango Industry Association, Queensland Department of Agriculture and Fisheries (DAF), NSW Department of Primary Industries and the Northern Territory Department of Industry, Tourism and Trade.

Article provided by Sue Heisswolf, Geoff Dickinson, and Dale Bennett, DAF, Bowen and Mareeba. For more information contact susanne.heisswolf@daf.qld.gov.au or geoff.dickinson@daf.qld.gov.au

Mango export performance review 20/21

Mango exporters and interested supply chain partners are invited to attend a Mango Export Performance Review meeting on Thursday 4th March 2021.

The focus of the day is to share experiences that have helped consistently deliver quality fruit to customers. Key topics include:

- The barriers experienced and how these were or could be overcome.
- The impact of cold chain monitoring and management.
- Results and learnings from the monitoring of cold chain temperature in a number of mango export consignments (sea & air freighted) will be presented by John Agnew (DAF).
- Robert Gray (CEO AMIA) will present export statistics including the breakdown of air vs sea volumes.
- A speaker from Austrade will talk about IFAM impact in 20/21 and expectations for the future.

Participants should be prepared to contribute to discussion and leave with the intent to try something different in domestic and export chains.

Date: Thursday 4th March

Venue: Fresh Centre, Rocklea Qld, Training Room 2

Time 10.00am – 12.00pm

Morning tea/coffee is provided

For those who cannot attend in person, you will be able to participate via MS Teams.

Please RSVP by 25th February to John Agnew (DAF Supply Chain Horticulturist) on 0436 849 357 or john.agnew@daf.qld.gov.au indicating whether you can attend in person or via MS Teams.



John Agnew, DAF Supply Chain Innovation team presents the factsheet: 'Rules of thumb for mango export and domestic supply chains'.

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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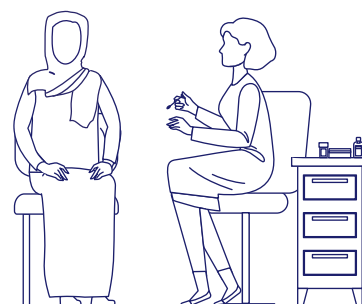


It's important to get a COVID-19 test if you have symptoms



If you have a fever, cough, sore throat or shortness of breath, get tested. Even if your symptoms are mild.

Getting a COVID test is quick. There is no pain. It might feel a bit uncomfortable, but it only lasts a few seconds.



Once you have had your test you must go straight home and stay home until your results come back, usually by the next day.

Testing helps stop the spread of the virus and will help keep you, your family and friends safe.

