

Australian
citrus
news

Autumn 2018



Supply chain innovation award winners

Extend the working life of your current grading equipment

"Like driving a 5 year old car and hopping into a brand new one, it's amazing to see the advances in electronics over that period. With the increase in productivity the upgrade quickly pays for itself."



RETROFIT

Benefits

- Extended machine life
- Minimum training required, easy to use software
- Cost effective solution

Features

- Latest technology available
- Compatible with most sizers
- LED lighting (efficient & economical)
- New digital cameras with HD resolution
- Remote access, net support (requires internet connection)



UNDISPUTED MARKET LEADER IN GRADING, PACKING, AND HANDLING OF FRESH FRUIT AND VEGETABLES, WE ARE COMMITTED TO ELABORATING SOLUTIONS MATCHING THE VERY NEED OF OUR CUSTOMERS.

OUR ENGINEERING TEAMS ARE DEDICATED TO GIVING YOU THE TECHNOLOGICAL ADVANTAGE YOU NEED TO BE ONE STEP AHEAD.



VISIONARY ENGINEERING FOR THE WORLD

MAF Oceania is always looking for dedicated, enthusiastic Sales Representatives. Please feel free to send your Resume to the email address below.

MAF OCEANIA

11 Park St, Bacchus Marsh, Victoria, 3340 Australia

Ph: +61 3 5367 3155 Fax: +61 3 53674480

Email: accounts@maf-oceania.com www.maf-roda.com



Australian citrus news

Autumn 2018

MANAGING EDITOR

Sophie Clayton
Currie Communications
T: (03) 9670 6599
E: sophie@curriecommunications.com.au

DESIGN & PRODUCTION

Josephine Eynaud
Redtail Graphic Design

ADVERTISING ACCOUNT MANAGER

Susie Mills
T: (03) 5023 6333
E: susie.mills@citrusaustralia.com.au

PUBLISHER

Currie Communications
T: (03) 9670 6599
Level 9, 190 Queen Street
Melbourne, Vic 3000
www.curriecommunications.com.au

FRONT PAGE IMAGE

Two of three companies awarded Citrus Australia's 2018 supply chain innovation award winners (lt to rt): Bindi Pressler of 2PH, and Helen Aggeletos and Maria Costi of Venus Citrus. Photographer: Laura Griffin



This publication is funded by Hort Innovation using the citrus research and development levy and contributions from the Australian Government. Each edition also features a small number of pages funded separately by Citrus Australia and its partners. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

In this issue...

NEWS

Citrus Australia welcomes new Chair...	3
Freshcare training	4
Mandarin manual	5

2018 MARKET OUTLOOK FORUM

2018 Market Outlook Forum	6
Exceptional export year	7
IP management in China	8

Time for Australian citrus in India	10
Woolworths' consumer focus	12
Consumer and retail trends	14

INNOVATION

Gall wasp control	16
Citrus evaluation work gets go-ahead ..	17

FARM MANAGEMENT

Fair Farms Initiative	21
Best labour management practices ..	22
Pacific Island workers	24
Red scale management	26
Pack house hygiene	28
High-density planting case study	30

BIOSECURITY

Citrus canker detected	32
Protecting our borders	34
Biosecurity in schools	35
Improving biosecurity preparedness ..	36



Australian Citrus News is written and published by Currie Communications Pty Ltd (ABN 82 050 913 909) for:

Citrus Australia Limited. (ACN 130 238 792)

94 Lemon Avenue, Mildura, Vic 3052
PO Box 10336, Mildura Vic 3502 Australia
T: (03) 5023 6333
F: (03) 5023 3877
E: admin@citrusaustralia.com.au
www.citrusaustralia.com.au

DISCLAIMER: Hort Innovation and Citrus Australia Limited (CA) make no representations and expressly disclaims all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in *Australian Citrus News*. Reliance on any information provided by Hort Innovation and CA is entirely at your own risk. Hort Innovation and CA are not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way, including from any Hort Innovation, CA or other person's negligence or otherwise from your use or non-use of *Australian Citrus News*, or from reliance on information contained in the material or that Hort Innovation or CA provide to you by any other means.



Biosecurity top of mind for industry

Media interviews at the Juice Forum.



MY first few months as CEO have been both informative and engaging. I have met lots of growers and other industry representatives in regional growing areas and at Regional Advisory Committee meetings. These meetings have definitely been a highlight as Citrus Australia look towards re-mobilising and energising our regional committees.

The Market Outlook Forum 2018 was also a great opportunity to meet many of you and, by the time you read this, I will have met even more of you at our inaugural Juice Forum. Both events had more than 100 registrations – a great turnout – demonstrating our industry’s enthusiasm to network and learn.

Joining me as new to the ranks is incoming Chair Ben Cant. Like myself, Ben has had a long working relationship with Citrus Australia before taking on his new position (more on the opposite page). I would like to welcome Ben to the Chair and I look forward to working under his guidance. Former Chair Tania Chapman was a great source of leadership to myself and previous CEO Judith Damiana and I would like to take the opportunity to thank her for her support too.

Unfortunately, in less favourable news, there has been a detection of citrus canker in the Northern Territory (read more on page 32). Citrus canker is a devastating disease. I cannot emphasise this enough. It has no cure and, while it can be suppressed, it will mean extra costs including increased copper

sprays and post harvest treatments. It is therefore important for industry to take every reasonable measure to eradicate it.

The canker detection occurred in a retail nursery which is presenting us with a whole set of different challenges compared to detection in a commercial orchard. However, we are currently working with the authorities to focus on minimising the risk of spread as the first step. I will keep you updated of progress towards eradication. And may I take this opportunity to remind you to subscribe to *Citrus eNews*, if you are not already, as we will be providing regular updates on the citrus canker situation there. You can subscribe by contacting the Citrus Australia office on (03) 5023 6333 or admin@citrusaustralia.com.au.

Biosecurity remains a high priority for industry and I was happy to have joined the Minister for Agriculture and Water Resources David Littleproud at the announcement of additional funding for biosecurity surveillance and early detection for the citrus industry (see page 36).

My visit to the US earlier this year to meet with American growers, industry representatives and researchers was also very productive with biosecurity a key theme. Given the scale and investment of research there, which is aligned to the scale of their industry, one of my aims was to build collaborative research relationships to strategically position our industry to be prepared for any incursions.

And, to end on a positive note, this year’s crop is looking like it will be a good marketable size. It may be lower in overall volume but we anticipate the crop will be perfect for export with a size profile fitting well into the marketable range for export. 🍋

NATHAN HANCOCK
Chief Executive Officer,
Citrus Australia

Vale: John Gregory

John Gregory, 90, of Waikerie, SA, was a statesman of the citrus packing industry spending nearly 30 years working at Waikerie Producers.

During his service to the Waikerie Co-operative he presided over a number of achievements including shrink-wrapping citrus; automatic bagging machinery; electronic counting, grading, sorting and sizing; and mechanized vibrafilling and pattern packing of citrus.

He also instigated grower payment systems based on actual market returns and was considered a Riverlander through and through. 🍋



Changes on Citrus Australia board

New Chair

Ben Cant has been elected as the new Chair of Citrus Australia.

Ben joined the Citrus Australia Board as a Grower Director in 2012. He is a third-generation citrus grower, packer, marketer and exporter. Ben spent 15 years running a modern pack house in his family business, which supplied both major supermarket chains and export markets.

During this time, Ben implemented changes to increase efficiency, out-turns and retail packaging options within his family's business. He has broad experience in orchard and pack house operations, on farm biosecurity and logistics. Ben was also previously on the Board of Riversun Export.

At the end of 2017, Ben's family orchard was acquired by the Costa Group. Ben's passion for industry meant there was never any doubt he would remain active in it, and he has taken up the role of Citrus Supply Manager for the Costa Group.

Ben said he had been proud to have been part of initiatives undertaken by Citrus Australia in his time on the Board, initiatives that have increased grower returns and profitability of the industry.

"The recognition by my peers, the Board and the wider industry is a humbling experience. I will strive to do my best to deliver greater outcomes for the citrus industry," Ben said of his election as Chair.

"I'll bring experience, broad production and supply chain knowledge, and passion to the role, as well as a team approach, a collegial atmosphere and an inclusive environment.

"I hope to continue the industry's upward trajectory, have even greater grower engagement, increase Citrus Australia's membership and continue to support the terrific work the existing team is already doing."

He thanked the outgoing Chair, Tania Chapman, for her leadership and contributions.

Departing director

After eight years of service to the citrus industry as a Grower Director and Chair of Citrus Australia, Tania Chapman has resigned from the Board.

"Tania has been tireless and fearless in focusing the organisation on getting the best outcomes for growers," said Citrus Australia CEO Nathan Hancock.

"As a grower herself in the Murray Valley, Tania was acutely aware of the challenges the industry was facing but was not in any way deterred by the magnitude of those challenges."

Tania was an inaugural director of Citrus Australia, joining in October 2008 when the industry was facing some significant challenges including drought, high exchange rates and competition in



New Citrus Australia Chair Ben Cant and departing director Tania Chapman.

export markets. In April 2010 she was elected as chair and held the position until April 2018.

During her time on the Board Tania supported the development of exports into China, led the company on backpacker tax and export reforms, and cultivated strong relationships with Hort Innovation and government. She guided the development of the industry and ensured that grower research and development levies were invested wisely and that outcomes were relevant to industry.

Tania was also effective at raising awareness about issues of importance to citrus growers including biosecurity and was a regular spokesperson for the industry in the media.

"On a more personal level, Tania has been a great friend to all of us at Citrus Australia and we will miss her passion and mentorship and, above all, her friendship," added Nathan. "But this does not mean the end, Tania will remain in the horticulture industry and we look forward to the company having an ongoing relationship with her, albeit in a different capacity." 

McIntyre Honey & Pollination

Providing professional pollination services to fruit & nut growers throughout VIC, NSW & QLD.

Working closely with farmers and managers for well over 30 years to provide the best possible outcome.

Highly experienced with contracts and compliance of OHS requirements and holds all necessary insurances.

Proud member of the Crop Pollination Association

 0438 200 038  ben@aussiebroadband.com.au





Citrus growers attending a Freshcare training session with Citrus Australia to help them comply with new food safety requirements.

Freshcare training

helps transition to new HARPS food safety scheme

By Laura Browning

Key points

New food safety requirements under HARPS

Freshcare training available for growers

Improve management of food safety risk

THE end of February marked the half-way point for Citrus Australia's Freshcare group training sessions that are helping growers to comply with new requirements under the Harmonised Australian Retailer Produce Scheme (HARPS).

The training is being rolled out across the Riverland, Riverina and Murray Valley regions. Citrus Australia's Market Development Project Officer Nicole Zerveas says the training has been pivotal in helping growers adjust to a changing approval process.

"Some growers have needed a little more clarification, so we've been able to provide that," she said.

"Major fresh produce retailers such as Coles and Woolworths require direct suppliers (like pack houses) to be HARPS approved. These suppliers require their growers to be approved to one of four base schemes; Freshcare, BRC, GlobalGap or SQF, by January 1, 2019."

The sessions provide attendees with extensive training in Freshcare's Food Safety & Quality Edition 4 (FSQ4). So far, each session has been attended by 10-12 growers and grower/packers. Most attendees have been citrus growers and packers, but some have been growers with additional crops like nuts and stone fruit.

Diana Castillon, Quality Assurance Manager for Pacific Fresh, Leeton, said the session that she attended was as equally beneficial for the pack houses as it was for growers.

"It's good for me as a quality assurance manager to know what is happening on-farm," she said.

"The sessions were really well presented and easy to understand. It will help moving forward because I can make sure that growers are doing the right thing. We're all responsible for keeping the

industry on track with food safety and quality assurance."

To be approved to supply the major retailers, growers need to undergo a food safety and quality audit during harvest prior to 1 Jan 2019. Citrus Australia recommends having the initial and all recertification audits take place as close to harvest as practically possible, otherwise follow-up visits, proof of compliance and other processes will be required.

Nicole says that food safety and quality assurance is very high on domestic and international market agendas.

"Food safety events such as the current listeria outbreak have a negative impact on consumer confidence. Freshcare provides a high level of confidence that food safety risks are being managed on farm, which has a flow on effect to retailers and consumers," she said.

MORE INFORMATION

Registration/payment enquiries should be directed to Nicole Zerveas at nicole.zerveas@citrusaustralia.com.au or 0499 044 111.

Freshcare: www.freshcare.com.au

HARPS: www.harpsonline.com.au



Mandarin manual fills knowledge gap

THE first ever comprehensive manual covering all production aspects of mandarins is set to help growers establish and manage their mandarin orchards.

Produced by the NSW Department of Primary Industries with support from the Australian Centre for International Agricultural Research (ACIAR), the 'Australian mandarin production manual' provides existing and aspiring mandarin producers with a summary of the production basics and the most current scientific research results.

"Mandarin production currently represents about 20% of Australia's citrus production and is expanding as demand for this type of citrus fruit grows both in Australia and internationally," said manual co-author Graeme Sanderson, Research Horticulturalist, NSW DPI.

Last year Australian mandarins were exported to 34 countries, with China being the main market with 34% sent to China, 16% sent to Thailand and 10% sent to Hong Kong. Mandarin export earnings are second to oranges and were valued at \$138 million in 2017 as compared to oranges at \$274 million.

Moreover, between 2014 and 2016 the area planted to mandarin in Australia increased 17% from 5,310 to 6,199 hectares.

"The manual can support decisions in the orchard establishment phase and it provides details on the broader principles



Released in 2017, the 'Australian mandarin production manual' aims to provide growers with best management practices for growing mandarin in Australia.

that underpin management strategies on a seasonal basis," said Graeme.

Comprising 318 pages including photographs and graphics, the manual covers topics such as basic orchard management; rootstocks and varieties; nutrition; irrigation; canopy management; pests and diseases; postharvest handling; diseases; and disorders.

Graeme added that rootstock selection to match soil type, desired fruit quality and long-term compatibility is an important topic covered in the manual.

"The manual has an extensive section on rootstocks for mandarins with the most current information to help growers make the right choice," he said.

Authors

The authors are retired NSW DPI officers Sandra Hardy and Patricia Barkley; Michael Treeby, Department of Economic Development, Jobs, Transport and Resources, Victoria; Malcolm Smith, Queensland Department of Agriculture and Fisheries; and Graeme Sanderson, NSW DPI.

Availability

Copies are available from Dareton Primary Industries Institute, Local Land Services office at Buronga, NSW, and the Citrus Australia office in Lemon Avenue, Mildura, Victoria.

The manual will also be placed on the NSW DPI web site during 2018.

Acknowledgement

The manual is produced by the NSW Department of Primary Industries as an output of two citrus projects in Bhutan partially funded by the Australian Centre for International Agricultural Research (ACIAR): HORT/2010/142 'Improving mandarin production in Bhutan and Australia through the implementation of on-farm best management practices' and HORT/2010/089 'Adapting integrated crop management technologies to commercial citrus enterprises in Bhutan and Australia'.

MORE INFORMATION

Graeme Sanderson, NSW DPI,
graeme.sanderson@dpi.nsw.gov.au
(03) 5019 8429



www.campbellchemicals.com.au

SINCE 1935
Vitra 400 WG
fungicide

The European
engineered copper

Vitra is a trademark of Industrias Químicas del Vallés, S.A. (IQV, S.A.) or its affiliates



matholding group

www.iqyagro.com



@campbellchemicals



@campbellhort



Colin Campbell Chemicals



2018 Market Outlook Forum

Thanks for joining us!



Congratulations to 2018 award winners

1. Citrus Australia 2018 supply chain innovation award winners (lt to rt): Bindi Pressler of 2PH, and Helen Aggeletos and Maria Costi of Venus Citrus.

2. Citrus Australia Hall of Fame award recipients for 2018 (lt to rt): Mark Chown, Kevin Parr and Michael Crook.



1

2



Citrus enjoys exceptional export year

Citrus exports in 2017

273,232t exported (+19%)

Value: \$462m FOB (+32%)

AUSTRALIAN citrus enjoyed an exceptional year of exports in 2017, Citrus Australia's Market Access Manager, David Daniels, said.

David said the growth in values in the past 12 months was thanks in large part to the growing demand for Australian citrus in Asia (especially in China).

He said China imported "a massive volume" of 70,000 tonnes of citrus (predominantly oranges and mandarins) – a 78% rise overall year-on-year.

"We would never have predicted that – our mantra back in 2012 was to do 20,000t to China by 2020. We've more than tripled that, well ahead of schedule," David said.

He said while Australia could export citrus to 50 different countries around the globe, it did so regularly to about 30 different markets, with 91% of fruit going to just 14 markets.

"So, there are opportunities there in a whole bunch of other markets," David said.

"We've seen China grow from year to year and we wonder whether it's going to plateau or whether this growth is strong. It hasn't stopped just yet."

He said Japan recorded good growth as well at 14%, and Malaysia 11%.

Mandarins

70,000t exported (+23%)

\$144 million

David said the growth in Australian mandarin exports was "tremendous" and 171% growth into China was "phenomenal" and something the

industry could never have expected. Last year China took just over 20,000t.

He said in terms of Chinese total mandarin imports, Australia had the lion's share, while about a quarter were from South Africa.

Really good volumes were exported from Australia to Thailand once again and David said promotions had been very successful in the past five years, taking exports from about 1500t to close to 10,000t.

"The only real disappointment [in mandarin exports] is Indonesia, with the trade restrictions going on at the moment; it's quite disappointing. It's really a market that should be at least 10,000t; [there's been] a drop of nearly a third over the previous year just due to the regulatory restrictions there."

Oranges

197,000t exported (+18%)

\$298 million

David said there was also "really exciting news" in oranges in 2017.

"We've seen tremendous growth. We've seen phenomenal volumes into China – 50,000t – and Japan; again, massive volumes across all markets," he said, citing significant growth of 56% into China and 11% into Japan.

He said data on the arrival of oranges into China was available for the first 10 months of 2017. It showed Egypt's market share in the Northern Hemisphere season had grown more quickly than anticipated, and in the Southern Hemisphere season (from June through to October) Australia supplied a third of China's orange imports.

"South Africa's doing quite amazing volumes as well, in particular around the months of August and September."

He said in some other markets, including Hong Kong, there was a fall in exports of Australian oranges.



Citrus Australia Market Access Manager David Daniels said 2017 was a strong year for Australian citrus exports. Photo: Mike Lamond, Fairfax.

"In many cases (there is) unmet demand there. It's certainly not all our customer; it's really just not enough fruit."

David said Japan was "the big success story for the Australian orange industry".

He said data on arrivals of oranges into Japan showed the US basically captured the entire Northern Hemisphere season.

"From June and July the market's pretty quick to jump on Australian product," he said, adding there were only small volumes from South Africa and not much else.

"We really have that market to ourselves. Great success story there – just pushed all the competitors out of that market over the years."

Other avenues for growth

David said while growers throughout Australia were tending to plant more trees, he thought export markets could absorb increased supply.

"There are 50 or so markets that we send citrus to without restrictions... (but) there are really (only) three or four markets that are being exploited to their full potential." 🍋

MORE INFORMATION

David Daniels, Market Access Manager, Citrus Australia Ltd, 0402 270 554 david.daniels@citrusaustralia.com.au



‘Chinese IP system is better than you think’: *IP Counsellor*

INTELLECTUAL property (IP) can be used as a shield and as a sword in China, said IP Counsellor David Bennett.

David is Australia’s first IP counsellor to China, and he told delegates of the Citrus Australia Market Outlook Forum that litigating with IP and actively enforcing it was particularly important in the China market, as was having an IP registered to act defensively.

“Otherwise, it can disrupt your market entry and create havoc for what you plan on doing,” David said.

David started his role in IP Australia in the end of 2016. He is based in Beijing and helps Australians to protect their IP in China.

He gave the delegates general information and guidance about China’s IP manners and said there was no substitute for going to speak with an IP attorney about specific circumstances.

David gave the example of Zespri, a kiwifruit producer that was very successful in China. He said Zespri’s exports to China exceeded \$400 million in fruit in 2017.

“Their brand is recognised by China’s consumers as a premium imported product and can command premium prices,” he said.

He said the core of its success was having registered trademarks protecting the brand in China, as well as registered

plant variety rights. David said these had given Zespri exclusive rights.

“So, they use these rights to protect their brand, to protect their varieties. They enforce against infringements,” he said.

“IP has been key to their success. Without it, they wouldn’t be in this multi-hundred-million-dollar scale that they’re about to make.”

He said apple brands such as Pink Lady and Honeycrisp had also used IP to shore up their success in the Chinese market.

“Essentially, a good IP strategy can make fruit producers a fortune, if it’s done right,” he said, adding that Australian businesses needed to be proactive about their IP and speak with an Australian trademarks lawyer.

“One of my first messages is that the Chinese IP system is better than you think it is,” David said.

“The image of IP in China as we hold in Australia has not yet been caught up with reality; what it’s like in 2018. And don’t get me wrong: there are still a lot of problems, particularly with infringements and counterfeits, but you should take the right steps and there are reasonably effective measures you can use to protect your IP in China.”

He said China was now the number one filer of patents, trademarks and designs.

“A lot of people think you can’t win in a Chinese court because of bias but



objective analysis of the dialogues of thousands of cases in the civil court system has shown foreign companies have the same win-rate as domestic companies. The idea that a foreign company can’t win in China just doesn’t hold up.”

He said the World Bank ranked China as the fifth-best place to enforce a contract out of 190 economies.

“This is based on the time, cost and quality of the judicial processes. There are specialised IP courts and IP tribunals to hear IP cases, and if your IP is infringed, there’re multiple enforcement option,” David explained.

But he warned these positive things were dependent on Australian businesses preparing appropriately.



Happy Chinese
New Year

As Chinese demand for Australian citrus soars, there is a lot of opportunity, but David Bennett, Australia's first Intellectual Property (IP) Counsellor to China, is urging Australians looking to export branded fruit into China to not "leave their brain on the plane".

He said one of his associates spoke of people going to China and "leaving their brain on the plane" – for example, doing things in China that they wouldn't do elsewhere, such as not doing due diligence on their partners.

He said businesses needed to register their IP in China and use contracts specifically drafted to China and enforceable in China.

He highlighted that mainland China, Hong Kong, Macau and Taiwan all had their own legal systems so it was necessary to file for registration separately with each.

"Brand will be the most valuable IP most companies have. In your industry, that's going to make a difference between commodity and premium product," David said.

"A brand is protected with a trademark, so if you don't have a trademark registered in China, your brand is simply not protected in China."

He explained trademarks needed to be distinctive, not purely descriptive. Another important principle of IP law in China is it has a first-to-file trademark system, which is different to Australia.

"It means that the first person to file for a trademark will own the mark, regardless of who first used the mark or who originally developed the mark," David said.

"This is why it's so important to file for trademarks early in China. If you don't, then someone else can file for your trademark [and] register it, and then when you come in wanting to enter the markets, they can demand a whole lot

of money from you in order for you to purchase your trademark back."

He said it was an enormous issue in China that affected some of the world's biggest companies, such as Apple and Tesla.

"It's the single largest issue I see here in China. The only effective way to avoid is to file your trademarks in China as early as possible.

"Be sure to register your English brand name and any logo mark you might have. Also, consider developing and registering a Chinese-language trademark and hearing what the Chinese consumers like."

He said in China businesses could not 'self-file' a trademark registration.

David warned that a trademark provided protection only with regard to the class of goods or services in which it was registered. He suggested businesses consider defensively registering trademarks and related trademarks classes, including to stop other people using that brand.

"For example, you need permission to register with respect to fresh fruits and vegetables class 31. Consider also registering fruit beverages and fruit juices in class 32, and jellies, jams and compotes in class 29."

He said if an Australian business found someone had already registered its trademark in China, "[t]here's no magic solution, unfortunately".

"You can try to negotiate a price – what you'd be willing to buy off the owner. Buying back your trademark is very painful but can offer the most pragmatic solution. You can try to oppose or invalidate the registration; it depends very much on circumstances but our success rates are generally all right. The final, unsatisfying option is develop a new brand for the Chinese market, but make sure you trademark it and control it."

David said it was up to the brand owner to enforce their IP. He said that could include monitoring e-commerce platforms and social media and employing private investigators in firms that specialised in this field. 🍋

MORE INFORMATION

Visit IP Australia's web page 'IP protection in China' via this shortcut url: <https://tinyurl.com/y8t3knqm>



‘Time for Australian citrus is now’:

Indian marketer

THE success of the Washington Apple Commission in exporting US-grown apples to India showed it was possible to market premium fruit in India, agricultural economist and consultant Keith Sunderlal said.

Keith established The SCS Group in the late 1980s as head of the agricultural commercialisation and enterprise project funded by the US in India. His prime focus is marketing premium foods to the Indian middle class. The SCS Group has worked on the campaign for Washington Apples in India since 2003.

He said India’s large and growing population, large middle class and fast-growing economy made it a market full of potential for premium Australian citrus.

Keith said the success of the US in exporting premium apples to India, despite a 50% tariff, highlighted a path Australian citrus could consider taking into the marketplace.

He said apple shipments to India started around 1999 and some of the earliest shipments were from Australia.

“It died out after five years – didn’t really grow much for Australia – but it

became a tremendous success story for the US,” Keith said.

Today India is the third-largest market for US apple exports after Mexico and Canada.

“They ship over 100,000 tons (90,700 tonnes) of apples to India. They’re the most expensive apples coming into India. We have apples coming all the way from Iran (and) Turkey, Oman (and) China, and European producers, Chile, all over the world, New Zealand as well.

“Despite that, the US [has] always had an advantage here of over 40% despite being the most expensive apple coming into the Indian market.”

Keith said despite India producing two million tons (1.8 million tonnes) of apples domestically each year, the US ships apples 52 weeks of the year to India.

He said product position and differentiation were key to the ‘Washington Apples’ success in India.

“I know Red Delicious isn’t one of the best apples and a lot of you wouldn’t even thinking about eating it,” Keith said.

“But it’s not important what you think. What’s important is what the Indian consumer wants to eat. It’s not the best tasting apple but the Indian consumer likes it.”

He said the “thick-skinned, humble Red Delicious apple” better withstood the high temperatures and humidity of the Indian summer, when the biggest shipments were made.

“Its unique shape, its unique product, has been a great help,” Keith said.

He said they were some of the first fruit to be marketed with a branded sticker, which signified to customers it was a premium product.



Keith Sunderlal, SCS Group Owner says it was possible – and exciting – to export premium fresh fruit to India. Photo: Mike Lamond, Fairfax.

Less than 20% of even premium food is sold by modern retailers in India so for any large-sale campaign to succeed it needed to include wholesale markets, wet markets and smaller cities and towns, he said.

“Last season we conducted direct consumer- and retailer- and wholesale market-level contact programs in 89 cities in India,” Keith said.

“It’s not easy to do but it can be done, and that is why we’ve, over the years, achieved the success we have achieved: by ensuring that even the smallest of towns and humblest of people are familiar with this product and have the opportunity to purchase this product.”

Opportunity for citrus exports to India

He said India produced 12 million tons (10.9 million tonnes) of citrus but harvest was over only a few months and cold storage conditions were quite challenged.

“So it does present an opportunity for a lot of citrus to be imported,” Keith said.

“India is beginning to import citrus. The biggest player in the market at the moment is Egypt but you also have citrus coming in from South Africa and Australia. Australia is the third-largest player in the market but I think you can

India at a glance

- Population: **1.324 billion** in 2016 and steadily increasing
- Middle class: estimated **300 million**
- Economic growth: annual growth of 7%–8% make it **one of the fastest-growing economies in the world**
- **\$6700 GDP**



easily become the second-largest if you focus more on India.”

He said India was importing about 55,000-60,000 tons (49,900-54,400t) of oranges in total. Mandarin imports were new, Keith said, but last year Australia “did some good shipments of mandarins into India”.

He said for Australia’s market share of citrus sold in India to increase, the industry had to target the middle and upper class and develop a strong brand.

“Keep it in your hands and tell the story the way you want to tell (it) from your part and I think there will be tremendous long-term benefits to you guys positioning it right, understanding what the Indian consumer wants and delivering it to them.”

In Keith’s experience, partnerships were vital to the success of Washington Apples in India.

“The big shippers continue to have strong relationships with the limited number of importers that are Indian.”

And his last tip was to persevere.

“India is not an easy place to do business. It might take you a little bit of effort

to get in and to understand how to do things, who the initial partners are, where do you want to sell, what your terms are going to be and things like that.

“But, again, please, I beg you, persevere in the Indian marketplace and it will deliver excellent results for you.”

A shift in thinking

Wayne Prowse, a market analyst from Fresh Intelligence, said India was currently worth \$5.4 million to the Australian citrus industry (or 1% of total exports) and had experienced 50% growth per year on average for the past five years – although that had tended to fluctuate in part due to exchange rates. (India trades in the US dollar.)

David Daniels, Citrus Australia’s Market Access Manager, said there had also been thinking in Australia that India was a lower-value market so more fruit tended to be sent there when there was a big crop of small fruit.

But David said exploring options to develop another high-value market for Australian citrus could benefit the industry.

“We have two big markets: Japan and China. One more would be really handy.”

Keith said the opportunity was enormous is India.

“You cannot think of it as a dump-off market – when the US started in India, that’s how it started, too, but we convinced them there was an opportunity,” Keith said.

“The time for Australian citrus is now. It’s today; it’s not three years from today.

“If you don’t position your product right in the Indian market, I guarantee you that you will never sell it in the Indian market,” he said.

“I think internationally there is a checklist when people think of a foreign market: what’s the quarantine situation, what’s the tariff, what’s the income, and if it’s X, X, X (it’s considered a) useless market.

“But it’s not true. The success of apple imports to India shows it.”



QUANTUM MIST ULTRA TOWER COVERAGE = CONTROL = CASH

- » TURBULENT, TARGETED AIR » DRIFT REDUCTION
- » SUPERIOR COVERAGE » REDUCED WATER RATES

Don’t take any chances with your fruit – the Quantum Mist is used by some of Australia’s biggest growers. It is unmatched in horticulture application worldwide for coverage, both on the canopy leaves and the fruit beneath. With its high volume, turbulent, directional air – **the proof is in the harvest.**

**3.9% FINANCE OFFER
NOW AVAILABLE***

*Terms and conditions apply



SEE THE QUANTUM
MIST ULTRA TOWER IN
ACTION HERE



CROPLANDS

www.croplands.com.au

Freecall
1800 999 162
Email
sales@croplands.com.au



'Keep focus on customers':

supermarket citrus manager

THE Citrus Category Manager for Woolworths, Cara Reynolds, urged growers to change their thinking about retailers.

"I'd like you not to think of us as your customer. The consumer who buys the products at the end of the day is the customer who we both need to passionately care about, 'cause without that customer, neither of us has a business," Cara told delegates at the Citrus Australia Market Outlook Forum.

"So, it's really important that we work more collaboratively with the industries and with growers to actually share information we have access to so that together can work to grow this industry."

Cara said 96% Woolworths' fruit and vegetables was Australian grown.

"Our customer is very passionate about 'Australian grown', so are we," she said.

"We only source the imported product when the Australian product is not available; that's our philosophy and we're very passionate about that."

She said of the more than one million kilograms of fruit and vegetables Woolworths purchased every year, 85%

was bought directly from Australian growers, which helped Woolworths tell its customers where the produce came from.

She said Woolworths also strived to get the product to the consumer as fresh as possible. She said Woolworths did not have facilities to freeze or otherwise store fresh produce long term and in its distribution centers kept, on average, only 0.7 days' stock on hand.

Consumer shopping habits had changed quite rapidly in the past 18 years, Cara said.

"If you go back to the year 2000, customers predominantly shopped once a week or once a fortnight, while the consumer trend now is people are shopping 'basket shops' and they're doing shops more frequently.

"So, they're shopping less, but more frequently. The great opportunity for the fruit categories is [that] a lot of the times fruit categories are quite impulsive purchases, so if we have impulse-purchase fruit lines up in the front of the store, right in front of the customer – they look attractive, appealing; they taste great – it's a great opportunity for our consumers to pick up these products,

not just once when they shop but every time they shop."

She said customers were now more concerned about value than price alone.

"So, to a customer, it's more about the whole experience. When they get home, does it meet their flavour expectations? Does it last in their fruit bowl?"

Her research shows customers are doing more "cross-shopping", meaning they're buying their groceries from more outlets, including online.

"Again, this is an ultimate opportunity for you as an industry to be able to have the right quality product for the customer at all of those retailers and absolutely increase consumption of citrus."

She said at Woolworths, the key customer groups purchasing mandarins were older and younger families.

"So, they're looking for a lunch box solution that's convenient, that's easy and that fits within the kids being able to peel it et cetera."

She said mandarins had gained market share from bananas, oranges, apples and watermelons.



Woolworths Category Manager, Cara Reynolds, said citrus fruit appealed to many of the clients and the industry needed to continue developing offering that suited their needs.

Cara cautioned the citrus industry to not take mandarins' growing popularity for granted.

"We have to be really careful, because if you look at apples, they're actually a slowly declining industry. But, in the last few years, they've had quite a good resurgence with some of the varieties such as Jazz... that are coming in (and) are gaining traction with consumers

because they have fantastic flavour (and) crunch and meet customer expectations," she said.

"We have to be very careful that we don't just do what we've always done. We have to understand what our customers are looking for and make sure we continue to give that and excite so we can continue to grow customers within this industry."

She said customers also wanted seedless fruit varieties.

Oranges appealed to similar customer categories – older families and younger families – and older singles and couples also ranked quite high – "but that's also because (they're) our main customer".

"Again, the barrier for purchase here is that it is quite hard to peel and we've actually seen a trend over the last five years with oranges on a very slow decline," Cara said.

Woolworths' data shows oranges are starting to lose customers to mandarins, melons and grapes.

Across fresh fruit, Cara said customers were passionate about quality – particularly a product that looked good on the shelf, that didn't go off when they got it home and that ate well.

She said Woolworths supported the Australian Citrus Quality Standards because customer research showed there was a minimum acceptance level

at which customers would enjoy a piece of fruit, which then turned into repeat purchases.

These standards help to inform Woolworths' specifications and Cara said that, along with testing fruit in distribution centres, they had helped to improve quality and increase seasonal purchases by 25%.

"Our seasonal purchases are the most important customer we want because they're the customer (who) comes back and shops multiple times throughout the whole season. We want to increase that more and more because they're the customers (who) will stay loyal to this industry and continue to grow."



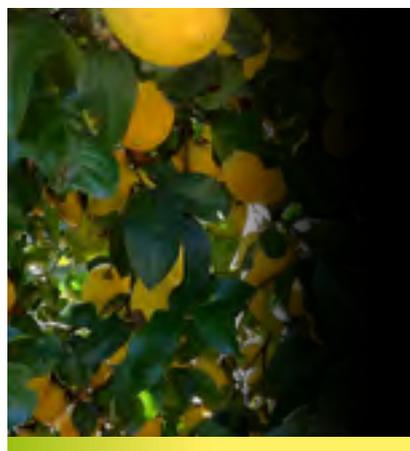
According to Cara, customers are prioritising value over price and

Woolworths' promotions aim to tap into this trend.

"Lower prices in stores... wasn't really working for us so we said 'Let's take a different tack and have a look at how we can engage the customer,'" she said.

She said the 'half-time oranges' campaign was a good example of such engagement.

"Anyone with kids will understand the half-time oranges is a great reminiscent factor with our sports. It's about engaging our customer there," Cara said.



"Eureka SL"

Exciting new seedless Eureka lemon variety from South Africa.

\$3.50 (+GST) per tree royalty only for fruit marketed in Australia. No fruit production royalty.

TOTALLY SEEDLESS

Fruit quality characteristics equivalent to standard Eureka lemon.



Trees Available For Sale

ANFIC Member and other sub-licensed Citrus Nurseries
Contact ANFIC on (07) 3491 9905 or Email: info@anfic.com.au



Eureka SL is protected by Plant Breeder's Rights (PBR). It is illegal to propagate, sell, export, import or stock propagation plant material from this variety under the PBR Act, 1994.



Appreciate consumer and retail trends for success



International speaker on global food and drink industry issues, Professor David Hughes said that Australia's citrus industry should look to Asia for great examples on how to promote their products.

THE citrus industry can tap into consumer and retail trends to protect and grow its market share.

This was the key message from David Hughes, Emeritus Professor of Food and Marketing at Imperial College London and Visiting Professor of the Royal Agriculture University, United Kingdom.

David told delegates at the Citrus Australia Market Outlook Forum 2018 that in most developed or higher-income countries more people lived alone or with one other person than ever before. For example, in the UK one third of households were one person, one third were two people and one third comprised three or more people. He said it was pretty much the same in the US. In Australia about 28% of households were one person.

David said it was important for the food industry to understand what this trend meant for how people bought and consumed food.

He gave the example of people increasingly buying food packaged for one or two people.

He said consumers – especially the demographic group known as Millennials (18 to 32 years old) and single-parent families – were time-poor and looked for products that were quick to buy, quick to consume and quick to clean up and dispose of.

Research showed that in most developed countries, fruit consumption for young people was low and it tended to increase with age, he said. However, David said research showed in the US and the US this young group was starting to eat much more fruit as they were much more conscious of health and the origin of their food.



He said that bode very well for fresh fruit but citrus must innovate to ensure it was meeting consumers' needs. In David's opinion, easy-peel citrus met these needs, but for many consumers "life's too short to peel the orange". He urged the citrus industry to promote its products and not concede market share to processed, packaged snack foods that contained fruit and made many of the same health claims.

David called on the citrus industry to work with major retailers to ensure its fruits were included in the growing supermarket category of "grab and go" – for example, they could be included as a dessert in a meal combination at a convenience store or inner-city supermarket.

David said the trend for big food businesses (such as Campbells) to invest in prepared snack foods highlighted the trend.

Increased regulation possible

He said there were opportunities and challenges for citrus in these trends. David said he thought that would also be the case as consumers and governments became more interested in health.

He said Australia ranked number five on the OECD obesity league table for 2016 and 30% of Australians were clinically obese, whereas in Italy, for example, under 10% of its population were obese.

"What I expect to see in the food industry in Australia, New Zealand and the UK is the government is going to be increasingly active in terms of regulating matters that relate to health and food," David said.

"And WHY? Because the taxpayer cannot afford the cost of type 2 diabetic and other diseases.

"I expect to see more regulation, tax on sugar or whatever it may be; we're going to see a lot more of that."

"You can see it already. Retailers are saying OK; they're being nudged by government to get into putting out more healthier options, and also their shoppers want them to have more healthy options."

David said while demand and prices were strong for Australian citrus, he warned Forum delegates to not take this for granted. He gave the example of how the citrus industry in Florida was suffering from citrus greening pushing down production and consumption of orange juice going down.

"And it's not just because of concerns about sugar in the US but also 54% of Millennial mums say they walk away from 100% orange juice because they have concerns about pesticides and GMO fruit. I think that's largely lunatic, but it doesn't matter if it reflects perception."

In David's opinion, the "number one global mega trend" is the increasing concern about the health of the family and the health of the planet. He said while consumers would not spend more on 'green' products, there was a penalty for not meeting these concerns.

He also expected governments to introduce more regulations about food packaging, he said.

"I would suggest by 2020, in most countries single-use plastic that cannot be composted or recycled will be banned – it will push industry much quicker," David said.

Changing retail landscape

David consults and presents around the globe and in his travels has observed enormous disruption, or "retail apocalypse", for traditional retailers.

For example, South Korea leads the world in online purchase of groceries, with nearly 20% of its sales conducted online. He said other high-income countries were following suit.

He warned that fresh produce suffered from the trend towards online shopping so citrus needed to be proactive to shore up and grow its demand.

He said when non-perishables were replenished automatically there were more opportunity for fresh produce "for theatre" – including placement and displays in store, other promotions and brands.

"It's not only about online but it's about the channel, so it's about online, big supermarkets, small supermarkets, convenience stores, and the winning retailer is going to be the retailer that is going to deliver on all those, because the product has to be available whenever I want it because 'I want it now'."

"And I think the challenge for you guys is to look at your product and say, 'In what format should it be for each of those routes to the consumers?'" 



Three-year citrus marketing strategy: a new frontier

Developed in consultation with industry, the new three-year Citrus Marketing Strategy is now in place to address the key strategic challenge for the marketing levy investment – to protect the premium positioning of Australian citrus by connecting deeper with consumers in key export markets.

The 2018-20 Citrus Marketing Strategy was presented at the November 2017 Citrus Strategic Investment Advisory Panel (SIAP) meeting. The SIAP recommended the strategy proceed and Hort Innovation will now implement it.

As part of this, for the first time, Hort Innovation will launch consumer insights projects mainly focused on China and Japan to develop a deeper understanding of the industry's consumers to help guide and inform industry and its marketing activities. Hort Innovation hopes to drive a data and insight-driven approach to marketing moving forward. Hort Innovation can also support mandarins in this work as consumer insights is funded by the research and development levy.

This year, Hort Innovation will also continue to support strong promotional activity in Japan and China for oranges by, for example, participating in trade seminars and strategic trade shows as well as investing to build emerging markets such as the Philippines to ensure a market for all Australian citrus products.

Setting a longer-term approach to marketing investments and projects will establish a strategic focus and ensure levy dollars are well-spent and well-targeted.

Stay tuned for more details as the plan progresses. 

MORE INFORMATION

These industry marketing initiatives are managed by Hort Innovation and are funded by the orange marketing levy. For more information, contact marketing manager Dianne Phan on (02) 8295 2350 or dianne.phan@horticulture.com.au.



Gall wasp control in autumn

By Jianhua Mo, Craig Swanbury, Andrew Creek, Steven Falivene and Scott Munro

RESEARCHERS from the NSW Department of Primary Industries and FruitDoctors update citrus growers on autumn control of citrus gall wasp and wasp movements.

Gall wasp is now in the young larva stage feeding inside newly formed galls. The larvae are well protected from natural elements and contact chemicals. The only control options from now until adult wasp emergence in the following spring are systemic insecticides.

We completed four field trials in the southern citrus regions over the last two seasons to determine optimal autumn control options. The research is funded by Hort Innovation, using the citrus research and development levies and contributions from the Australian Government. The results showed Samurai® and Movento® provided consistent control of gall wasp larvae.

A single soil application of Samurai® at 8g/tree or foliar application of Movento® at 40ml/100l plus Hasten® at 50ml/100l in March/April both reduced emergence of adult wasps in the following spring by over 60% (Figures 1 and 2). Due to their late timing, autumn applications of the two chemicals did not affect gall size. Please check permit requirements, withholding periods (WHP) and maximum residue limits (MRL) before applying chemicals.

Gall wasp movement

To find out how far adult gall wasps would normally fly, we conducted a mark-recapture experiment in a block of Valencia orange trees in Leeton from 17 October to 7 December 2017. Adult gall wasps were marked with fluorescent powder upon emergence and their subsequent movements were monitored with yellow sticky traps. The traps were placed in four concentric,

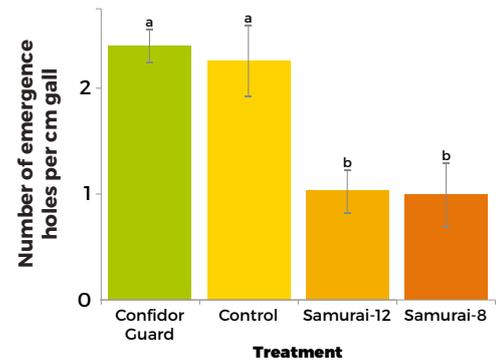


FIGURE 1 Reduced wasp emergence with autumn Samurai® application

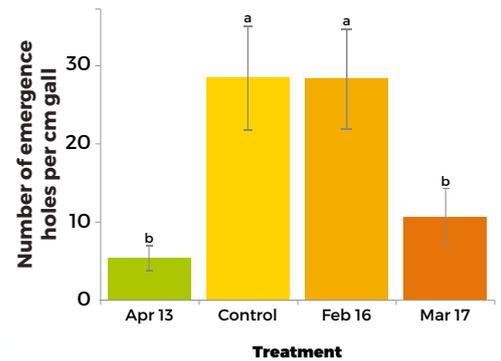


FIGURE 2 Movento® timing research trial – Griffith 2016-17





Citrus growers at the Dareton Primary Industries Institute tasting the fruit from the different varieties in the evaluation trial.



Dr Dave Monks takes over leadership of the citrus evaluation program this year.

rectangular rings around the release tree at a minimal distance of 5, 10, 20 and 40m.

Of all the marked wasps caught on the sticky traps, 95% were caught in the tree where the wasps emerged and 5% in a neighbouring tree 5m away. Traps placed further away did not catch any marked wasps. The results confirmed our earlier observations that citrus gall wasps do not fly far and are happy to lay eggs in the same tree they emerged from. It is likely though the wasps may move over long distances in the wind.

Acknowledgement

This research is part of the project Development of national strategies to manage citrus gall wasp (CT15006) which is a strategic levy investment under the Hort Innovation Citrus Fund. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture. 🌿

MORE INFORMATION

Dr Jianhua Mo, NSW DPI, (02) 6951 2537, jianhua.mo@dpi.nsw.gov.au

Citrus variety evaluation gets green light for five more years

CITRUS growers can look forward to ongoing independent evaluation of cup-and-coming varieties with a reinvestment into the NSW Department of Primary Industries (NSW DPI) citrus evaluation program.

The program, recently funded for another five years as a strategic levy investment of the Hort Innovation Citrus Fund, is managed at NSW DPI's Dareton Primary Industries Institute (PII).

This season, researchers have top-worked 10 new varieties to Valencia orange on a range of rootstocks, joining 41 varieties already established in the field. Of these, 14 varieties will fruit at Dareton for the first time this year.

Graeme Sanderson, industry stalwart and long-time leader of this research, has stepped aside this season and welcomed Dr Dave Monks in to lead the program.

"I've been with the Department at Dareton for 30 years and have seen the move from public varieties towards private varieties," said Graeme.

"Continuing to have an independent evaluation helps industry gain confidence in their planting decisions."

Dave acknowledged the experience and expertise Graeme has been able to pass on.

"Having Graeme show me the ropes this year has been terrific – to be able to learn alongside him will mean, hopefully, we can offer the same standard and service to industry," he said.

Varieties to fruit in the field at Dareton PII in 2018 for the first time are Valencia (Midnight 115-1717, Ruby, Weipe, McClean, Lavallo and Benny); Grapefruit (Star Ruby early and late varieties and Jackson – Sweet Sunrise); Navel (Witkrans, Rayno and Glen Ora); and Mandarin (USDA 88-2, Sonet and CSIRO 91-03-04).

Except CSIRO's 91-03-04 mandarin, all varieties fruiting this year for the first time are managed by Variety Access Australia – a cultivar management company.

Growers interested in seeing certain varieties in the field may contact the variety manager and then make an appointment to come to the Dareton PII; juice quality and yield data is available on all varieties that have produced fruit to date.

Acknowledgement

The project 'Evaluation of new citrus varieties 2017-2022' (CT17006) has been funded by Hort Innovation using the citrus research and development levy and contributions from the Australian Government. It is being delivered by NSW DPI. 🌿

MORE INFORMATION

Dave Monks, Research Horticulturist, NSW DPI, (03) 5019 8431, dave.monks@dpi.nsw.gov.au



Fruit protection starts with Exirel®

Exirel® controls pests like Kelly's citrus thrips and Light brown apple moth that hit your citrus early and can damage fruit early and your bottom line.

Once these pests come into contact with Exirel® treated crops, they will rapidly stop feeding providing almost immediate crop protection.

Exirel® is designed for effective crop protection early to help achieve high quality fruit at harvest.

Visit www.fmccrop.com.au for more information.

Exirel®
insecticide

ALWAYS READ AND FOLLOW LABEL DIRECTIONS. Copyright © 2018. All rights reserved. Exirel® is a registered trademark of FMC Corporation or its affiliates.

FMC

FMC Australasia Pty Ltd
Phone: 1800 901 939
www.fmccrop.com.au





Save time and money with Exirel®

If you're exporting citrus to Korea, China or Thailand, you'll know Exirel® as the product of choice for citrus growers.

A foliar option for Fullers rose weevil, Exirel® improves your process of meeting export market protocols while maintaining a healthy orchard.

Visit www.fmccrop.com.au for more information.

Exirel®
insecticide

ALWAYS READ AND FOLLOW LABEL DIRECTIONS. Copyright © 2018. All rights reserved. Exirel® is a registered trademark of FMC Corporation or its affiliates.

FMC

FMC Australasia Pty Ltd
Phone: 1800 901 939
www.fmccrop.com.au



AustSafe Super notches up a milestone in the industry

LONG before the Keating-led government made compulsory superannuation mandatory in 1992, AustSafe Super had already recognised the need to help people save for a comfortable retirement. Fast forward three decades, that philosophy remains and as we get set to turn 30, we're continuing to help rural and regional Australia achieve financial security when they need it the most.

This year marks a very special milestone for AustSafe Super – it's our 30th anniversary. Founded in 1988, the Fund began operations with under 1,000 members and \$100 million funds under management. Three decades later, it now represents a total of 100,000 members and \$2.4 billion funds under management.

Delivering better outcomes for our members and employers

In the last year, we've continued our track record of delivering strong investment returns and held even more seminars for members and employers. We also introduced a number of significant product improvements, including the launch of our new Mobile App.

In the 2016-17 financial year, we delivered strong investment returns for members with 11.12% p.a. for the MySuper (Balanced) investment option, and 13.41% p.a. for our Pension Balanced investment option¹.

Our efforts haven't gone unnoticed with the Fund collecting several industry-based awards and accolades throughout 2017. AustSafe Super was named Best Growth Super Fund in the Money Magazine Best of the Best Awards, as well as being a finalist in the Rainmaker Selecting Super Awards' Innovation Award

for Millennial Superannuation. This year, the Fund ranked 2nd out of ten in the top ten performing growth funds for the 12 months to 31 December, 2017, capping off a stellar period of growth.

Celebrating 30 years of growth

In our 30th year, there will be a number of exciting developments. Our valued members and employers are encouraged to keep an eye out at austsafe.com.au, as well as follow us on Facebook and Instagram for the latest updates.

Disclaimer: This editorial is general information only and does not take into account your individual objectives, financial situation or needs. You may also wish to seek the advice of a qualified financial planner. Please also read the relevant AustSafe Super Product Disclosure Statement (PDS) before making a decision in relation to the product available at austsafe.com.au which summarises important information about being a member of AustSafe Super. Austsafe Pty Ltd ABN 96 010 528 597, AFSL 314183 is the Trustee of AustSafe Super ABN 92 398 191 503

¹ Past performance is not a reliable indicator of future performance.



Celebrating 30 years as your local super fund

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

Find out how AustSafe Super can support you.

☎ 1300 131 293
 🌐 austsafe.com.au



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



Fair Farms Initiative

reaches grower-employers across Australia



By Ryan Ong

Key points

Help for growers around employment practices

Seminars and workshops available

Potential voluntary industry-driven certification scheme

LAUNCHED in May 2017, the four-year initiative fosters good employment practices across the Australian horticulture industry.

The initiative is part of an industry response to negative stories of underpaid or mistreated farm workers in the media.

While most growers endeavour to do the right thing, understanding and complying with complex legal requirements can be difficult. The Fair Farms Initiative supports horticulture employers in their knowledge and application of Fair Work laws through seminars that are being rolled out around Australia.

“Our initiative is about lifting the standard of employment practices across the Australian horticulture industry to ensure that workers are treated fairly while they are employed on horticulture farms and pack houses,” said Jane Muller, Project Manager for the Fair Farms Initiative.

Growers learning the latest employment practices with Growcom in Kununurra, WA.

Since its launch, seminars and workshops for horticulture employers have been held in Stanthorpe (QLD), Adelaide, Darwin, Katherine and Kununurra, attracting groups of between 10 and 50 growers. The Fair Farms team also presented at the Gayndah post-season in November 2017.

The interactive sessions range between two and four hours and cover a business risk assessment against Fair Work requirements, practical ways for farm businesses to achieve compliance, tips for managing tricky issues such as poor performance, and how to work effectively with labour hire companies.

“The response to the seminars has been really positive. We’ve heard from growers that the information is very targeted and helps them determine where their strengths are and where the gaps lie in their record-keeping and employment processes,” said Jane.

Growers in Western Australia have the opportunity to attend a Fair Farms seminar soon, with sessions planned around Perth and the south-west between 21-25 May. Employers who are interested in building their confidence and efficiency around employment practices and record keeping are encouraged to attend.

The Fair Farms team is also looking at a potential voluntary industry-driven certification scheme for good employment practices in horticulture. The scheme is currently in its pilot stage, with further developments expected in the middle of the year.

“The critical thing at this stage is managing and building the reputation of the industry when it comes to employment practice. There’s more and more pressure from retailers and consumers around this issue. If the industry doesn’t take the first step, then someone else will,” said Jane.

“Horticulture is very reliant on harvest labour. If we continue to build a positive reputation as an industry, we can expand our pool of labour. We need to showcase that we are a good industry to work in, that you will be paid and treated properly. We should also aim to demonstrate that there are career pathways and opportunities in horticulture.”

As well as the seminars and certification scheme, the Fair Farms Initiative is working on other activities to recognise and promote good employers. A national award to showcase horticulture employers who maintain excellent employment policies and practices will be established in 2019.

Acknowledgement

The Initiative is coordinated by Growcom and funded through the Fair Work Ombudsman. Freshcare and DLM Consulting (Horticulture workplace relations specialist, Donna Mogg) are project delivery partners. Growcom works closely with national commodity organisations to ensure the Initiative addresses industry needs. 🌿

MORE INFORMATION

Contact jmuller@growcom.au or call Growcom on (07) 3620 3844.



Best practices around managing harvest labour for fruit growers

Planning what labour you need during harvest and building relationships with your staff will help your harvest run smoother.

By **Reginna Vasi**

Key points

Plan labour requirements early

Clearly communicate safety instructions

Establish direct relationships with workers

HARVEST is a busy and stressful time, that is why it is important to implement some good practises when it comes to sourcing and maintaining labour to make this process run as smoothly as possible, rather than have it add to your stress.

Plan early

Try to plan early and work out what your needs will be and how you plan to source labour. Use the resources available such as your local Harvest Labour Office, National Harvest Labour Information Service, advertising in your local paper, online (jobs.gov.au/harvest-labour-services) and don't forget the power of social media.

If you have a rough idea of how many pickers you will need and when (try to work off previous seasons), it will help you secure some people ready to start rather than scrambling at the last minute. Keep in mind other growers will also be searching for staff around the same time as you, so the quicker you can lock in people for your farm, the better.

Build relationships

If you source labour through a contractor, it is important to not distance yourself completely from the recruitment process or from workers on your farm. Staff like to know who owns the farm they are working on and appreciate feeling valued by managers and supervisors as well as knowing that you are approachable, even if they are not hired directly by you.

Small acts of kindness or thoughtful gestures go a long way when motivating your workers. Something as small as a BBQ lunch or providing icy poles on a hot day can give employees a great experience when working for you which then generates boundless word-of-

mouth not only for your farm, but the region as well.

Do not under estimate the power of word-of-mouth, especially if you source labour from backpackers. There are many online platforms that backpackers communicate on when looking for work or sharing experiences from working in Australia. You can contribute to these platforms and help build a positive image for the industry and your business which will attract workers.

Using backpackers for labour is an effective way to get your fruit off the tree, particularly when you need large numbers of pickers for short periods of time. To apply for a second year working holiday visa, backpackers must complete 88 days' work in a regional area, in a farming environment. The harvest season is a popular way to achieve these days, however, backpackers do move around a lot and if you have breaks within your harvest period, they will often move onto another farm or region rather than waiting around.



Look to locals

Many farms are again looking at locals to fill ongoing positions within their orchards. There is often a stigma that local Aussies don't want to do the work orchards have available but this is not always the case. Especially in regions with a large multi-cultural community, you can often source hard-working employees for ongoing roles on your farms.

The seasonal work can sometimes cause problems for residents as they will often find other ongoing employment during your down time and be unable to return. Many farms we are working with are looking at putting more time and money into upskilling labour that live in their region. By training people who want to remain in the region, you can support their future career options such as working their way into supervisory and manager roles because when these roles are required, they are often very difficult to fill successfully.

Communicate
regularly with
workers

Traineeships for young people looking for a career is a popular option as it gives the employee a qualification as well as on-the-job experience all while earning a pay check each week and don't forget our grey nomads travelling the country looking for some extra cash!

Keep people safe

Having a safe workplace is very important when sustaining labour on your orchard.

Employees will be turned off your farm if, on arrival, they see long grass between trees or faulty equipment.

You should always provide an informative and specific induction when you have new staff starting on your farm that covers how they are to perform their job safely and effectively, how to refrain from damaging fruit, where facilities are, and any other relevant information for working on your orchard.

Clear communication is a must. Ensure that on your staff's first day that all parties are clear on everything including

expected hours, pay rates, what they will pick, what fruit you need them to pick (whether it is colour picking, strip picking or you only require a certain percentage off the tree), as well as how long you are expecting your harvest to last and any expected breaks. This way you can plan out when you will need to 'top up' numbers throughout the season. The majority of the negative feedback we get from labour stems from confusion around expectations that were not explained prior to starting work.

The smoother you can make your recruitment process; the better off you will be getting your fruit off the tree when you need it. Valuing your workers goes a long way to making your season a fruitful one. 🌿

MORE INFORMATION

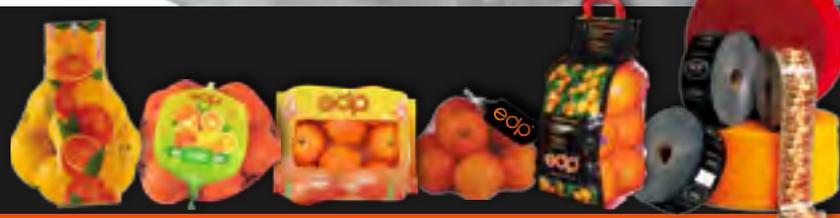
Reginna Vasi, Harvest Officer, MADEC
Australia: rvasi@madec.edu.au or phone
(03) 5829 3600.



Custom Designed, totally integrated packaging solutions for the Australian Citrus Industry.
Complete turnkey installations and after sales support.



MANUFACTURING
IN AUSTRALIA
SINCE 1947



- Laminated film options
- Wineglass, Clip2Clip and adhesive labels
- Clipping wire
- Knitted and extruded net

edp australia pty ltd

phone: (03) 5820 5337

www.edp.com.au

email: robm@edp.com.au





Pacific Island workers

*good for business
and families*

Key points

Pacific Island workers provide industry labour

Returning workers build expertise

Benefits flow to home countries as well

MAJOR citrus producer, the Costa Group, is reaping the benefits of employing staff from across the Pacific Islands under the Australian Government's Seasonal Worker Programme, which is simultaneously changing the lives of the workers themselves.

The Seasonal Worker Programme (SWP) helps Australian farmers meet their seasonal labour needs by providing access to workers from the Pacific and Timor-Leste. The programme

offers employers in the agriculture sector access to a reliable, returning workforce when there is not enough local Australian labour to meet seasonal demand. SWP workers gain both skills and remittances benefiting their families and communities.

In 2016-17 more than 6,000 workers from nine Pacific Island nations and Timor-Leste completed up to six months unskilled seasonal work across Australia under the SWP. According to Department of Home Affairs data, visa approvals for the SWP were up by 56% between July and October 2017 as compared to the same period in 2016.

Delivering business benefits

The Costa Group in Renmark South Australia, with over 2,000 hectares of citrus production, employs around 1,000 people annually and joined the SWP in 2012.

Steve Burdette, Costa Group's Business Development Manager, said that one of the core business benefits of the programme is it helps them get access to reliable labour.

"We have three recruitment areas," Steve explained. "First and foremost, we look after the local population. We try very hard to make sure locals get the work first, and invariably take on supervisor and quality controller positions, roles with more responsibility.

"Then we have backpackers and workers from the SWP. The biggest issue with backpackers of a seasonal nature is that they start, then their visa ends in three weeks, and we must change people over and train others.

"However, with the SWP, the workers are here for a set period. They are here every day, we know they are going to arrive and they are trained. Having that reliability of labour is critical for us," he said.

After more than five years in the program, Costa is now looking to expand its participation in the programme from people from Tonga and Fiji to Samoa.



Josefa Rasedaseka from Manuku village in Fiji, working in the nursery at Costa in Renmark, says that he has learnt a lot of skills and wants to come back again to work.



The SWP has benefitted Costa's local employees who are able to fill the skilled supervisory positions while SWP workers and working holiday visa holders make up the unskilled picking labour force. Skilled opportunities for the locals have increased as the business expands. Farmers employing Pacific seasonal workers under the SWP can also reduce training and supervision costs by having the same workers return each season, creating continuity of employment and ongoing skill development. This is a significant win for both.

"I highly recommend this programme to any grower that is serious about securing a reliable workforce and may find it difficult to satisfy their labour needs through a lack of local workers in the first instance," said Steve.

"The SWP is a partnership and you have to see it as one. At Costa, we make it a priority to look after their wellbeing which means we must know our responsibilities and be committed to the program. This means ensuring they are paid properly, that they get the right number of hours, and they are treated with respect and dignity, because that is the essence of the partnership."

Costa Group and Seasonal Workers

While the business benefits of SWP are a tangible benefit for the Costa Group, Steve said that the programme is more than just getting access to labour.

"More importantly is to see the people we recruit changing their lives back home. For us that is an amazing achievement when people go back and build homes, never had running water, now have a new home, a vehicle, and it helps to make them self-sufficient," said Steve.

When it comes to the performance of Fijian workers, Steve said, "General performance and productivity is very high with the seasonal workers because they are incentivised on their own, to actually earn more money – it is all about getting money back to their families".

"I think Australians don't really understand the socio-economic background some of them come from. If we can provide opportunities – then we have achieved a great deal from Costa's perspective," he said.

Steve went on to say that he often receives emails from workers' families



Jone Dusilele Raitani from Koro Island in Fiji picking citrus at Costa farm in Renmark says that his family is very happy that he comes to Australia to work.

describing the impact of the SWP on their lives. A recent email from the family of a worker expressed their joy about the boat and vehicle they had purchased with SWP remittances that they plan to start a tourist whale watching business in Tonga.

As an extra benefit for Costa's SWP workers, the business organises shipping containers for the workers to send items home, such as generators to do some contract work or start a business.

"We know that the things they take home will make their children and their families very happy. It's all about helping them to get forward in life and if we can achieve that then I think we have achieved a great deal from Costa's perspective," Steve said.

From Fiji to South Australia

One of the seasonal workers picking fruit at Costa in Renmark is Jone Dusilele Raitani from Koro Island in Fiji.

"Back home in my village we are all farmers and I get some money for my family from growing and selling taro and cassava at the Suva market," said Jone.

SWP participants save an average of \$8,500 over a six-month period. Jone is planning to invest his earnings in his village as part of the rebuilding efforts following cyclone Winston.

"Before we came here cyclone Winston hit our village very hard. Nothing was left in my village, no houses, no food, no

water, no anything. So now we must start again," said Jone.

"When I go back I will start to build some shelter and buy other things for my family. My family is very happy I come here to work. They know I will get money for us back home to build a house and be able to start again after the cyclone."

Josefa Rasedaseka from the Fijian village of Manuku, who also works at Costa, is using his SWP wages to renovate his house.

"I live in a village with less than 50 people. There are no cars or other vehicles. We are all subsistence farmers, so we are experienced," said Josefa.

"When I came here I set my plans. In the last five months, I have sent money home every week so that we can renovate our house. So far, I have sent about AUD \$4,000 and plan to take an additional AUD \$3,000 home as well.

"Back at home it is very hard to find paid work, so I think I got blessed going through Fiji's National Employment Centre to find work here.

"Costa and my supervisors have been great in teaching me new skills that I can use back home. It is (a) very good experience for me. If they want me next year I will be back as I have many other plans to improve my family's life. I hope I get a chance to come back. Thank you!" said Josefa.

A win for Australia and the region

The SWP fills gaps in the Australian labour market while boosting the economy of 10 participating countries. The Programme provides Australian farmers with access to a reliable workforce that can return each season, building skills and reducing the need to retrain workers.

Seasonal workers benefit from the opportunity to earn Australian wages and gain valuable on-the-job learning opportunities. For workers and their families, the SWP is a life changing opportunity. 

MORE INFORMATION

For further information on the Seasonal Worker Programme refer to the Department of Jobs and Small Business website: www.jobs.gov.au/seasonal-worker-programme.

Fiji's Ministry of Labour, Industrial Relations and Productivity can be contacted via email: sakeo.talemaimaleya@govnet.gov.fj.

A preliminary timing guide for red scale management

By Jianhua Mo, Andrew Creek,
Steven Falivene and Scott Munro
NSW Department of Primary Industries

Key points

Management techniques for red scale

Time control with life stage

Tables to guide control timing

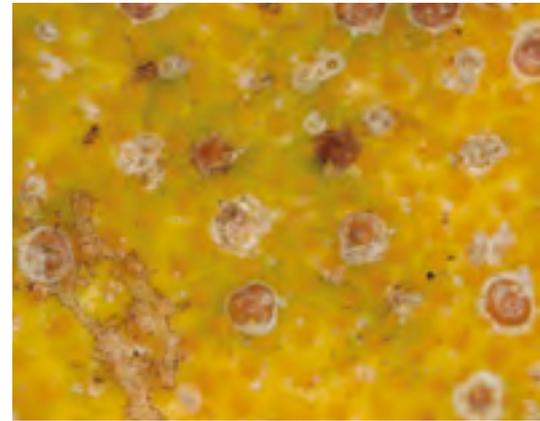
RED scale is a widespread pest of the citrus industry but can be managed if control measures are well-targeted and timed to coincide with specific life stages of the pest.

Red scale's life cycle starts as a crawler that emerges from underneath the cover of a female scale. It soon settles and starts to secrete a wax cover, appearing as a white-cap. From then on, a female scale moults twice to become the second and third instars and mature females. A male scale moults once to become the second instar then pre-pupa, pupa and adult male. Adult male scales have wings and can fly (see Figure 1).

A commonly used chemical spray against red scale in the southern citrus regions is oil plus half-rate chlorpyrifos. The spray is only effective against crawlers and newly settled white-caps. Two of the other registered insecticides, pyriproxyfen (Admiral) and buprofezin (Applaud), are most effective when crawlers have completely emerged and become white-caps.

Red scale crawlers are tiny and difficult to see with the naked eye. To assist citrus growers in timing their red scale control, we have developed a preliminary timing guide based on two season's monitoring data of pheromone trap catches of adult male scales and seasonal abundance of crawlers in citrus orchards in the Riverina and Sunraysia.

Our pheromone trapping data showed a series of male flight peaks. There was a regular peak of male flights between mid-September and mid-October. From this peak to the following crawler peak, there was an average gap of 428 degree-days (DD) above 11.7°C. Table 1 shows the number of days before the next crawler peak when a male flight peak



Monitor red scale by placing pheromone traps that consist of a yellow sticky card and pheromone lure to determine the stage of the life cycle the pest is in to help with pest management.

is detected between 1 October and 15 December. The estimates were obtained using long-term average monthly temperature data from the Bureau of Meteorology (BoM).

To predict the timing of the next crawler peak using the above table, we need to know when male flight peaks. This can be found out by weekly monitoring with pheromone traps. We recommend placing four red scale pheromone traps (more than 20m apart) in a red scale infested block by late August and monitor trap

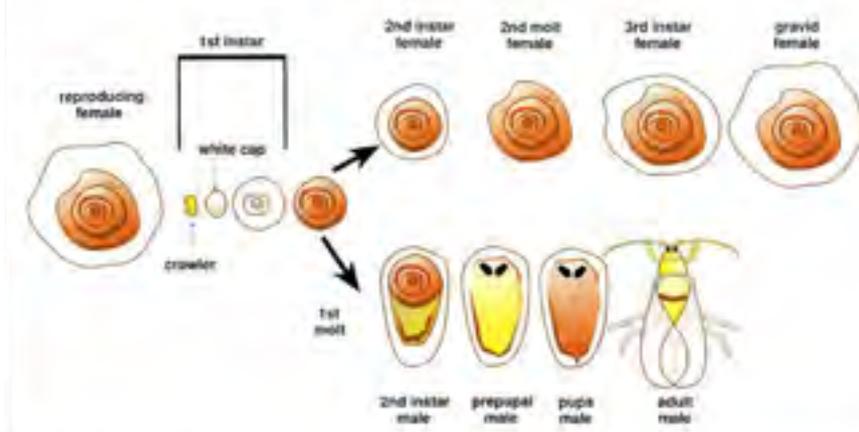


FIGURE 1 Life cycle of California red scale

Diagram reproduced with permission from the University of California's Division of Agriculture and Natural Resources. Source: <http://ucanr.edu/sites/KACCitrusEntomology/files/4457.pdf>



TABLE 1 Estimated number of days from a male flight peak to the next crawler peak based on long-term average monthly temperature data

Male flight peak	Yanco	Griffith	Mildura	Loxton
1 October	55	60	61	63
15 October	49	53	54	57
1 November	40	44	46	49
15 November	38	41	42	47
1 December	34	36	37	41
15 December	32	34	35	39

Source: Bureau of Meteorology

TABLE 2 Average catches of adult males and crawlers across all sites and seasons

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Male	514	513	1024	1057	378	24	4	22	519	505	52	548
Crawler	3.35	2.83	4.58	5.19	4.21	1.08	0.17	0.05	0.26	3.27	7.69	5.91

Note: Data collected after Feb 2017 was not included in the estimation. Those data are yet to be analysed.

catches weekly. A red scale pheromone traps consists of a yellow sticky card (available from www.bugsforbugs.com.au) and a red scale pheromone lure (available from www.entosol.com.au). The lure needs to be changed every four weeks.

For growers who do not use pheromone traps, the following table shows the average catches of adult males and crawlers across all sites and seasons in data analysed so far. Male catch (male flight) in the Riverina and Sunraysia was highest during March and April and lowest during June through to August and in November. Crawler numbers in the Riverina and Sunraysia were highest in November, followed by December, April, and May and lowest during June to September (Table 2).

For growers who plan to release *Aphytis* wasps, timing of peak male flight is also a good indicator of the time when virgin females are abundant. The two stages need to be around the same time for reproduction. Virgin female is the preferred stage for *Aphytis* wasps to parasitise.

This timing guide will be updated when new data become available. An online degree-day calculator will also be published by the end of October to allow growers to use actual temperatures to predict male and crawler peaks.

Acknowledgement

This article is a contribution from the *Development of phenology models and a timing guide for the management of Californian red scale in Australian*

citrus (CT15008) project funded by Hort Innovation and NSW Department of Primary Industries. Levies from Australian citrus growers are managed by Hort Innovation and contributed to funding this project. The Australian Government provides matched funding for all Hort Innovation's research and development activities. Thanks to Peter Symens and Grant Napier for helping with data collection. 

MORE INFORMATION

Jianhua Mo, NSW DPI, (02) 6951 2537, E: jianhua.mo@dpi.nsw.gov.au



Use Nordox 750WG
Copper Fungicide for
citrus disease control

Contact Steve Phillips 0477 626 677 for more information

+ Safe

+ Effective

+ Economical

Authorised Australian Distributor Tanuki Pty Ltd | www.tanuki.com.au | office@tanuki.com.au



Pack house hygiene

– sanitation and food safety

By John Golding and SP Singh

Key points

Develop a food safety plan, train workers

Remove culled fruit from pack house

Clean and sanitise the packing line

PACK house hygiene and sanitation are fundamental to the supply of safe, fresh quality citrus. Good pack house hygiene is not only a good agricultural practice, but it is essential to reduce the risk of postharvest decay, the development of resistance to postharvest fungicides and improve food safety.

Improving postharvest decay control

The control of postharvest decay requires an integrated approach of postharvest handling, hygiene and sanitation, and the correct use of fungicides. The control of postharvest decay with sanitisers and fungicides was discussed in 'Postharvest decay control – fungicides and sanitisers' (*Australian Citrus News*, Spring 2017, pages 12-13). This section summarises some of the key activities to improve pack house sanitation.

Good fruit hygiene starts in the orchard. It is important to train fruit pickers to harvest sound, clean fruit. Care is required for correct harvest and handling of the fruit, as many rots rely on damage (wounds) to the skin for entry and infection. Picking bins also need to be free from contamination and regularly cleaned.

A critical tool to reduce the risk of decay and the level of mould spores in the pack house is to prevent the entry of rotten fruit into the pack house and the removal of decayed and culled fruit from the pack house and cool rooms as soon as possible. Removal of culled fruit and any other accumulated fruit waste should be regularly conducted and disposed of well away from packing facilities. The reduction in spore load within the shed minimises the risk of infection and development of fungicide resistance. It is particularly important to remove culled fruit which roll from the line to under equipment and bins. If undetected this fruit can continuously contaminate the pack house over time.

It is also important to thoroughly clean and sanitise all components of the packing line and equipment, from receival areas to the coolroom. Pay attention to cleaning de-greening rooms and coolrooms where fruit is held for extended periods and where rotten fruit can lead to a higher spore population. It is also ideal to keep packed fruit separate from unsorted bins and away from other potential contamination sources.

Food safety

While decay control is essential, the absolute fundamental of growing and packing all food, including citrus, is food safety. This is non-negotiable. Food safety is the top priority for consumers in both domestic and international markets. Foodborne pathogens such as *Salmonella* and *Listeria monocytogenes* are serious and potentially fatal pathogens that have been linked to horticultural produce.



These pathogens can enter into a pack house with the fruit, in dust storms, on workers, harvest bins, machinery and other objects (living and non-living). It is critical to have a food safety plan to minimise these risks. The most important protection against any food safety problem relies on the pack house workers. It is critical that all workers are aware of food safety risks and properly manage their work to minimise any risk.

To support workers to maintain food safety standards:

- Educate and train workers about the personal hygiene and food safety risks linked to fruit handling and processing.
- Provide eating, drinking, smoking and toilet facilities away from the processing area.
- Hand wash stations must have a cold and hot water supply along with a soap, disposable paper towels and a bin.

Managing food safety risks in the pack house is a key component of any food safety plan. Some important considerations for the pack house hygiene include having a pack house access and layout that:

- Restricts access to the visitors.



- Prevents entry of dust, dirt, birds, insects, rodents and animals including pets.
- Segregates handling areas for unprocessed and processed fruit.

Pretreatment or washing of fruit with water containing a sanitiser is essential to minimise the risk of bacterial pathogens and reduce fungal spores. Citrus fruit are generally not considered a carrier of foodborne pathogens (e.g. Salmonella) due to their high acidity and inedible rind. But recent research has shown that bacterial pathogens present on the citrus rind may get transferred to hands and mouth of consumers during peeling and eating. Therefore, the use of a sanitiser is important to mitigate food safety risks and to complement the fungicide treatment through its action on moulds and yeast.

A number of sanitisers with different chemistries, including fungicides, are currently available in the market and are registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). Each sanitiser has its own merits and demerits of adoption. The selection of sanitiser is influenced by a number of factors such as price, water source (channel, ground or

council) and quality (pH, hardness), method of application and monitoring (manual vs. automatic), packing line machinery (corrosiveness) and buyer's requirement etc. These are discussed in 'Postharvest decay control – fungicides and sanitisers' (*Australian Citrus News*, Spring 2017, pages 12-13). However, it is important not to solely rely on sanitisers to control any postharvest food safety issues. An integrated approach is required to develop a food safety plan.

Key points to include in a cleaning and sanitising schedule:

- Develop and implement a food safety plan with written procedures for cleaning and sanitising food contact and non-contact surfaces.
- Food contact surfaces (harvest bins, packing line) must be cleaned and sanitised using food grade detergents and sanitisers.
- Non-food contact surfaces (floors, walls, ceiling and drains) must be cleaned and sanitised regularly.

Cleaning and sanitation of packing line equipment is critical. Just one source of pathogen introduction, at any point, can potentially inoculate all fruit that pass through the line.

Therefore effective cleaning is critical to maintain food safety of the pack house and minimise postharvest decay. The University of Florida publication 'Fresh Produce Handling, Sanitation, and Safety Measures: Citrus' (2002) summarised the key cleaning tips for citrus packing lines as follows:

- **Cleaning** – physically removing debris, biofilm build-up, and any other residuals on the line. This is done with detergent and physical labour (such as scrubbing or a pressure washer, etc.).
- **Sanitation** – using sanitisers of various types to kill microbes on clean surfaces. Sanitation is most effective after a surface has been cleaned. This is true of packing lines, hands, bins and anything else that may become soiled.

Many steps can easily be overlooked during cleaning. Here are some key points to remember:

- Remove debris accumulation from all surfaces.
- Clean all surfaces that fruit or workers may contact, including bench/table tops, drains, walls, cooler coils, ceilings, etc., as appropriate.
- Clean using a top-to-bottom method to avoid re-soiling already cleaned surfaces.
- Closed-in spaces can be fumigated for sanitation.
- Never put fruit that has fallen from the line back into circulation.
- Have waste receptacles available for worker use and regularly empty and clean them.
- Properly store all equipment after the work day ends.

Regular cleaning greatly reduces opportunities for pathogen build-up and inoculation to occur.

Acknowledgement

This article is a contribution from the Australian Citrus Postharvest Science Program (CT15010) funded by Hort Innovation and NSW Department of Primary Industries. Levies from Australian citrus growers are managed by Hort Innovation and contributed to funding this project. The Australian Government provides matched funding for all Hort Innovation's research and development activities. 🌿

MORE INFORMATION

John Golding, NSW DPI: (02) 4348 1926 or email john.golding@dpi.nsw.gov.au



High-density planting and pruning case study: Sunmar Orchards, Sunraysia

By Steven Falivene

Key points

High-density plantings boost returns

Different layout, different management

Cashflow break even reached sooner

HIGH-DENSITY plantings are delivering very good long-term returns to Sunmar Orchards in the Sunraysia region, the results of which are backed up by an economic analysis by the NSW Department of Primary Industries (NSW DPI).

Daniel Lazar manages 100 hectares of citrus at Sunmar Orchards owned by John Keams in the Sunraysia region. Maximising productivity and efficiency from established blocks with high-density plantings of Afourer mandarins and navel oranges is one of the business's key targets.

At the NSW DPI citrus roadshow in October 2017, Daniel presented Sunmar's high-density management growing techniques. This article captures his presentation.

Traditional versus high-density plantings

The traditional standard density of citrus tree plantings is about 440 trees per hectare (planted at 6.5m x 3.4m spacings). Sunmar Orchards has two

types of high-density planting layouts; a twin row and a standard layout. The twin row high-density trees are planted at 952 trees/ha and the standard layout high-density trees are planted at 600 trees/ha (5.2m x 3.2m) (see Figure 1).

Daniel has been managing the orchard for two years and emphasises that the high-density plantings require an intensive annual pruning program. Without annual pruning the productivity of the high-density block can quickly decline below traditional planting densities.

As the trees grow, the row spacing closes, so the trees have to be hedged more frequently to allow for tractor access. For high-density trees with narrow row

spacing (i.e. less than 5.5m), annual side hedging could be required. Hedging will cut off bearing wood and the potential crop. The solution is to implement an intensive annual hand pruning program that results in more fruit bearing inside the tree. The trees will still need regular hedging, perhaps every second year instead of annually and, when the trees are hedged, only a small portion of fruit-bearing shoots are cut off (see Figure 2).

The twin row layout does require a few extra herbicide sprays and a higher application coverage volume in the early years. Irrigation and foliar spray volumes also slightly increase. However, these extra costs are minimal in terms of the total cost of production.

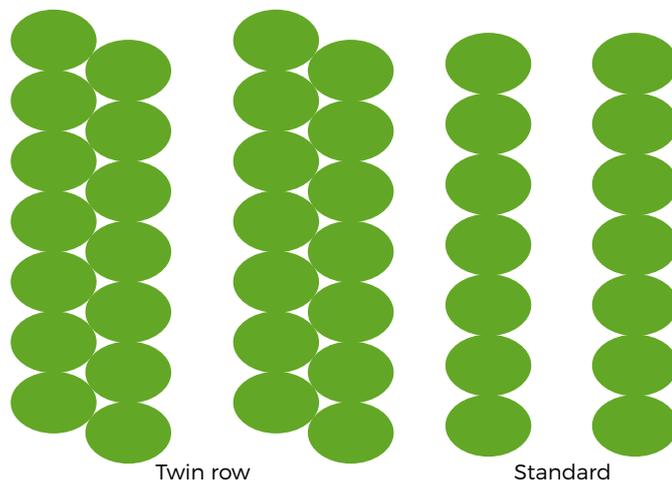


FIGURE 1 The twin row planting layout (left) and the standard planting tree layout

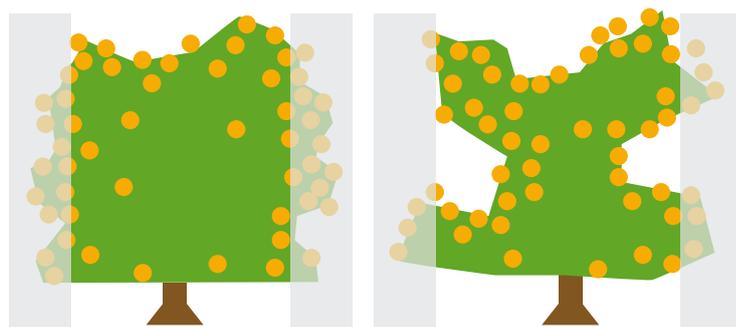


FIGURE 2 An unpruned or poorly pruned tree (left) has most of the fruit on the outer parts of the canopy which is cut off (grey rectangle) when hedged. An intensively pruned tree (right) has a portion of fruit growing inside the tree that remains after hedging

To enter the Chinese export program the blocks needed to be trunk band sprayed and this is impossible for the twin row layout blocks using a conventional trunk band sprayer that can only spray one side of the trunk per tractor pass.

Daniel overcame this problem by inventing a trunk band sprayer that can spray all around the trunk from a one-side tractor pass.

Hand pruning in high-density plantings

Daniel starts hand pruning trees when they are young so the trees have a good structure by maturity. Average annual pruning costs are \$1.60 per tree on the standard high-density layout (\$1000/ha) and about \$1.30 for the twin row layout (\$1250/ha). The twin row layout trees are smaller and therefore have a slightly lower per tree cost. Pruning costs will vary season to season.

The program has been producing very good long-term average yields of navels of about 55t/ha for the standard layout high-density navels and 63t/ha for the twin row layout. Without the annual hand pruning program, yields would be 15 to 20t/ha less; that's a loss of up to \$13,500/ha (\$650/t fruit price). Investing \$1250/ha in pruning and getting \$13,500/ha return is a very good investment. Daniel says he also gets less blemished fruit which increases his pack-out and per ton price.

The take home advice Daniel wishes to provide growers is high-density planting will provide higher early yields and twin row planting will provide higher mature tree yields, but annual hand pruning is essential to maintain good yields.

An economic analysis

NSW DPI has done an economic analysis of various high-density planting scenarios based on Sunmar

Orchard's experience. The scenarios were analysed using the 20-year NSW DPI citrus budget spreadsheets and based most assumptions on Sunmar's information. Three scenarios were analysed:

- 1. Traditional single row layout at 440 trees/ha:**
 - 6.7m × 3.4m spacings
 - Mature tree; year 12, canopy diameter 4.2m, tractor access 2.5m and canopy surface cover 63%
- 2. High-density single row layout at 600 trees/ha:**
 - 5.2m × 3.2m spacings
 - Mature tree; year 10, canopy diameter 3.3m, tractor access 1.9m and canopy surface cover 63%
- 3. High-density twin row layout at 952 trees/ha:**
 - Mature tree; year 9, canopy diameter (two trees) 5.4m, tractor access 1.9m and canopy surface cover 74%

Note: tractor access is the space between trees along the row that enables machinery to pass through.

The economic analysis is limited to the assumptions chosen in the budget

spreadsheets, which are available from NSW DPI on request.

Figure 3 presents the results outlining the cumulative cash flow for each scenario over 20 years. During the first 11 to 13 years the enterprise is in debit since substantial cash was spent in buying trees and preparing the land for planting. Although yield might commence in year three, it takes numerous years of income to repay the land development and planting debit.

The high-density plantings have the higher debit due to more trees planted per hectare, but they produce higher yields than traditional density planting in the early years and are able to pay off the debt quicker. This results in the cash flow breakeven point reached one to two years earlier for the high-density plantings (years 10 to 11) as compared to the traditional density planting (year 12).

The cumulative yield at year 20 indicates that the high-density twin row layout scenario has the highest cumulative cash flow followed by the high-density single row layout and last is the traditional layout (Table 1).

An important way to analyse long-term budgets is net present value (NPV). Because the cash flows in Table 1 represent a 20-year prediction, the buying power of \$100 today is not the same in 20 years' time, it will be less due to inflation and the option of putting the \$100 in a bank and obtaining interest on it for 20 years. For example, if you put \$100 in the bank at 5% interest for 20 years it would be \$265. Thinking in reverse, \$263 of income in 10 years' time or \$265 in 20 years' time is actually worth \$100 in today's terms at a 5% discount rate (i.e. put \$100 in the bank at 5% interest).

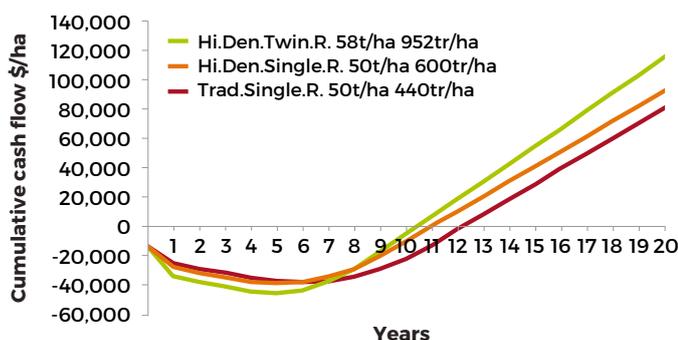


FIGURE 3 The cumulative cash flow of navel oranges at: high-density twin row layout (Hi.Den.Twin.R.); high-density single row layout (Hi.Den.Single.R.: 600 trees/ha); and traditional density single row layout (Trad.Single.R. 440 trees/ha)



TABLE 1 Cumulative cash flow and net present value for year 20 for all scenarios (per ha)

Scenario	Year 20 cumulative cash flow	Year 20 net present value
High-density twin row	\$278,172	\$86,915
High-density single row	\$230,909	\$70,386
Traditional single row	\$210,402	\$59,710

The NPV over the 20-year period in all scenarios provides a positive result and the differences between each scenario are between about \$10,000 and \$20,000/ha.

It is a personal choice whether the differences in cash flow and NPV over 20 years are sufficient to justify the extra effort of planting and managing a high-density block. Budgets are very dependent upon their assumptions and some assumptions can significantly change results. For example, growing your own

nursery trees can reduce the initial debt and favour high-density planting.

Management and cultural practice factors are also a very important consideration. The higher density trees require the extra effort of annual pruning, however the trees will be smaller than the traditional density trees and will be easier to harvest and spray. Picking labour favours smaller trees because they require less or no ladder work which makes them faster

to pick and there are less ladder related injuries.

To help growers better assess their personal situation the Excel spreadsheets used to develop the high-density scenarios will be available in autumn 2018 at the NSW DPI citrus website for growers to customise pricing and management assumptions to their needs. Draft versions of the Excel spreadsheets are available from Steven Falivene (steven.falivene@nsw.dpi.gov.au) prior to autumn 2018.

MORE INFORMATION

This article was first published in *Citrus Connect* – NSW Department of Primary Industries' e-newsletter for citrus growers. Citrus growers may subscribe to the newsletter at tinyurl.com/citrusconnect. Steven Falivene, NSW DPI, (03) 5019 8405, steven.falivene@dpi.nsw.gov.au



Citrus canker detected, industry targets eradication

CITRUS canker has been detected in a retail nursery in the Northern Territory.

"Citrus canker has previously been found in Australia and was successfully eradicated," said Citrus Australia CEO Nathan Hancock.

"We hope that this early detection and related activity to contain the disease through controlled movement of citrus plant material will give us the best chance of eradicating the disease."

The disease was detected on a potted lime variety, which is a patio plant not found in commercial production. All citrus products have been removed from sale at the affected retail nurseries and held in quarantine and will be disposed of safely.

The Consultative Committee on Emergency Plant Pests (CCEPP), which provides technical and scientific advice in response to exotic plant pest and disease outbreaks, has met to discuss this incident and is considering the next steps.

"Citrus Australia is working on this issue with successful eradication as the desired outcome in this instance and we will be working with the authorities, local community and growers to do what we can to achieve this," said Nathan.

Activation of emergency levy

Citrus Australia is a signatory to the Emergency Plant Pest Response Deed (EPPRD) that covers management and funding of responses to emergency plant pest incidents – such as the incursion of an exotic pest or disease like citrus canker. It also ensures participation from plant industries in decision making and their contribution towards the costs related to emergency plant pest incident responses.

"At this early stage activities are focused on minimising the risk of spread," explained Nathan. "As signatories to the EPPRD, Citrus Australia has a seat at the decision table to determine what happens next.

"We will continue to keep growers informed about the response and if industry funding through the Emergency Plant Pest Response (EPPR) levy is required."

If the EPPR levy is activated in response to citrus canker there is a structured industry consultation process that will occur and growers would be provided with an opportunity to provide input.

Keep an eye out

Citrus Australia wants to encourage all citrus growers – both commercial and backyard – to report any signs of infection immediately to the Exotic Plant Pest Hotline on 1800 084 881. Anyone who has recently purchased a citrus plant from a Darwin or Palmerston retail nursery recently should immediately contact the hotline.

"As this issue is at this time thought to be linked to nursery material I would encourage growers and nurserymen across Australia to inspect any new material and be sure you know its origin," Nathan added.

MORE INFORMATION

A useful fact sheet with canker imagery to help with identification is available through Plant Health Australia and can be downloaded via this shortcut url: tinyurl.com/PHAcitruscanker

Silvan Radak patented sprayers meet penetration needs with faster application in tall tree crops, citrus

THE Riverland of South Australia has a relatively large number of medium scale citrus orchards that produce fruit for the juicing and retail markets.

Many of the orchards have older well-established trees where the challenge is to get spray penetration into the bulk of the canopy.

And often they still have older spray equipment that in many instances will not be equal to this task.

The challenges are to invest in better, state-of-the-art spray equipment which usually comes with a significant reduction in the time and thus the cost of effective and timely spray applications.

The Uppal Orchard owned by Sunny Singh at Waikerie fits this description.

The orchard has about 53 hectares, or approximately 133 acres, planted to well-established citrus varieties.

Sunny Singh says his spraying has been done "using two very old spray units".

As a consequence, he has just taken delivery of a new Silvan G2E Sprayer

with a 4,000 litre tank to replace his existing fleet.

It is fitted with the Silvan patented Radak conveyor system that is purpose designed to obtain strong spray penetration into tree canopies, particularly those which obtain considerable bulk on maturity.

The air volute design of the Radak conveyor takes the air flow generated by the high volume fan of the sprayer and directs the airflow from underneath into the canopy.

The Silvan Radak sprayer is regarded as a major assistant to the spray regimes of tall tree and orchard crops.

Not only in the citrus industry, the Silvan Radak is now extensively used in avocado, macadamia, walnut, lychee, mango and olive plantings to achieve the effective spray penetration and coverage sought by their growers.

Silvan's South Australian Account Manager Russell March who arranged the handover and commissioning, along with Jo Gallo from Growers Services Renmark, of the Silvan G2E 4,000 litre sprayer with

the Radak conveyor says he anticipates that the spray times in the Uppal Orchard can be reduced by as much as one third over the older spray rigs.

This will be achieved by the larger spray tank volume and the proven Radak penetration.

"The Riverland has a relatively large number of medium-scale citrus orchards where their mature trees create timeliness and penetration problems with older spray equipment," Russell said.

"I am always available to discuss these issues and solutions with Riverland citrus growers if they care to give me a call on 0425 748 932." 

MORE INFORMATION

Or for more information on Silvan spray options for all types of applications including citrus and tall tree crops call 1300 SILVAN (1300 745 826) or email info@silvanaust.com for technical literature and support.

TARGETED SPRAYING IN MEDIUM-TALL TREES WITH THE RADAK CONVEYOR

Ideal for tall tree crops and those with dense canopies such as citrus, macadamias, avocados, mangoes, olives and lychees.

The patented air volute design maximises the use of the airflow generated by the 920mm fan, the Radak ensures thorough coverage of the targeted canopy by directing airflow into the foliage from above using the top wings and underneath via the bottom wings.

FEATURES:

- 920mm fan
- Complete tree coverage



The Spraying Specialists

CALL 1300 SILVAN (745 826) OR VISIT silvan.com.au FOR MORE INFORMATION OR TO FIND YOUR NEAREST DEALER



Protecting our borders

from exotic fruit flies



By Darryl Barbour

Key points

Ongoing monitoring is protecting industry

Investment insures against exotic fruit flies

Multi-party agreement in place

WHILE Australian citrus producers are familiar with the challenges posed by Queensland fruit Fly or Mediterranean fruit fly, there are other exotic fruit fly species that pose a similar threat to horticultural production, and they're already on our doorstep.

The Australian mainland is separated from Papua New Guinea, and various exotic species of fruit flies, by only a 150km stretch of ocean – the Torres Strait – which is dotted with over 200 islands that provide stepping stones.

Every year, strong seasonal winds bring exotic fruit flies from the north onto some of these islands. If left unmanaged, fruit flies could establish on one island before making their way progressively further south to eventually reach

the Australian mainland. Here they would wreak havoc through Australian horticulture, posing a huge problem for producers.

The exotic fruit fly threats

Three species present in Papua New Guinea pose a particular risk: Melon fly (*Zeugodacus cucurbitae*), New Guinea fruit fly (*Bactrocera trivialis*), and the highly destructive Oriental fruit fly (*Bactrocera dorsalis*).

Risk analysis of the Oriental fruit fly alone, is that it is likely to have a wider host and climatic range than our Queensland fruit fly. Should it establish in Australia, it would threaten over \$4 billion in horticultural production.

Monitoring on Torres Strait islands

To monitor the presence of these flies in Torres Strait, the Australian Government funds an exotic fruit fly trapping program across many of the islands. Traps operate permanently and are managed more frequently during the wet season. The detection of any of the target species triggers response activities, in a similar way to responses staged when fruit flies are detected in a pest free area.

Aided by wind, small numbers of exotic fruit flies arrive on the northernmost islands in Torres Strait, Boigu, Dauan, and Saibai. Being located less than 10 kilometres from the coast of Papua New Guinea, Australia has in place proactive control measures on these islands from November to May.

Islands towards the centre of Torres Strait, such as Badu Island, Moa

Island and Yam Island see occasional detections. These islands are located some 50 kilometres from the Australian mainland and response activities are directed on an as needs basis.

It is very uncommon to detect exotic fruit flies on the islands closest to the Australian mainland, including Thursday Island and Horn Island. However, given the proximity to the mainland, the detection of even a single exotic fruit fly prompts response activities on all islands in the area and additional monitoring on the Australian mainland.

It makes sense to stop the flies while they're only on the islands. Should exotic fruit flies make their way to the Australian mainland, their first port of call would likely be in Cape York Peninsula. Given how remote and inaccessible this area is, a large-scale eradication response would be extremely difficult.

Australia's response

To protect against these exotic pest threats, an arrangement for an ongoing eradication response was set up in 2015, funded by a national cost-sharing agreement between governments and industry.

Since most of the islands in Torres Strait are Australian territories, eradication efforts in the Torres Strait are dealt with under the provisions of the Emergency Plant Pest Response Deed (EPPRD). A three-year rolling response plan under the EPPRD has been agreed between parties, including the Australian Government, the Queensland Government and horticultural industries.

Oriental fruit fly,
Bactrocera dorsalis.

When response activities are required it is the Queensland Government that swings into action, coordinating additional traps, protein bait sprays, and male annihilation technique to eradicate any incursion.

These activities are funded under the provisions of the ERPPD. There is a pre-approved budget of \$400,000 per financial year, paid for by parties to the agreement. Horticultural industries, including the citrus industry, contribute 20% of this response budget, the rest being cost-shared between governments.

A good investment

An Oriental fruit fly incursion has happened before, giving us an indication of the cost of an exotic fruit fly incursion. In 1995 the species was found in Cairns – at that time it was called Asian papaya fruit fly. The subsequent eradication program lasted five years and cost governments and industries \$36 million. Affected industries also incurred losses of \$100 million in lost trade and additional quarantine treatments.

A review by ABARES also demonstrated the overwhelming cost-benefit of the ongoing eradication program. In 2013 ABARES estimated that the investment delivered a benefit-cost return between 169:1 and 1063:1, depending on the likelihood that eradication could be achieved.

Producers can be assured that their contribution to the eradication effort is a worthwhile investment.

Plant Health Australia is the not-for-profit coordinator of the government and industry partnership for biosecurity in Australia. More at planthealthaustralia.com.au

The National Fruit Fly Council brings together government, researcher funding groups and growers to develop a national approach to managing fruit flies in Australia. More at preventfruitfly.com.au/national-coordination/national-fruit-fly-council/

MORE INFORMATION

Darryl Barbour, Manager of the National Fruit Fly Council, Plant Health Australia (PHA), dbarbour@phau.com.au.

Citrus industry's future leaders to be **biosecurity-aware**

By **Laura Browning**

SSCHOOL students across Australia have been busy learning how to maintain a biosecurity-conscious citrus industry.

Through their online initiative Primezone, The Primary Industries Education Foundation Australia (PIEFA) has created and made accessible nationally a number of educational resources that help primary and secondary students to develop an understanding of the Australian agricultural industry. Among these resources is a Citrus Biosecurity package.

Targeting students in years 7 to 10, the citrus packages aim to raise students' awareness of the importance of plant biosecurity and integrated pest management for the citrus industry. The resources explore what biosecurity means, the science behind it, and the contribution that it makes to business along the entire length of the supply chain.

Ben Stockwin, Chief Executive Officer of PIEFA, said that raising awareness about agriculture doesn't just mean learning about on-farm production.

"We want every student to be aware of all aspects of the food, fibre and production sector – the entire industry, not just the farm supplier," he said.

"Students should be aware that biosecurity isn't just important internationally, but also state-to-state."

The resource was only made available last year; however, it has already been downloaded and used by teachers over four hundred times.

Hilary Salmon, science teacher at Manning Primary School in Perth, believes the resource creates a powerful and engaging learning environment for her students.

"The best science lessons are real-world and hands-on. As a bonus, student performance increases when they are interested," she said.

The Citrus Biosecurity package includes teacher guides and animated PowerPoint presentations and is designed to integrate with the rest of the students' curriculum.

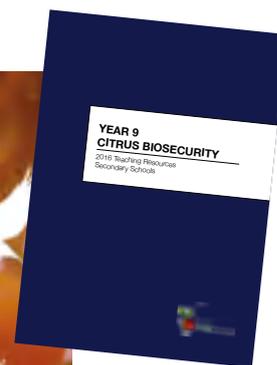
According to Ms Salmon, "learning about why food and fibre needs protection and better understanding the food supply chain has given students rich experiences across different learning areas; not just sciences, but maths, English, technologies and even the origin of pests through the history curriculum."

Mr Stockwin has high hopes for the impact of the program.

"By raising awareness and creating interest, hopefully we've got the next generation of biosecurity-aware industry leaders in our classrooms," he said.

MORE INFORMATION

To learn more about the school resources, visit the Primezone website at www.primezone.edu.au.





Improving citrus industry biosecurity preparedness



Citrus Australia CEO Nathan Hancock (lt) joins the Minister for Agriculture and Water Resources David Littleproud (rt) at the announcement of additional funding for citrus biosecurity.

NEW funding to support citrus biosecurity has been achieved providing ongoing support to the industry for pest surveillance and biosecurity preparedness.

Building on earlier work, the project, *Improving biosecurity preparedness of the Australian citrus industry (CT17001)*, is a strategic levy investment under the Hort Innovation Citrus Fund and will be managed by Plant Health Australia (PHA).

It is funded by Hort Innovation, using the citrus research and development levy and contributions from the Australian Government.

The project will develop a Citrus Biosecurity Program that will focus on bolstering the biosecurity capacity and technical capability of the Australian citrus industry, and include a range of preparedness, response and awareness activities.

With the industry facing a number of significant exotic pest threats that have the potential to affect production as well as market access, ongoing support for biosecurity has been welcomed. Pests that the project will focus on include Huanglongbing and its psyllid vectors, citrus canker and citrus variegated chlorosis (*Xylella fastidiosa*).

As part of the project, PHA will develop a nationally coordinated surveillance program for early detection of high-priority pests. Data generated from the project will also be able to support industry market access and trade.

While still in its early stages, a key element of the project will be ensuring that growers, consultants, other industry participants and members of the public are more aware of biosecurity and exotic pests of citrus.

To cement the strong partnership between industry and government, an

additional \$352,000 in funding from the Australian Government has been announced for better pest surveillance and early detection for the citrus industry. This funding will further support the Citrus Biosecurity Program and will be an important step in implementing the *National Citrus Biosecurity Surveillance Strategy*.

Both the Minister for Agriculture and Water Resources David Littleproud and the Member for Mallee Andrew Broad announced the National Citrus Biosecurity Surveillance Strategy and additional funding in Mildura as part of initiatives established under the Australian Government's *Agricultural Competitiveness White Paper*.

"We need to ensure the earliest possible detection of incursions to help limit their spread and minimise the disruption outbreaks can cause our growers, not to mention the costs of control," said Mr Broad.

The project will be jointly managed by PHA and Citrus Australia and will be overseen by a steering committee that includes government, growers and industry personnel, with a National Citrus Surveillance Coordinator to be based in Mildura.

MORE INFORMATION

www.planthealthaustralia.com.au/industries/citrus/



Rootstock Services

...for high quality rootstock in tubes

Varieties available:

Cox Mandarin Hybrid
P. Trifoliata
Carrizo Citrange
Benton Citrange
Swingle Citrumelo
Troyer Citrange Carz
Cleopatra Mandarin
Flying Dragon
C35

Your top quality check list:

- ✓ Grown in an accredited nursery
- ✓ Only Auscitrus seed used
- ✓ Grown in an accredited soil-less mix
- ✓ Supplied weed free
- ✓ Consistent height and size
- ✓ Popular biodegradable tubes

Owner Colin Mansfield has over 40 years nursery industry experience.



Mob: 0417 396 575 Tel: (03) 98987430 Fax: (03) 9899 7311
834 Station St, Box Hill North, Victoria 3129 ABN: 15 872 298 116
Email: rootstockservices@bigpond.com www.rootstockservices.com.au

Murray Valley Nurseries Pty Ltd

Wholesale CITRUS growers

Olives, persimmons and mulberries. All trees propagated from approved material. Direct delivery to your farm.

Props: Greg and Shane Fleming
PO Box 1, Wood Wood, VIC 3596
Fax: 03 5030 5536



ORDER EARLY TO AVOID DISAPPOINTMENT

Phone: 03 5030 5325



Netpro Citrus Canopy



YOUR SUCCESS IS OUR SUCCESS



Reduces water use
No Sunburn
Export Quality Packouts

The Complete Service of Quoting and
Engineering to Construction and Aftercare

1300 NETPRO (638 776)

www.netprocanopies.com



EYLES CITRUS
A T Eyles & Sons



A CENTURY
OF CITRUS
EXCELLENCE



**WE
OFFER**

Expertise
Consultancy
Premium quality trees
Variety Access selections

**OUR
TREES**

Grafted
Consistent sizing
Grown to your specifications
Sourced AusCitrus material

Kenthurst- New South Wales
sales@eylescitrus.com.au

02 9654 9227

www.eylescitrus.com.au

Chislett Nurseries

Growing Excellence
~ Since 1990 ~

Avocados | Citrus | Pistachios

- 4.2L container-grown
- Auscitrus seed & budwood
- New rootstock varieties
- Variety Access & Nuleaf licensed propagator
- M7, Chislett, Rohde
- Nursery & orchard visits welcomed

Please contact:
Jonathan Chislett
0400 923 411



p: 03 5038 8238 | 03 5038 8220
e: jonathan@chislettfarms.com.au
762 Kenley Rd, Kenley VIC 3597
chislettfarms.com.au



Growing your future

Victorian Citrus Farms
Citrus & Avocado Nursery

- Variety Access licensed grower
- Nuleaf licensed grower
- Utilising Auscitrus seed and budwood material
- Potted citrus and avocado trees
- Nursery visits welcomed by appointment

To arrange a visit or for more information:

Sean Arkinstall – M: 0419 391 558
Jason Bowes – M: 0408 729 043



393 Woomera Ave Red Cliffs Vic 3496

E: victorianscitrusfarms@gmail.com

www.victorianscitrusfarms.com.au





The extra, special reefer treatment is on us.

We think inside the box.

Hamburg Süd is a climate change expert. Inside your container, it's all about high-tech refrigeration and atmosphere management. We employ and apply the world's most advanced technology to precisely establish, manage, measure and maintain the conditions needed to optimise your product's shelf life. Precisely configured for specific commodities, our systems help to bring more markets into closer commercial proximity. It's what we're famous for – great cargo care, and added value.

No matter what.

HAMBURG  SÜD

www.hamburgsud-line.com