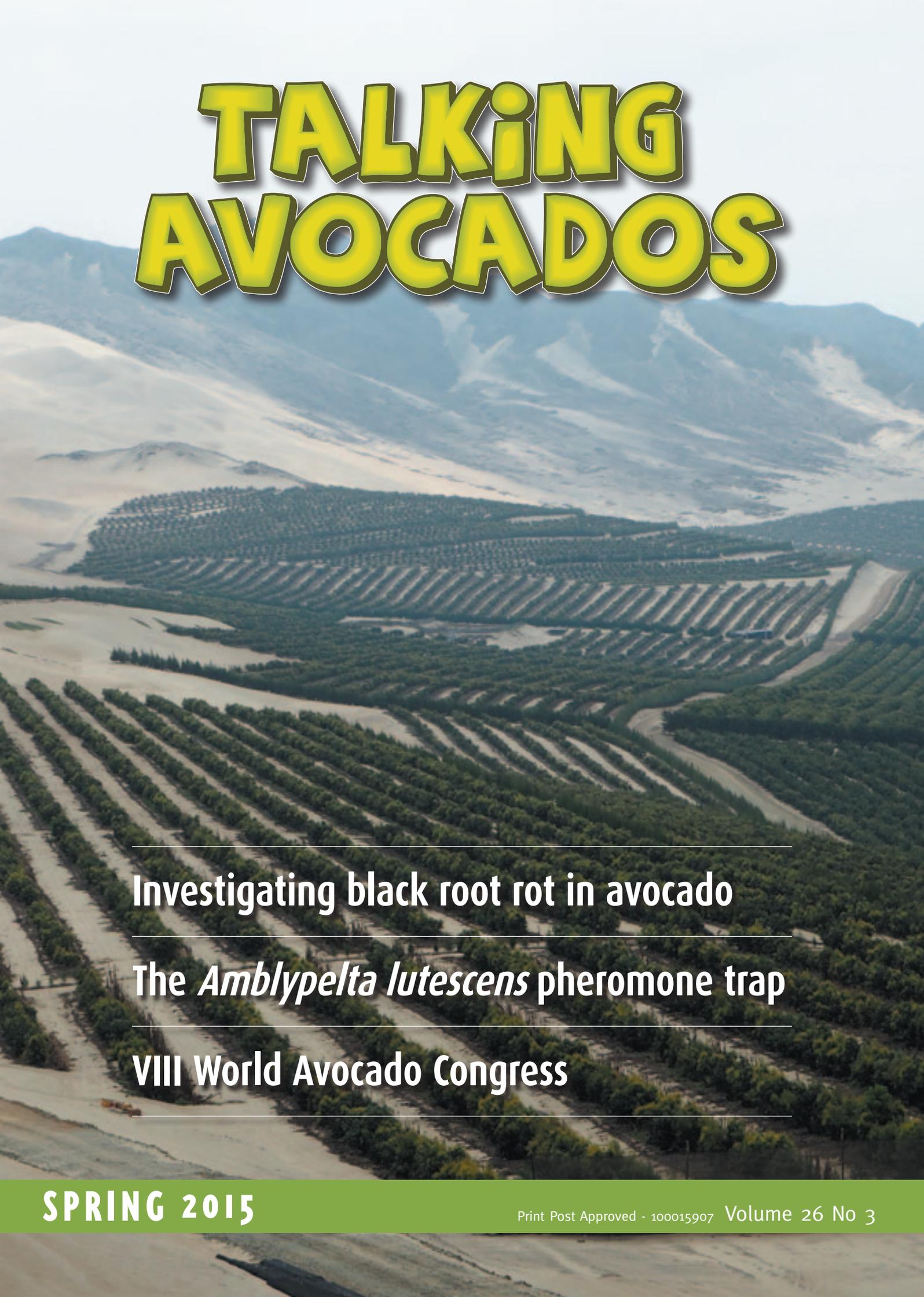


# TALKING AVOCADOS

An aerial photograph of a vast avocado orchard. The trees are planted in neat, parallel rows that stretch across a valley. In the background, there are large, rugged mountains with some snow or light-colored patches. The sky is clear and blue.

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Investigating black root rot in avocado

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The *Amblypelta lutescens* pheromone trap

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VIII World Avocado Congress

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**SPRING 2015**

Print Post Approved - 100015907 Volume 26 No 3

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## Talking Avocados

Talking Avocados is published by  
 Avocados Australia Limited.

### Published:

Quarterly - Autumn, Winter, Spring and Summer

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**Circulation:** 1000 Copies



Talking Avocados is published using avocado grower levies which are matched by the Australian Government through Horticulture Innovation Australia Limited.

**Printed by:** Snap Brisbane Felix Street, Level 3, 10 Felix St Brisbane 4000  
 Phone: 07 3221 5850, Fax: 07 3221 3208

Email: [brisfelix@snap.com.au](mailto:brisfelix@snap.com.au) [www.brisfelix.snap.com.au](http://www.brisfelix.snap.com.au)

**Subscriptions:** Four issues per year: Australia: AUS \$65.00  
 New Zealand: AUS \$85.00  
 Rest of the World: AUS \$100.00

**Advertising:** Avocados Australia Limited,  
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**We all make mistakes:** If we make a mistake please let us know so a correction may be made in the next issue.

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**Cover:** Part of the Arato Montegrando avocado orchard near Trujillo in northern Peru.

# Chairman's Perspective



I have written in previous reports that outside parties have made comments on the success of our industry and at this time, I will add another accolade. It is important to labour this point because there are some within our industry from all the stakeholder groups who offer critical comment and promote the vision of waste and failure.

At the recent VIII World Congress in Peru, I had the honour of representing the Australian avocado industry at a dinner at the Club Nacional in Lima. At that dinner I was approached by the Australian Ambassador to Peru-Bolivia who proudly told me that the Mexico and Peru representatives had just told him that Australia was a world leader in aspects of research and marketing of avocados. This is high praise coming from two major avocado producers and equally high avocado consumers. It is of greater importance that this praise be passed on to the growers who pay the levies that have allowed this research and marketing to this high level where it sets a standard for other countries to follow. Be proud of your efforts and use these instances of praise to ward off those who would put the industry down.

People ask me if I learn something new at these events. There is always something to learn and usually I have come away with the feeling that Australia does pretty well in the field of R&D and marketing, as has been confirmed by others at this congress. I still hold the view that our R&D is of a high standard and adds to the science of avocado. Our marketing is without equal especially in the way we promote avocado to new consumers and how we engage with consumers to add to the ways they use avocado.

However, and there always is a however, we have to look for

the gaps in the knowledge we have about the actual growing and culture of our crops. Peru and Chile have vast areas of Hass avocado on similar soil type and similar climate and they have advanced their knowledge of tree phenology (life cycles) and plant physiology far above our known knowledge. They are using this knowledge to manipulate and control tree growth through many means (canopy management, irrigation, nutrition, growth regulators, plant density, site selection and more). Our industry is now facing the prospect of countries with massive production area, very high tonnes per hectare and low input costs combined with regular predictable production. They are only 13 hours away.

Our industry is much more fragmented in geography, soil types, climate, varieties, rootstocks and disease and insect pressure but it is very important that we look harder to understand the tree physiology and use that knowledge to get control over our production volume, consistency, and quality. The knowledge other countries have gained from Australia's efforts is repaid through the knowledge imparted during the formal sessions, the informal coffee break sessions, the late night bar sessions and the field trips at the World Congress.

There is so much still to learn about avocado. The next World Avocado Congress will be in Colombia in 2019.

*Jim Kochi*

Jim Kochi, Chairman, Avocados Australia Limited

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Peter & Pam Lavers  
100 Henry Hannam Drive

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# CEO's Report



## Season update

It seems spring has brought with it a good flowering season with Hass setting well for most regions. A little more rain would be ideal as the weather begins to warm up. We continue to see good returns for supplies of quality fruit and hope that this continues for the remainder of 2015 as significant volumes are yet to be harvested in Western Australia and New Zealand across spring and summer.

## World Avocado Congress

There was a strong contingent of Australians that attended the VIII World Avocado Congress in Peru in September 2015 which included four days of concurrent conference sessions and a one-day field trip. More than fifty Australians attended the congress and some delegates also attended a pre or post congress tour to the northern regions of Peru. A group of twelve participated in a post congress tour to Chile arranged by Avocados Australia and Simon Newett. These events are invaluable for the sharing of information and research results between countries. There is much that Australia can learn and there was a lot that Australia had to share with the global avocado community with seven presentations delivered by Australians. The scale of development in Peru and other parts of South America is phenomenal. However, many believe that so too are the opportunities for growth in global consumption of avocados.

Information from the study tours will be presented in Talking Avocados over the coming months. The next World Avocado Congress will be held in Columbia in 2019.

Avocados Australia (along with representatives from ten other countries) also attended a meeting of the Avocado Marketing And Promotion Working Group (AMAPWG) an unincorporated body that shares information about global supply forecasts, dispatched volumes and promotion of avocados. Similar to what Avocados Australia delivers on a domestic scale through Infocado, the AMAPWG provides information that enables more effective global marketing of avocados. The USA has a compulsory levy in place for suppliers to the USA and those suppliers have seen the benefit of this investment over many years. From this meeting, a decision was taken to establish a mechanism to coordinate collaborative marketing and promotion investment into Europe. It is inspiring that these suppliers are able to see beyond their own businesses to the benefits of co-investing to build markets in which they all compete.

## Horticulture Innovation Australia update

### New advisory mechanism proposed

During the period of transition, interim advisory processes have been put in place. Horticulture Innovation Australia (now referring to itself as 'Hort Innovation') has continued to report that it will seek advice as and when it is needed and from whom it chooses. Avocados Australia has continued to contest that this approach is not appropriate. Since the formation of Hort

Innovation in November 2014, only one avocado advisory group meeting has been held with a group that was 'hand-picked' by Hort Innovation. Fortunately, from consultation to date Hort Innovation has received some clear messages from stakeholders and has acknowledged that investment advisory mechanisms need to be:

- Open, transparent and inclusive
- As representative of the make-up of the industry as possible
- Inclusive of appropriate set of skills beyond production
- Provide good governance.

Hort Innovation has decided to establish Strategic Investment Advisory Panels for each levy industry. These Panels will be responsible for overseeing each levy industry's strategic investment priorities.

Each Advisory Panel will have clearly defined objectives associated with the provision of strategic investment advice and will be guided by the strategic priorities set out in the strategic investment plan for that particular industry. Hort Innovation will develop and publish a set of skills criteria for participation on each panel. Consideration will also be given to sectoral and geographic requirements.

Ideally, an open call to levy payers for each industry will be promoted seeking expressions of interest in being a member of the panel. Hort Innovation will also work with industry representative bodies to ensure levy payers are aware of the opportunity and suitably qualified levy payers nominate. Industry representative bodies will have a minimum of one and a maximum of two places on the panel relevant to its industry.

Panel membership will be structured with 'terms' for members to allow for a balance of continuity and member refreshment.

A professional selection process will be undertaken and the successful candidates for panel membership will be publicly announced.

Hort Innovation will source and appoint independent chairs for each panel meeting. It is intended for the scope of the chair's role to be confined to the effective conduct of panel meetings ensuring good governance and process around panel discussions. Terms of Reference reflecting this will be developed. A full record of proceedings in each meeting will be taken using an appropriate professional services organisation.

In addition to the Strategic Investment Advisory Panels, in some industries it will also be appropriate for complementary advisory processes to be established. These changes are considered a step in the right direction. In fact, this is very similar to the structure and process that was in place under HAL before the new company was established. Avocados Australia is keen to work with Hort Innovation to ensure an appropriate mechanism is established for the avocado industry.

## HIA AGM

Hort Innovation will be holding its first Annual General Meeting in Sydney on 27 November. Hopefully many avocado levy payers have joined Hort Innovation and some of you will be able to attend the meeting. As levy payers, this is your chance to meet the people who are managing your levies, ask questions about how the new organisation is operating and its plans for the future.

## New HIA Staff

Recently, Duncan Sinclair, the Hort Innovation Marketing Manager for avocados resigned. Working with Avocados Australia and specialist service providers, Duncan was instrumental in developing the current three year marketing strategy which has been implemented successfully over the past two years. Avocados Australia has thanked Duncan for his services to the industry and welcomes the new Marketing Manager, Julie Willis.

The Hort Innovation avocado Relationship Manager, Craig Perring has moved to a new role in Hort Innovation and Astrid Hughes has taken over this role for avocados. Astrid has extensive experience in the role and has worked with the avocado industry previously. Avocados Australia welcomes Astrid to the role and looks forward to working with her during the next phase of Hort Innovation's development.

## New Projects

Avocados Australia has been busy responding to Hort Innovation tenders for key projects. In line with a brief from Hort Innovation, Avocados Australia has submitted a proposal to deliver the Avocado Industry Communication program for the next three years, with the current project completing on 30 October. If successful, this will continue the core communication platforms such as Talking Avocados, Guacamole newsletter, but also include a number of additional services such as a quarterly search of the latest avocado research abstracts, a trial of social media for industry communications and a refreshed website with improved functionality and structure.

Other project briefs that Avocados Australia has responded to include the continuation of data management through Infocado and OrchardInfo as well as ongoing efforts to improve avocado quality throughout the supply chain. Rots, bruising and immature fruit continue to be the three main quality issues that are impacting on consumer satisfaction. Avocados Australia is collaborating with other agencies to develop a program of initiatives which aim to reduce these defects. If approved, these projects are expected to commence in the New Year.

## Australian Government Export Grant

Avocados Australia has been successful in accessing an Australian Government grant to assist with increasing exports in key markets.

While the domestic market remains strong, the level of production that is likely to hit the Australian market in the

next few years could put a significant strain on the domestic market. One of the objectives of Avocados Australia is to continue to drive demand in line with (or hopefully ahead of) supply. Economic analysis has demonstrated that there is room to increase domestic consumption but it is important to also develop other markets.

An Australian Avocado Export Plan was developed last year to provide strategic direction for avocado export development. Market access protocols will play a key role in future export growth, but markets which are currently open (such as Singapore, Malaysia and the Middle East) offer potential growth opportunities in the shorter term.

Avocados Australia will be working with three grower-owned companies, the Queensland Department of Agriculture and Fisheries, Trade and Investment Queensland and P2P Business Solutions to undertake a number of initiatives to help further develop these markets.

2015 has been another very busy year for Avocados Australia and a period of significant change in relation to the way the avocado levies are now managed. As we approach the end of 2015, Avocados Australia wishes all readers a safe and fulfilling festive season and all the best for the New Year!

## Order your Kangaroo Labels

**Avocados Australia manages the Kangaroo Label and a set of barcodes for use on Australian avocados.**

To order Kangaroo Labels through our registered label companies, grower packers or packhouses should contact Avocados Australia so they may be issued with a Packhouse Registration Number. Contact Avocados Australia on toll free 1300 303 971 or email [admin@avocado.org.au](mailto:admin@avocado.org.au), then source your Kangaroo Labels from a registered Kangaroo Label supplier listed below.



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# Around Australia

## Tri State Report

By Barry Avery, Avocados Australia Director for the Tri State Growing Area



As I sit and write my final report for Avocados Australia, I wonder where the last six years have gone. It has been very enjoyable working with a group of industry people who are focused purely on getting the best results for growers.

Lisa Martin has moved to Bundaberg which is a big loss for the TRI State region. This is very good news for growers in that area but it will be a big loss to our local industry. I have worked very closely with Lisa over the years and have seen what success she has brought to growers with nutrition programmes and her agronomy expertise - something which is just not available through any other outlets in this area for the avocado industry.

Most growers will be or should be well into their harvest and taking advantage of good prices being offered, although at the time of writing, there is a slight glitch with a bit too much fruit being offered up both from Western Australia and New Zealand. Hopefully sanity will kick in and we get back to a more orderly marketing program.

Most properties I have seen locally seem to have plenty of flower buds showing so let's hope the frosts stay away and we start to get some more consistent warm weather. Growers also need to be aware of the nutritional needs of their trees as they move into the flowering period as there is no doubt that poor nutrition and poor cropping go hand in hand in this area. Poor moisture levels at this time will also significantly affect crop set.

Although I was unable to attend the conference in Peru, I hope all of those who did got a lot out of it and I urge all TRI State growers to get out of their backyard and visit other growing regions as often as possible as this is the only way to keep up with new information. Not all may be relevant to our area, but some will be and sometimes the smallest of things can lead to significant improvements in the way we manage our orchards.

Most growers will have realised that 1% or 2% improvement in production can lead to significant increase in the amount of return that you can achieve.

## Central Queensland Report

By Lachlan Donovan and John Walsh, Avocados Australia Directors for the Central Queensland Growing Area



It seems so soon that I find myself writing another Regional Report for Central Queensland and I ask myself what has happened in these last three months - is it really that long? Well from a personal point of view I have been overseas for about six weeks, part of which was work if you include the World Avocado Congress (WAC) in Peru that is! Talking about WAC 2015, there were a

few take home messages. The first would be the use of Plant Growth Regulators (PGR's) to control tree growth and increase yield. Now many of us have been using PGR's for 15 years or so, so that's nothing new but certainly their high density plantings plus their PGR soil applications and the yield that they achieve is really interesting. When you have as many of the variables controlled as they do in Peru, then surely they can manage and achieve high consistent yields - and yes, they do. The massive plantings that are in the ground now and achieving high yields must certainly be a concern to all avocado producing countries and it seems like the plantings are continuing in a big way.

Where does all that leave us? At the moment our tray price is basically double that of most other countries but we need to be able to produce quality fruit at a world market price. To think that the prices of the last two years will remain long-term is kidding ourselves. It's not all about producing the same tons/Ha as these other countries, it's about creating efficiencies in the way we do things - controlling our labour inputs, maximising our efficiencies and increasing our yield. We all need to be constantly looking at ways to achieve this and if we are, then we will have a long and profitable industry. The bright side is the demand for avocados worldwide is still outstripping supply. Some of the South American countries have access into China and starting from a small base, they are seeing large percentage increases in throughput - positive signs!

Enough of that, let's talk about Central Queensland (CQ). There has been a very good flowering, the Hass appear to be setting well however it's still too early to tell with the Shepard. Conditions at flowering were practically ideal. The trees all looked good so potentially looking like its set up for a good sized crop out of CQ - possibly the largest for quite a few years.

Water wise, it has been dry and allocations for ground water are a little reduced. Everyone has been flat out irrigating but really there are no issues out there. It would be nice to get some decent rain, but it will come eventually.

The Horticulture Innovation Australia (HIA) Annual General Meeting is coming up on the 27th of November in Sydney. I doubt whether many growers will be there and you would have to ask why they would be. Yes they can vote but from what I see, only for electing two Board members. I have also heard of some growers who have put up their hand to be on the Board but being rejected by the Director Nomination Committee. Amazing - the growers own this company (HIA) but the growers don't have the automatic right to stand and be elected by their peers!

## South Queensland Report

By Daryl Boardman, Avocados Australia Director for the South Queensland Growing Area



As I write this report I am on my way home from the World Avocado Congress (WAC) which was held in Lima, Peru. For those Australian avocado industry growers,

marketers and researchers that attended, I am sure everyone would agree it was a very informative and positive event for a produce product that we can all be proud to be involved in.

For all industry people that could not attend, I would recommend that you make it a priority to try and attend the next congress which will be held in Columbia in four years. Sally and myself took the opportunity to take our children along and make a family holiday as it is a long way from home. We arrived prior to the congress and trekked to Machu Picchu and visited Lake Titicaca and after the congress we spent 10 days in Cuba and then four days in New York. I would recommend all three countries as travel destinations and if you would like to revisit the 50s, 60s and 70s, Cuba is a must before it all changes.

There were big learnings from the congress. For me it was that we have an industry world wide that just wants to deliver the best quality avocados to its customers and continue to improve in all areas from growing to getting them in the consumers shopping basket. World wide consumption continues to increase and health benefits continue to be found from this fantastic fruit.

Although Australia is a very small market and producer on the world wide stage, we produce a good product with a good local and close export market into one of the largest untapped markets - China. With the access of Mexico and Peru now into

China, we will see this market explode over the next few years which will be fantastic for all avocado producers world wide.

As I have been away for a few weeks during our flowering period, I am unsure how this is going but from all reports the weather has been favourable so I hope that we all get a good fruit set and no hail storms in November like last season.

So start your Columbian bank account and Spanish lessons now because in four years this industry will be that much more developed and the information that will be delivered will be something you would not want to miss. From the information to the networking with world growers and other industry leaders, these events are so valuable. See you there.

### Sunshine Coast Report

By Robert Price, Avocados Australia Director for the Sunshine Coast Growing Area



It was another interesting harvest in the Sunshine Coast area this year with some good crops of quality fruit and conversely some poor results - mainly through fruit size and imperfections. The up-side is that the market price held up and maintained a level of return that is appropriate with the cost of production and an equitable return to the grower.

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*Around Australia continued*

For those who aren't aware, Peter and Sandra Young have sold their business to the Flemmings Group, after 47 years of successfully operating Birdwood Nursery, supplying plants to orchardists. I thank Peter and Sandra for the good service and advice over the years and wish them well in the future.

For those who have been following the Horticulture Innovation Australia developments it is interesting to see their latest press release, 'New Industry Investment Advisory Processes for Hort Innovation - Progress Update' and to quote:

"From consultation to date Hort Innovation has received some clear messages from stakeholders. Regardless of the industry's size or complexity, investment advisory mechanisms need to be:

- *Open, transparent and inclusive*
- *As representative of the make-up of the industry as possible*
- *Inclusive of appropriate set of skills beyond production*
- *Provide good governance.*

In this context, Hort Innovation will be establishing Strategic Investment Advisory Panels for each levy industry. These Panels will be responsible for overseeing each levy industry's strategic investment plan."

This sounds plausible however on reading the full release I was not overwhelmed with a feeling that this organisation was in full understanding on how levy payers wanted their hard won incomes used to their industry's best advantage. Growers who have spoken to me are sceptical about the direction that HIA are heading and have a premonition that all is not as they originally agreed to when they voted for levies in their industry.

**Tamborine and Northern Rivers Report**

By Tom Silver, Avocados Australia Director for the Tamborine and Northern Rivers Growing Area



Tamborine and Northern Rivers growers have concluded their 2015 harvest, with most growers enjoying an improvement on the 2014 crop and firm prices throughout.

Flowering, fruit set and spring flush appears quite good at this stage so fingers are crossed for 2016. The late winter and spring weather, at least to this point has been quite mild, with only a few days over 30 degrees and some quite cool nights and no adverse winds. Even growers with Sharwil and Shepard varieties are observing a good set.

Avocados Australia has developed and is implementing an Avocado Export Development Plan (EDP) the objectives of which are loosely, to gain new and maintain existing high value markets in Asia, reclaim the Thailand market, gain access into China in the next 6-10 years and at a minimum, maintain current exports of 5% of annual Aussie production.

In light of expected massive increases in avocado production in Australia, this is a prudent strategy and is in my view, an example of your industry body being proactive and forward thinking. I believe it folly to put your head in the sand and believe that the domestic market will continue to absorb increases in production whilst maintaining current prices, irrespective of New Zealand imports or not. Furthermore, the removal of small fruit from the domestic market (size 28 and 30), has a positive impact on prices as buyers have to purchase more trays to obtain the same amount of fruit.

Due to changes with the HIA funding model, implementation of the plan is difficult as AAL does not have direct monies to pay for it. However, the awarding of a grant of \$250,000 through the Coalition Government Package Assisting Small Exporters will contribute greatly to our industries ability to achieve our export goals.

These funds combined with targeted research into the development of fruit fly protocols that satisfy our intended markets in a timely fashion, is needed. Please keep in mind that money invested into export development benefits all Australian avocado growers, not just exporters.

**Western Australia Report**

By David Duncan and Neil Shenton, Avocados Australia Directors for the Western Australia Growing Area



Sunny Western Australia has pretty much lived up to that this last winter, with the result that picking is going along at a steady pace, with more starting in November and bigger volumes starting to move through the market. Small fruit is holding up some orchards.



Six spotted mite is rearing its ugly head again in the more southern regions and orchardists need to be on the ball with their mitigation programmes.

A lower than usual winter rain has left many dams in a slightly parlous state and farmers will probably need to keep a beady eye on their water volumes. One of the long-term predictions I saw was for more than usual rain in spring and summer, but it doesn't look like that so far!

In my opinion, Horticulture Innovation Australia is still unsure about how their new structure is going to work for the industry. I encourage you to become a member to ensure you have an influence over how your levy is spent.

Dave Duncan, the father of avocados in the West has finally decided to retire from his position as Western Australian (WA) representative on the AAL Board. He has been there for many years, in different roles, through thick and thin. His contribution to avocados in WA and the rest of the country has been outstanding and ongoing for many years. We all owe him a debt of gratitude and thanks.

## Central New South Wales Report

By Ian Tolson, Avocados Australia Director for the Central New South Wales Growing Area



Harvesting in the local and Bellingen-Coffs Harbour areas has come to a close with the majority of growers experiencing a significant increase in yield to last season. Combine that with the excellent prices means very satisfied farmers who are now focusing on next year's crop. There has been a good flowering, which we all hope will result in a good fruit set. Spring brought nice warm days, however the nights were still a bit on the cool side. Some good rain towards the end of September was very welcome and since then it has really warmed up.

In Comboyne, Red Hill and Mangrove Mountain, some growers have finished whilst others will be going for quite a while yet. Fruit quality from the Comboyne region was a vast improvement on the previous season. Growers are very grateful not to have had another damaging hail storm.

Fruit quality should always be first and foremost in growers minds. Diligent orchard management practices are required to ensure the best possible product is either packed by yourselves or delivered to the packing facility is paramount. Premium product will equal a premium return.

## North Queensland Report

By Jim Kochi, Avocados Australia Director for the North Queensland Growing Area



This spring has been a mild one with great expectations for a good flowering and fruit set across the whole region. Some of you may have already scoffed at the thought of planning so far ahead and you are absolutely right. The reports coming in are that the Atherton-Tolga area are setting well as is the Walkamin area but the Mareeba-Dimbulah area is more patchy. The season so far has supplied little rain as is expected from the El Nino influence so the expectation is that lower rainfall will continue through the summer period. From another perspective, the growers in Peru and Chile are expecting heavier rainfall events over the summer from the same El Nino effect. Time will tell, as always.

It is important for all growers to be more accurate with forecasting of their crop as we enter the November-December period. These numbers need to be supplied to Avocados Australia for Infocado so the markets have time to prepare for the arrival on the new North Queensland crop and also the continuation of the crop from New Zealand and Western Australia. This is something growers can contribute to and do have an influence over.



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# Industry Matters

*Industry Matters includes articles that have been published by various news sources and are acknowledged accordingly.*

## Phase two of Qualicado now complete

The Melbourne and Adelaide Wholesaler Workshops held in July attracted more than 20 wholesalers, ripeners and transporters over the two days. AAL representatives John Tyas and Nathan Symonds discussed the Supply Chain Program, the Best Practice Resource and the benefits of Infocado. Noel Ainsworth from QDAF presented on Avocado Bruising Research Update and Improving Avocado Ripening Practices.

The Central Queensland Qualicado Workshop attracted 58 growers and packers from the Childers region, focussing on the latest information about how to further improve fruit quality and productivity.

John Tyas and Nathan Symonds were accompanied by a range of guest speakers including Simon Newett and Noel Ainsworth from QDAF and Howard Hall from CDI Pinnacle Management, wrapping up the day with an orchard walk lead by host Ivan Philpott.

This wraps up Phase two of Qualicado. Thank you to all the hosts who have allowed us to visit your orchards and thank you to everyone who attended and participated in the Qualicado Workshops. We've received overwhelmingly positive responses and look forward to facilitating events like this in the future.



*Orchard walk lead by Ivan Philpott and Simon Newett.*

## Order of Merit awarded to Simon Newett

The Central Queensland Qualicado Workshop also played host to the presentation of a significant award. Simon Newett was presented with the Avocados Australia Order of Merit which is awarded to outstanding individuals who have made significant contributions to the Australian avocado industry.

Having been raised on a broad acre crop and beef farm in Rhodesia (now Zimbabwe), agriculture was in Simon's blood. His interest in this field then progressed to studying agriculture at university.

Simon has had an extensive career spanning 21 years in the avocado industry and is very well respected by his peers, colleagues and growers nation-wide. Simon inherited the avocado extension role from his predecessor Alex Banks.

Prior to beginning work in the avocado industry in 1994, Simon worked for CSR Ltd Sugar Division on an ethanol from

sugarcane project that was to happen on the Ord River in WA in the 1980s. This project was shelved because the price of oil dropped and he was seconded to CSR's macadamia business, continuing to work with this crop for 10 years as a horticulturist and in orchard management. During this time, he also worked on a cashew nut pilot project. Simon joined the Queensland Department in 1992 initially working with the pineapple industry and then began working in avocados.

Simon is passionate about his work and believes there is always something to learn and every season is different. "All aspects of growing avocados interest me. Of particular interest are irrigation, nutrition, rootstocks, pollination and fruitset, canopy management, pests and diseases."

Simon's successful career has seen him reach many great achievements. His top four include being part of the team that developed the AVOMAN orchard management software (which was a great way to learn about the crop), developing the Agrilink Avocado Information Kit which has morphed into



*Simon Newett,  
Order of Merit recipient*



*Lachlan Donovan (L) and John Tyas (R) presenting Simon Newett (M) with his Order of Merit award*

the Growing section on the Best Practice Resource, producing "The Avocado Problem Solver Field Guide" and organising the regional study group field days.

Simon has worked with many people in the industry over the years and here is what a small handful of them had to say:

**Daryl Boardman:** *All I can say is that he has been and still is a valuable asset to the avocado industry via his great ability to connect with growers and be able to convey the messages in a language that growers understand and appreciate. I would like to thank him for his passion to the industry and congratulate him on this award.*

**Barry Avery:** *He has been great to work with, a great knowledge of the industry with very good people skills which makes it very easy for him to relate to growers, very deserving of the award.*

**Dr Elizabeth Dann:** *It has been a pleasure to know and work with Simon over the last 8 years or so, and he is certainly deserving of this formal recognition by Industry. Congratulations Simon!*

**Tony Whiley:** *Simon Newett is a very worthy recipient of the Australian avocado industry's Award of Merit. I have known and*

*closely worked with Simon for in excess of 20 years and always found him a diligent and conscientious colleague focused on obtaining the best possible outcomes for the industries to which he provides information services.*

**Ken Pegg and Lindy Coates:** *Congratulations Simon! This is a recognition well deserved for dedicated service to the avocado industry over many years. Avocado growers and the scientific community have benefited greatly from the support and direction you have provided.*

**Irene Kernot:** *It is not often you get a chance to work with someone both so knowledgeable and so unassuming.*

Simon says, "The avocado industry has been a pleasure to work with and I feel privileged to have had this opportunity and good fortune to spend a lot of my career with this crop and those associated with it. The crop is unforgiving but if you get it right it can be very rewarding. I have made good friends with those working in the industry and it is a great honour to receive this recognition. I hope that I have made a difference and will continue to do so for some years yet (hopefully this award isn't a subtle hint for me to retire!). I'd also like to say that achievements would not have been possible without great project teams and great collaboration from growers."

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Industry Matters continued

Australian Avocados Forecast - July 2014 to June 2015 (5.5 kg eqv trays)													
	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	12 mth Total
Hass	954,534	980,993	691,678	729,101	880,842	815,348	330,441	155,563	74,227	339,016	926,757	991,606	7,870,106
Shepard	0	0	0	0	0	0	6,386	253,102	860,241	502,146	57,768	2,145	1,681,788
Other	70,087	51,502	19,787	31,882	7,883	18,012	14,394	4,761	34,119	29,671	57,947	55,101	395,146
<b>Total</b>	<b>1,024,621</b>	<b>1,032,495</b>	<b>711,465</b>	<b>760,983</b>	<b>888,725</b>	<b>833,360</b>	<b>351,221</b>	<b>413,426</b>	<b>968,587</b>	<b>870,833</b>	<b>1,042,472</b>	<b>1,048,852</b>	<b>9,947,040</b>

Australian Avocados Dispatches - July 2014 to June 2015 (5.5 kg eqv trays)													
	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	12 mth Total
Hass	928,870	986,822	758,947	1,109,500	717,892	561,559	569,451	366,282	65,707	168,975	1,227,519	1,000,347	8,461,871
Shepard	0	0	0	0	0	0	0	29,974	652,529	814,487	155,649	0	1,652,639
Other	37,841	68,545	23,897	30,638	20,682	18,112	27,398	11,555	7,592	41,290	33,878	35,949	357,377
<b>Total</b>	<b>966,711</b>	<b>1,055,367</b>	<b>782,844</b>	<b>1,140,138</b>	<b>738,574</b>	<b>579,671</b>	<b>596,849</b>	<b>407,811</b>	<b>725,828</b>	<b>1,024,752</b>	<b>1,417,046</b>	<b>1,036,296</b>	<b>10,471,887</b>

Australian Avocados Forecast - July 2015 to June 2016 (5.5 kg eqv trays)													
	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	12 mth Total
Hass	951,159	980,117	922,625	1,080,904	928,224	782,278	634,196	276,851	51,999	412,470	1,216,854	1,302,300	9,539,977
Shepard	0	0	0	0	0	0	0	174,873	844,346	727,529	48,768	0	1,795,516
Other	79,172	102,551	44,910	29,732	17,485	10,726	15,330	4,202	17,118	27,858	39,625	38,826	427,535
<b>Total</b>	<b>1,030,331</b>	<b>1,082,668</b>	<b>967,535</b>	<b>1,110,636</b>	<b>945,709</b>	<b>793,004</b>	<b>649,526</b>	<b>455,926</b>	<b>913,463</b>	<b>1,167,857</b>	<b>1,305,247</b>	<b>1,341,126</b>	<b>11,763,028</b>

Infocado

Over the 2014/15 financial year the industry saw some remarkable volumes of avocados travel through the markets. Throughout this period, volumes varied greatly with never seen before weekly volumes over the 2014 spring with quite slow volumes at the end of summer into the autumn months (Figure 1). Overall the volume forecast for 2014/15 was eclipsed by approx. 500,000 tray equivalents. The outlook for the 2015/16 year in July was looking to indicate that this current year volumes were going to continue to increase, estimated to peak at 11,763,028 tray equivalents.

Figure 1 outlines the fluctuating volumes over spring, the end of summer/start of autumn did have a slight correlation to the retail prices that were recorded over the same period (see Figure 2). As it can be seen from the larger volumes dispatched in October 2014 and November 2014, the retail price eased slightly whilst over February 2016 to April 2016 the prices seen at the retail level increased quite significantly. The lower volumes were largely attributed to North Queensland fruit being slow to mature.

Figure 3 has been included to illustrate July 2014 to June 2016 dispatches and forecasts by variety.

Figure 1: July 2014 to June 2015 Forecast and Dispatch, July 2015 to June 2016 Forecast by Variety

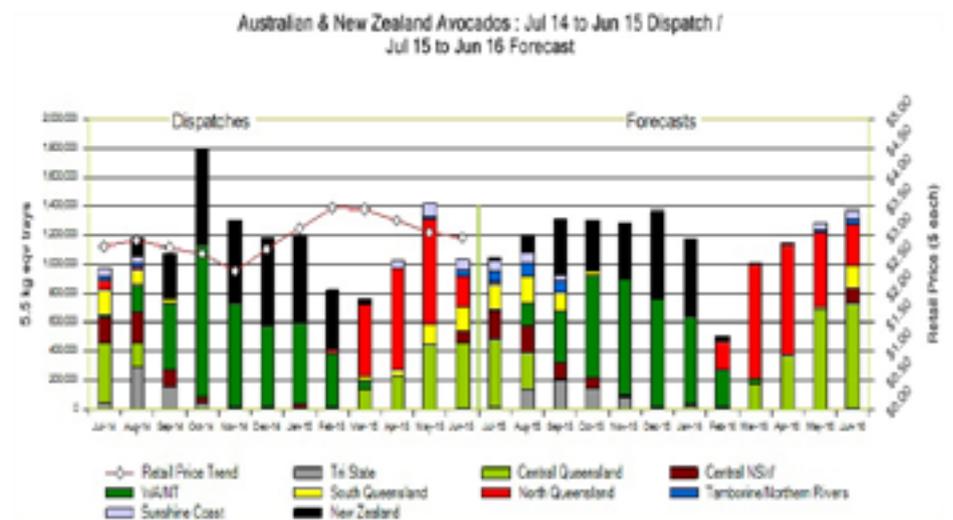


Figure 2: July 2014 to June 2016 Forecast and Dispatch by Region

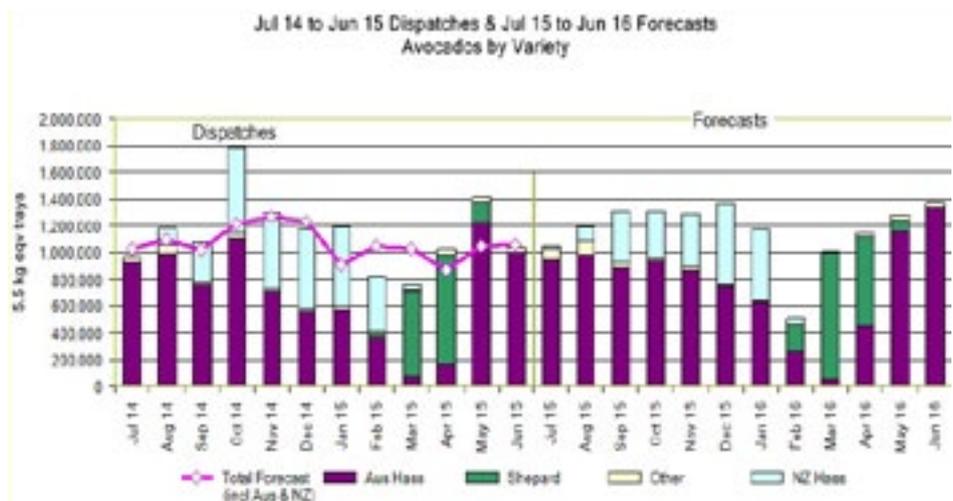


Figure 3: July 2014 to June 2016 Forecast and Dispatch by Variety

It also enables easy differentiation between Australian and New Zealand Hass. The pink line illustrates the monthly volume that was forecast for that period of time.

The forecast for the coming 12 months illustrates the increased volume that has been estimated. This volume seems to be quite well spread with six months peaking above the 1,200,000 tray equivalent/month. If dispatches follow the forecast it will mean quite a few weeks where 250,000 – 300,000 tray equivalents will be marketed.

### Retail Prices

As avocado dispatch volumes have varied over the 2015 year, retail prices have been fairly consistent with minimal movement to the average price (see Figure 1, 2, 3 & 4).

The most uniformity of the average singular price has been seen in Perth and Melbourne with \$3.00 per avocado being steady over the last six months. The Brisbane retail market has shown more variance with the single price varying from \$2.00-\$3.00 over the same period whilst Sydney has shown more strength with the single price hovering between \$3.00-\$3.50.

With a fair portion of the estimated volume yet to be dispatched from Western Australia and New Zealand the coming months will no doubt be quite interesting.

The HIA project that provides the funding to monitor and report avocado retail prices will be finishing at the end of November 2015 and HIA has determined that it will not continue to fund this activity beyond then therefore, this service will be discontinued. Avocados Australia is investigating alternative retail price monitoring mechanisms and if a new low-cost format is considered useful by supply chain stakeholders this service may be provided in the future.



Figure 1: 12 month Brisbane retail prices (Hass)



Figure 2: 12 month Sydney retail prices (Hass)



Figure 3: 12 month Melbourne retail prices (Hass)



Figure 4: 12 month Perth retail prices (Hass)

Industry Matters continued

**OrchardInfo**

The end of the winter period saw the 2013 OrchardInfo reports distributed to contributors. AAL is preparing to collect the 2014 data at the end of October.

**OrchardInfo Prize Offers – Be in the chance to WIN!!**

Growers that input their orchard information in the next round will be in the draw to win a temperature data logger to monitor orchard temperatures which can impact on fruit set. You’ve got to be in it to win it!

**Retail Quality**

As 2015 wraps, as does the Retail Quality monitoring project, we thought that it would be timely to have a short update on the way retail quality is performing.

Surveys are conducted on a monthly basis in Brisbane, Sydney, Melbourne and Perth. Fruit is collected from 16 stores in each city (a total of 64 stores) and assessed the following day for total levels of damage and damage attributed to specific issues. Ten pieces of fruit, depending on the availability of ripe fruit (including both Hass and Shepard when available) are sampled from each store. Samples are then assessed for overall damage and specific defects.

Over the course of eight years of monitoring, bruising and body rots continue to be the main defects that have been observed. Although other defects are observed through this process they have reduced and are minor compared with the damage seen by bruising and body rots (see Figure 1).

The data from five years ago indicated that bruising levels were improving though in the last two financial years bruising

levels have been high. Defects like diffuse flesh discolouration, vascular browning and stem end rot have reduced to quite minimal levels.

We know from recent research that most, if not all of the bruising, is occurring at the retail end of the supply chain. Further research is required to understand the causes and to develop practical solutions.

**Best Practice Resource: Avocados Australia providing practical WHS resources for avocado growers**

Avocados Australia has launched a Workplace, Health and Safety (WHS) module on the Best Practice Resource (BPR) webpage to provide avocado farmers and packers with the appropriate tools required to manage WHS while ensuring legal obligations are adhered to for the safe operation of their business.

The three main resources which form the basis of the Manage WHS module are:

- Avocado Growing and Packing: A Practical Safety Guide
- WHS Implementation Checklist
- WHS Policy and Plan.

These documents are to be used to assist avocado growing and packing businesses to effectively manage WHS. The templates are to be used as a guide and should be modified to meet the needs of each business.

John Tyas, AAL CEO says the WHS module will provide businesses with useful tools which they can readily and confidently draw on to help manage WHS.

“Our aim is to provide our growers’ nation-wide with a set of

**Hass Defects - Type by Year**

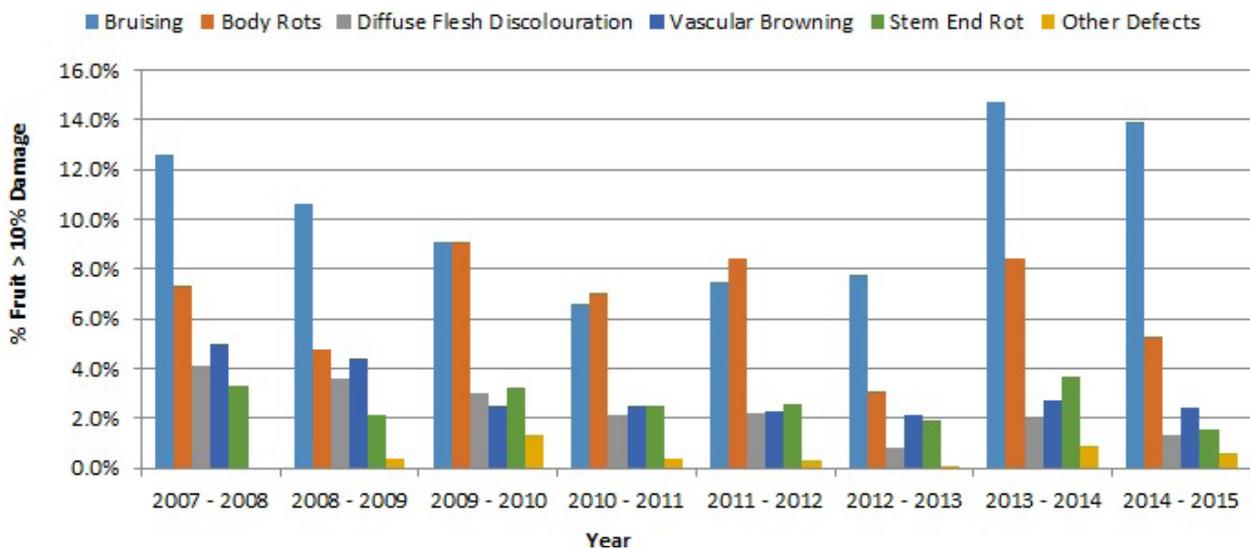


Figure 1: Hass Defects – Type by Year

guidelines that have been tailored for the avocado industry which helps them to keep people safe and to meet their legal obligations," said Mr Tyas.

Other resources include:

- Safety Guides - provide additional information about individual work areas which typically involve some level of risk
- Safety Inductions - include a range of templates to be completed by each new employee upon commencement of their employment
- Hazard Checklists - identify a number of hazards and assist with the safety inspection that should be undertaken to manage these hazards
- Management Tools - include a variety of resources including checklists, registers and emergency cards which can be useful to display important information in case of an emergency.

Central Queensland avocado grower Laurie McCloskey was one of the first to pilot the module and said it is a big plus to be able to access specific documents, checklists, manuals and induction forms.

"Peirson farms 5 years ago spent \$4500 implementing a WHS policy & procedures manual and was recently informed by a WHS inspector that 75% of the manual was out of date or

irrelevant. So you have everything that's needed for our industry at our finger tips with a click of a button," said Mr McCloskey.

The Manage WHS module was created to provide growers with relevant and practical WHS resources they could implement into their own businesses, noting that standards can often vary from state-to-state.

Sunshine Coast grower Peter Annand said he used the WHS module as part of their employee induction. "We found it very clear, well focused on avocado orchards and easily adaptable to our individual farm. It is reassuring to know that we have covered all the safety issues and have documentation to prove it if that was ever needed."

AAL have developed a number of practical resources which are all available for download on the BPR. The BPR has been designed as an online library housing all information relating to best recommended practices for all sectors of the avocado supply chain. Up to date reference materials can be found on the BPR as well as customisable training modules for staff members.

The content available on the BPR has been developed and published by AAL in conjunction with industry experts.

Australian avocado industry stakeholders can apply for access to the BPR by clicking on the Apply for Access tab on the webpage: <http://bestpractice.avocado.org.au/Login.aspx>.

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*Industry Matters continued*

## Visits to avocado orchards in Peru during the World Avocado Congress in September 2015

By Simon Newett, Department of Agriculture and Fisheries

Six orchards were visited in Peru, four (Casablanca, Agrícola Cerro Prieto 'ACP', Arato Montegrando and Avo Perú En Sueño) between 400 and 700 km north of Lima and two orchards (La Calera and Hoja Redondo) about 150 kilometres south of Lima. This article summarises the visits to these six orchards. The orchards visited in Chile will be described in a future article.



*Typical desert topography of Peru's coastal strip which lies between the Pacific Ocean and the Andes Mountains*

### Avocado industry in Peru

Avocados have been grown for thousands of years in Peru however the crop has experienced phenomenal growth in the last decade. Domestic and foreign investors have established large new plantings of avocados, asparagus and blueberries for export particularly in the north of the country. The four orchards visited in the north each grow an average of 600ha of avocados and whilst the oldest trees were 10 years old, most were less than six years old. One farm was part of an agricultural group which grows 3,250ha of avocados. Another group, Camposol, which we did not visit, grows 4,000ha. Farm labour in Peru currently costs about USD15 per day.

The standard of practices both in the field and packing shed are high in order to meet the export fruit quality criteria imposed by codes such as GLOBALGAP ('Good Agricultural Practice'). A group called 'ProHass' (Association of Hass Producers in Peru) coordinates the marketing and export of Hass from Peru. Expertise for new developments (orchards and packing sheds) has been drawn from Chile, Israel, New Zealand and USA.

Production in Peru was listed as 215,000 tonnes in 2014, ranking it number six in the world. The large areas of new developments will ensure that production will continue to grow rapidly.

### Climate

Peru is situated in the north west of South America and can be divided into three main regions, the narrow coastal strip along the Pacific Ocean, the Andes Mountains and the jungle of the Amazon to the east. The avocado industry is located on the coastal strip and although it lies entirely within the tropics (equivalent latitudes to New Guinea), the temperatures are significantly cooler than would be expected because of the cold Humboldt Current which travels north from the Antarctic along almost the entire west coast of South America. Not only does this cold current significantly modify the temperatures of the coastal region (temperatures rarely drop below 12°C or exceed 32°C) but it makes it very dry. Rain is rare (usually less than 25mm per year) although it is often overcast or foggy especially in winter. The rain shadow cast by the Andes Mountains also contributes to the desert conditions.

Rivers that flow west from the snow melt and higher rainfall in the Andes Mountains to the Pacific Ocean provide water for irrigation. There are several major river valleys along the Peruvian coast that originate in the mountains. Traditionally agriculture has been on the relatively fertile alluvial soil of these river valleys (the civilizations of the Chimu, Mochica and Incas thrived in these valleys), however many of the new avocado developments are on previously uncultivated land on the periphery of these river valleys.

The government has built several large dams in the Andes to better secure a regular water supply and has even driven tunnels through the Andes to conduct water from the eastern side (Amazon basin) where rain is more plentiful, to the west. Large concrete channels (up to 150km long) bring this water to multiple farms on the coastal strip. Sometimes orchards source underground water associated with major rivers. A new dam is being built in the Andes which will have a capacity of 500,000ML and a second water tunnel from the Amazon side is also under construction.



*The irrigation canal that supplies Avo Peru En Sueño orchard*



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## Industry Matters continued

Other crops grown in the coastal strip include asparagus, blueberries, citrus and table grapes for large scale export, plus artichoke, cassava, corn, mango, papaya, pomegranate, potato, quinoa, sugarcane, sweet potato and rice.

### Soil

Soils vary from fertile loamy alluvial soil in river valleys to coarse sand where orchards have been established outside the river valleys, often on sand dunes.

### Tree production and establishment

Plants are raised in nurseries either as grafted trees or as seedlings that are planted out at two months of age and grafted in the field. They have found that the higher the graft, the faster the tree develops and also that the precocity of young trees depends on when they were grafted. Those grafted before December flower in September and produce their first crop the next year.

### Varieties and rootstocks

Hass is grown almost exclusively on these new export-orientated orchards although some Maluma (a Hass-type from South Africa) is being tried. Since Phytophthora root rot is not a major issue (thanks to the dry climate and largely free draining coarse sandy soils), tolerance to root rot in rootstocks is not a major requirement.

The main rootstocks used are Zutano, Topa Topa and Lula. Dusa® is being tried. West Indian rootstocks from Israel do well and these include Degania 117, Ashdot and Zrifin.

Although Ashdot performs well, the seed has to be imported from Israel and is expensive. Zutano gives a more uniform tree than Topa Topa and is considered vigorous but production is reported to be irregular. Lula uses 10% less water as the roots are thicker and spear through soil more easily.



Another section of the 605 ha Arato Montegrande orchard

### Tree age and spacing

Many of the large export orchards are very young, tree age on the six orchards ranged from just planted to 15 years old, but most had been in the ground for less than six years.

Tree spacing ranged from 7 x 3.5m (408 trees/ha) down to 5 x 2m (1,000 trees/ha). Most were 6-7m between rows and 2.5-3m between trees in the row (averaging 480 trees/ha).

### Irrigation

Gravity fed drip irrigation is used almost exclusively, mostly three (sometimes two) lines of drippers are used per tree row, delivering between 20-42L/tree/hour. Irrigation is generally applied during the day.

Evaporation rates are not particularly high, typically ranging from 4.7mm/day in winter to 6.5mm/day in summer. Scheduling methods range from tensiometers placed at 30, 60 and 90cm depth, to evaporation pans and dendrometers.

Irrigation frequency ranged from two or three times per day in summer to five times per week in winter.

Water quality is generally good (less than 1dS/m) but clay particles in the water must be removed to prevent drippers from blocking up. This is achieved by storing water in large plastic lined settling ponds when it arrives and treating it with anionic polymer flocculants to precipitate out the clay. Annual water use ranges from 7-19ML/ha/year depending on tree age.

Managers acknowledged the importance of ensuring that sufficient oxygen reaches the avocado roots.



Preparing fertigation at the pump station next to a settling pond.

### Nutrition

Organic material (either compost or manure) is incorporated in the tree row on sandy soils some time prior to planting. All orchards are fertigated; some orchards also apply chicken manure if available.

Leaves are analysed regularly. At one orchard, calcium levels are tested in the fruit during January in an attempt to predict fruit quality. Soil pH is usually neutral or alkaline.

Average rates (kilograms/hectare/year) of element across the six orchards visited were as follows:

- 240kg N, 65kg P, 280kg K, 50kg Ca, 30kg Mg.

These levels are high compared with Australia but it should be remembered that most orchards are very young which helps explain the relatively high rates of nitrogen, and in many cases the soil is inert coarse sand with very low levels of organic matter.

Phosphorus is often applied as phosphoric acid which also serves to acidify the typically neutral or slightly alkaline soils.

The trace elements iron, manganese, zinc, copper and boron are also applied through the fertigation and foliar boron (and sometimes calcium) sprays are applied at flowering. The chelate form of iron is used where the soil is alkaline.

There can be significant levels of boron in the underground water which is suitable for avocados but not for citrus where the levels encountered can be phytotoxic. The water can also contain chloride and for this reason West Indian rootstocks are often preferred for their greater tolerance to this element and high pH soils.

Timing of fertiliser applications follows the phenology. Nitrogen is applied weekly throughout the year, rates are highest just prior to flowering, drop slightly during flowering and fruitset, drop further during the first fruit shedding event, then increase again (to the pre-flowering rate) for fruit growth and then drop off during harvest and pruning. Potassium is also fertigated weekly and the rate is highest during fruit growth.

Our guide at Arato Montegrando referring to the management of nutrition in their coarse sands said, "The sand doesn't give anything, but it doesn't take anything either," meaning that managing nutrition on their soils is relatively straightforward.

## Diseases

Pest and disease pressure in this environment is low. Phytophthora root rot is only a problem when soils are heavy and are over irrigated; phosphorous acid is sometimes applied as a preventative treatment. Some orchards inoculate the soil with *Trichoderma* species to help suppress Phytophthora root rot, applying it through the irrigation system up to three times per year.

*Lasiodiplodia theobromae* is considered an important pathogen in Peru where it is associated with stem end rot, fruit fall and cankers on branches and trunks, the latter can progress to tree death especially under stressful conditions.

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## Industry Matters continued

*Lasiodiplodia theobromae* is in the same group of pathogens as *Botryosphaeria* spp (formerly referred to as *Dothiorella* spp) and we have both these pathogens in Australia where they are most commonly associated with stem end rot.

*Botrytis* is reported as an occasional problem causing flower rot. Conditions are too dry for anthracnose to be a significant issue.

### Pests

The main insect pests are thrips and red and brown mite *Oligonychus yothersi* and *O. punicae* respectively which all cause russetting on fruit and leaves, an avocado mirid called 'daghbertus' which is a sucking insect that causes raised lumps on fruit and also attacks flowers, scale insects and armoured scale insects ('queresas'), loopers, and a bag worm ('bicho de cesto', *Oieketicus kirbyi*) which eats uniform 1cm diameter holes in the leaf and is similar to Saunders' Case Moth which occurs in Australia. Aphids and white fly are occasional pests.

### Canopy management

Most trees are still young so canopy management is generally not yet a major issue. However, trees grow about 80-100cm per year and they have learnt enough to know that trees must be pruned every year or they soon get out of control at these high planting densities. Extensive use is made of plant growth regulators, either uniconazole or paclobutrazole to help reduce vegetative growth.

Generally speaking, trees are shaped during their first year in the field to establish a single leader and thereafter are pruned every year, mainly in July shortly after harvest but before flowering commences. Pruning from the second year onwards is aimed at maintaining good light through the tree and keeping the trees no taller than 4-5m, selective limb removal is practiced and on some properties mechanical pruning of tops and sides is carried out. These practices also make harvest easier and safer and allow for better spray coverage.



Avocados growing in the sand dunes at En Sueno orchard

On 'En Sueño' orchard, trees are given a rating each year for productivity. This rating is recorded as a paint mark (a different colour for each of four ratings) on the trunk. Trees that consistently perform poorly are removed and replaced by clones of trees that consistently perform well. These latter trees are dubbed 'super trees' and are also used in new plantings. With their low levels of *Phytophthora* they don't appear to have the same issues with establishing replant trees that we do in Australia.

### Flowering and fruitset

Trees were flowering strongly on all orchards during our visits and we were told that flowering is strong every year. This year there seemed to be a high proportion of determinate flowering panicles. The main flowering event takes place from the end of August until October although it is not unusual to get some flowering at other times of the year.

All orchards use pollinisers but judging by their mild temperatures they may be unnecessary, especially in the northern growing areas. Pollinisers used included Edranol, Ettinger and Fuerte and took up between 5% and 8% of tree spaces. In this environment Ettinger was flowering later than Hass and is therefore of questionable value but the flowering time of Edranol and Zutano appeared to be better matched to Hass. Managers report that initially they get better fruitset in Hass trees closest to the polliniser trees but after natural shedding the yield is the same.



At En Sueno orchard 60 ha of flowers are grown to assist build-up of beehive numbers

Beehives are brought into orchards at a rate of between 2-12 hives/ha. In some areas there is a good population of feral bees, but on one of the orchards which is being developed in sand dunes away from the river valley there are no local bees and a concerted effort is being made to build up numbers and keep them on the property. For 1300ha of avocados and blueberries they already have 2,000 of their own hives and plan to grow them to 6,000 hives within the next two years. To help feed and build up hive numbers they have planted 60ha of flowering plants attractive to bees including basil, cuphea and portulaca. On another farm that has a very large egg producing

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## Industry Matters continued

business, chicken manure is spread in the orchard, not only to fertilise the trees, but also to encourage blow flies which are believed to contribute to avocado pollination. They were seen in large numbers on flower panicles during our visit.

Most orchards visited use Sunny® (uniconazole) which is applied in two or three sprays during flowering (a total of 1% is applied, 10L/ha) to enhance fruit set and retention.

### Harvest and yields

There are generally two harvest periods each year, the first between March and June and the second in August. Harvest season starts when fruit reaches 23-24% dry matter. By the end of the harvest, dry matter has reached 27-29%.

New orchards in the north of Peru appear to reach maturity by about year six and yields appear to average about 24t/ha at this stage, however many of the trees are less than four years old. Some have recorded up to 42t/ha. The orchards visited south of Lima appeared to yield about 16-18t/ha at maturity.

It was reported that better yields follow relatively cool winters whilst lower yields are obtained following mild winters. This may be because flowering lasts for about two months after cool winters, whilst after mild winters flowering is over within a month.

Peruvian fruit from the older orchards closer to Lima have a reputation for being too large, but in the northern production areas this is not an issue because temperatures are warmer.

### Packing and marketing

Typically, on arrival at the pack shed, fruit is placed in a cool room to remove the field heat then packed the next day. The ambient temperature inside the grading and packing area of the ACP shed will be kept at 13.5°C to ensure fruit does not warm up after removal from the cool room. Once packed, fruit is stored at 4.5°C.

Only one packing shed was visited, this was at ACP. It had been completed only a month before our visit and was yet to

pack any fruit. The shed was designed by New Zealanders for packing export fruit and fitted out with Compac equipment. The forecast packing rate for this shed is 48t/hour. The shed on the Montegrando orchard was quoted to pack at 32t/ha.

Note: a more detailed report with more photographs is available on the Best Practice Resource and presentations are being made at avocado study group meetings.



Brand new Compac equipped 48 t/hour packing shed waiting for its first fruit.

### Acknowledgements

The author's trip was funded by Horticulture Innovation Australia, using avocado industry levy and matched funds from the Australian Government as part of project AV14000 "Achieving more consistent yields of quality fruit in the Australian avocado industry". Simon would also like to thank John Tyas for giving up his place on the pre-congress tour so that he could participate.

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*Industry Matters continued*

**An industry tribute to Tony Walsh**

*By Kristy Lankester, Communications Manager, Avocados Australia*

*We should always try to make a positive difference in all we do*  
**- Tony Walsh.**

Tony Walsh has had a long career working in the exporting field as an export manager. Tony is taking a step back, not quite retiring just yet, but looking to wind down after working in fruit and veg for more than 40 years.



*Tony Walsh and Michael Flynn*

Tony was born in Townsville and went to school at Villanova and Seton College in Brisbane. He undertook further studies with the Australian Institute of Export completing a Diploma in Export Marketing. Tony then went on to lecture in the same course and was awarded "Fellow" from the institute in recognition of the reforms he initiated.

Tony's first job was in 1969 in the horticulture industry as a labourer at Moolabin freight yards. "I quickly learned it was brain not muscle that would take me further," said Tony. He then worked in retail stores until 1979, three of which he owned. With the exception of six years working with QUF Industries (Pauls Milk), Paul has spent his working career in horticulture.



*James Van Elswyk, Tony Walsh and Tom Panna*

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"Interesting to note that of the 40 years I have been working in fruit and veg, 30 years have been in a growers co-operative, Committee of Direction and then Market Gardeners Ltd. Growers are always a top priority; I don't drive home in a Ferrari!" he said.

Tony decided to work in the Rocklea Markets to try and understand how the system really worked. "I got an opportunity to join the Committee of Direction export division as a clerk and worked my way to Export Manager over time. Domestic managers were a dime a dozen and I always thought I had better chances of promotion if I could demonstrate I could work remotely; show initiative and resilience. Where better to do this but in Papua New Guinea and the Pacific. The key to success in these regions was to actually do what you promised. Once you had a reputation for performance, the orders and relationship simply grew. Success in the Pacific took me to Asia and then to Europe based on these simple values."

Tony considers the extensive travel involved throughout his career as an education in itself. "Connecting with ex-pat outposts was always interesting whether in Port Moresby, Guam or Noumea. Doing business in Asia was another challenge with culture, logistics and sophisticated marketing programs and then

participating in market access negotiations in Brussels on behalf of the Australian Hort Industry carried real responsibility."

Tony has a long history of being involved with a number of committees and was driven to participate in them for a number of reasons. "What I found over time was that if you were prepared to work with them [Government], you could create policy and structure that does encourage investment and did drive out costs."

He acknowledges that they work at a different pace and the trick is to understand their political agenda. "Always try to meet them at a point in the continuum where we both win. You have to accept that you can't win every battle. Always take the long view."

Tony was Chair of the Exporters Association for a number of years and Chair of the Horticulture Export Consultative Committee for the rebuild of Australian Quarantine Inspection Services (AQIS) Horticulture Export Program. Most recently, Tony was accepted into the Industry Advisory Committee for avocados.

Tony says the future challenge facing the Australian avocado industry going forward is to hold our disciplines and ensure that perception of value for money is retained and per capita

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Industry Matters continued

consumption continues to grow.

“What the Association has successfully created is a value for money proposition that has been embraced by the Australian public. The development of effective marketing programs along with targeted educational support of the highest order to the growers has combined to deliver real prosperity and sustainability to the category.”

The Food Service sector is growing and the demands for innovation in that space is a challenge. “It’s time to investigate how we can enter the processed arena. We need to consider how we can add the inherent goodness and taste of avocados into a new range of consumer offerings.”

Tony has witnessed and been involved in a number of great achievements throughout his career. He was a part of the team who rebuilt and diversified Market Gardeners NZ from the disastrous deregulated period from the mid-90s to the Fresh Fruit and Veg market leader it is today. Tony loved the challenge of moving 200 tonnes of bananas from Cairns to Brisbane by 747 cargo aircraft immediately after cyclone Yasi.

“Managing the generational change in a number of family farming enterprises was affirmation I was truly connected to the business and the next generation. Lastly, participating in and

witnessing growth and prosperity in the Avocado Category these past five years.”

Tony is stepping back into a part-time role for a year or two and then plans to get lost in his family and rose garden. “I am one of eight children and my wife and I have created a wonderful family that numbers 18 souls. Time for me to stop deigning myself of their company and perhaps to give them some support on their journey.”

**Words of appreciation**

Tony’s dedication to the industry and his presence will be sorely missed. We invited colleagues and friends to say a few words.

**Jennie Franceschi, APMS:** *I have worked with Tony Walsh for the past six or so years and have found him to be a gentleman of high integrity. His dedication to the industry in general has always been about delivering the best result to growers, retailers and consumers. Tony has added real value to the avocado supply chain and has been a great mentor and sounding board to me. I feel honoured to have had this opportunity to work with Tony and wish him all the very best in his future endeavours, even if it’s having a wine while watching the sun set on a beach in Noosa.*

**James Van Elswyk, La Manna Group:** *Although I’ve only had the privilege of knowing Tony a short time, he has certainly been one of the biggest influences on my career within the Avocado industry.*

*He’s one of a few remaining gentlemen & the one thing that becomes evidently clear right from the very first time you meet him is he’s genuinely a nice guy who you can’t help but be drawn to.*

*It would take a lifetime to impart the knowledge, values & professionalism that Tony delivered within his daily work, now evident within the ongoing success of La Manna’s Avocado category.*

*I would like to thank him for everything & wish him all the very best in his future endeavours.*

**Bill Mair, Balmoral Orchard:** *Tony Walsh has been a true friend of the Australian Avocado industry over many years. He is one of nature’s gentlemen and his contribution will be sadly missed. We wish you many years of happy and healthy retirement Tony.*

**Reminder: Araluen’s West Australian Avocado Festival on 28-29 November 2015**

The Araluen West Australian Avocado Festival is on 28-29 November from 10am to 5pm. This year’s festival is set to be bigger and better than last. The festival will be held at the Araluen Botanic Park with fresh produce, skin and beauty products, ciders, beers and guacamole. For more information, please contact Grant Nixon on (08) 9496 1171 or email [ldunn@araluenbotanicpark.com.au](mailto:ldunn@araluenbotanicpark.com.au).

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## Avocados Australia welcomes new Horticulture Innovation Australia staff

**Julie Willis** is the new Horticulture Innovation Australia (Hort Innovation) Avocado Marketing Manager replacing Duncan Sinclair. Julie has more than ten years marketing, communication and branding experience at an executive and management level. Her experience has been developed from a variety of companies including large global organisations, government agencies and most recently a marketing management role at Brismark (Brisbane Markets).



*HIA Marketing Manager Julie Willis*

Julie has specialised in fresh produce marketing and has a deep

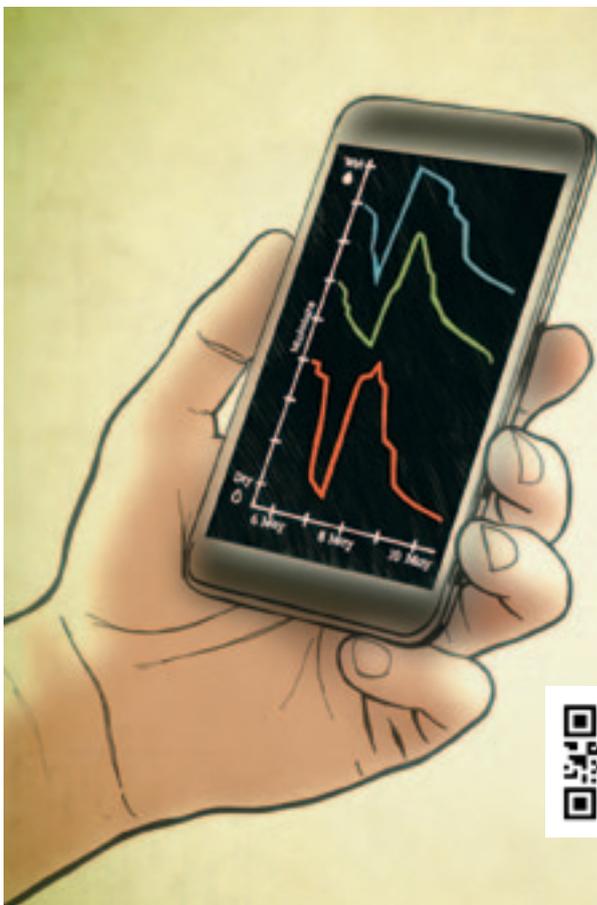
understanding of the horticulture sector and experience in delivering marketing plans and campaigns that increased sales of fresh fruit and vegetables.

**Astrid Hughes** is the new Hort Innovation Relationship Manager for Avocados. Astrid has been with Hort Innovation for nine years (previously Horticulture Australia Limited) working within the Industry Services team and now the Stakeholder Engagement team.

The industries Astrid is currently working with are Custard Apples, Persimmon, Lychee, Pineapple, Banana, Passionfruit and Mango and Melon. She has previously worked with the Tree Nut industries, Table Grapes, Olives and Raspberry and Blackberry and Blueberries.



*HIA Relationship Manager Astrid Hughes*



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Industry Matters continued



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**Biochar increases soil fertility and water retention: WA avocado farmer**

For thousands of years charcoal or biochar has been added to soil to increase fertility and water retention.

The Denmark Biochar group in the Western Australia’s south-west is convinced of the benefits to soil, and is developing kilns to create charcoal.

Bart Lebbing, the group’s chairperson said charcoal-amended soil can improve fertility and help farmers retain water.

“It’s a porous material that is introduced into the soil. It’s like the home of nutrients, so in Western Australia we’ve got this issue of low fertility and low water retention and biochar actually can address both, by providing a home to nutrients and micro organisms,” Mr Lebbing said.

The use of biochar, also known as terra preta isn’t new.

Mr Lebbing said archaeologists in South America have found evidence of layers of charcoal dating back 2,500 years, which is believed to have been introduced into the soil to improve its quality.

The Denmark Biochar group is focused on developing kilns to create the biochar.

Fred Pearce said that simply burning wood, results in ash rather than charcoal. Rather than simply creating a fire, these kilns roast wood which then turns into charcoal.

The charcoal is then crushed and can be mixed through soil.

**The application of biochar**

Manjimup Middlesex cattle producer and avocado grower Doug Pow is less focused on creating biochar and more focused on the application of biochar for his crops.

Last November Mr Pow planted new avocado trees into soil mixed with Jarrah charcoal and was impressed with the results.

“Avocado tree’s growing in the charcoal-amended soil would be about 30 per cent bigger, the leaves are about thirty per cent greener, and the stems are about thirty per cent thicker.”

Following a leaf analyst Mr Pow also found that non-charcoal amended avocado trees had 23 per cent more salt or chlorine in the leaf tissue than the charcoal-amended avocado trees.

Mr Pow believes that the charcoal is absorbing the chlorine which is present in the irrigation water, which will inevitably assist the trees yield.

Professor Tim Flannery, chief councillor of the Climate Council, is also a strong advocate of biochar given the environmental benefits of the sequestration of carbon.

“Biochar is one of the growing number of approaches that have the potential to draw carbon dioxide out of the atmosphere at scale,” said Professor Flannery.

Source: [www.abc.net.au/](http://www.abc.net.au/)



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# Investigating black root rot in avocado

## A new research project

By Dr Elizabeth Dann, Queensland Alliance for Agriculture and Food Innovation, University of Queensland.



Louisa Parkinson and Liz Dann. Photo courtesy of Phil Savory QAAFI UQ

Significant losses recorded in young plantings in the last 5-6 years prompted initial investigation of black root rot in avocado, conservatively estimated to have cost growers in excess of A\$1.5 million (Guest et al., 2014). The preliminary studies confirmed that *Calonectria ilicicola*, a soilborne fungus isolated from diseased roots of young trees, was an

aggressive pathogen (see Talking Avocados Summer 2012), and likely to be a primary cause of the devastating problem.

A new project has commenced to further study this disease in avocado. The study forms the basis of a PhD project by Ms Louisa Parkinson, who is supervised by Dr Liz Dann (UQ) and Dr Roger Shivas (QDAF). The aim of the work is to increase our understanding of diseases causing tree deaths after outplanting and to provide practical management procedures for nurserymen and growers. This will lead to improved tree establishment and health in avocado orchards. So far, Louisa has sampled avocado roots from *sick* and *healthy* trees from several nurseries, as well as young and mature orchards, from all of the major growing regions in Australia.

The characteristic lesions or black spots on the roots (refer to image 1) are different to those caused by *Phytophthora*



Image 1: An avocado feeder root with distinct 'leopard spot' type lesions typical of infection by Nectriaceous fungal pathogens.



Image 2: Microscope photographs of conidia (spores) of *Ilyonectria* sp (left) and *Calonectria* sp (right).

*cinnamomi*. A small piece of diseased root tissue is transferred to fungal growth media and resulting colonies examined under the microscope. Fungal isolates belonging to the Nectriaceae family are selected, based on the shape and size of the spores for a preliminary identification (refer to image 2). The fungal DNA is extracted and small sections of three key genes are amplified and sequenced and compared to published sequences in a large database (GenBank). This allows the identity of each isolate to be verified.

Louisa has collected over 100 isolates belonging to the *Calonectria*, *Ilyonectria*, *Dactylonectria*, *Cylindrocladiella* and *Gliocladiopsis* genera. Inoculation of hundreds of seedlings in the glasshouse has confirmed that *Calonectria ilicicola* is an aggressive pathogen, causing severe stunting, wilting, root necrosis and seedling death within five weeks (refer to image 3). *Cylindrocladiella* and *Gliocladiopsis* tested alone are not pathogenic.



Image 3: Avocado seedlings approximately 5 weeks after being inoculated with *Calonectria ilicicola* (left and centre), compared with mock-inoculated controls (right)

Further testing will commence shortly to determine whether *Ilyonectria* and *Dactylonectria* cause black root rot in avocado. Interestingly, *Calonectria ilicicola* isolated from diseased peanut, custard apple and papaya were also severely pathogenic to avocado, and *Calonectria pauciramosa* from blueberry was moderately pathogenic. This new information has implications for avocado growers who may be considering planting into land where these crops were previously grown.

The project will investigate management options including biofumigation, incorporation of animal manures, companion planting and chemicals. Although it is feasible, we remain opposed to the use of fungicide drenches in the nursery. They do not eradicate pathogens – they are temporary inhibitors of fungal activity and mask symptoms of disease and disease development continues unabated once the effect of the chemical wears off. Fungicide treatment is not permitted in Avocado Nursery Voluntary Accreditation Scheme (ANVAS) nurseries but is allowed in Nursery Industry Accreditation Scheme Australia (NIASA) accredited nurseries.

At present, the best management practice is to ensure planting material is free of these soilborne pathogens prior to planting.

AV14012 ‘Investigating tree mortality during early field establishment’, is funded by Horticulture Innovation Australia (HIA) Limited using the avocado levy and funds from the Australian Government. Louisa is supported by an Australian Postgraduate Award.

### References

Guest, D (2014) HAL Project AV13022 “Review of AV13005”, unpublished.

### Acknowledgements

Louisa Parkinson commenced her PhD with Liz Dann in October 2013 after completing her Honours project (Hons 1) where she demonstrated that treatment of passionfruit with a defence activator reduced severity of passionfruit woodiness disease. Louisa is participating in the 8<sup>th</sup> World Avocado Congress and industry Study Tour in September, where she will be presenting results of her research on black root rot and learning about production systems in other avocado growing countries.



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# Grower profile

# Lisa Roche, Roche Farms



*Lisa Roche on the family orchard*

Lisa Roche from Pemberton in Western Australia has always worked in the finance field of banking and accounting but her passion was working on the land. Just five years ago, Lisa decided to swap the corporate wear for farm boots and stepped into the family business. Roche Farms have been growing avocados for 20 years and have 4,500 trees on 42 acres.

Lisa admits she had a lot to learn in a very short time but she's had excellent support and found the whole experience to be very rewarding – she loves the challenge and monitoring progress and intends to constantly improve the orchard where possible.



**What do you enjoy most about being an avocado farmer?**

I enjoy being an avo farmer for several reasons - I enjoy the contact and support of other growers in the field, the large amount of things to learn in the orchard and being able to put them into practice and seeing the final product of your fruit in a tray off to market.

**What varieties of avocado do you grow?**

We only grow Hass with a very small amount of Sharwill, originally planted for cross-pollination.

**What other crops have you farmed?**

My family used to be potato growers for many years but decided to put our whole farming focus into the avo trees. We also have an Angus beef cattle herd which we thoroughly enjoy.

**What makes your avocados unique?**

What makes our avocados unique is the pride we take in producing quality and the magnificent area in which they grow.

**Are there any growing practices you use that are different to standard growing?**

I wouldn't say there are any growing practices we use that are different to the standard but we do place a priority on canopy management, water management and soil quality.

**What is unique about growing avocados in your region?**

What is unique about growing avos in our area is that no other state is picking at the same time as us (maybe a slight cross over). We also have a crop developing on our trees whilst we are picking.

**What are the biggest issues affecting avocado growers in your region?**

I think some of the biggest issues affecting the avo growers in our region would be Phytophthora (Dieback) Management, levy expenditure (in terms of what does the avo grower get back at his farm gate for the dollars spent each season), large plantings and potential effects on the industry in the future.

**What's the best advice you would give to someone who has just started or is thinking about growing avocados?**

The best advice I can give someone who is new to the industry as a grower would be to get out and about and look at as many other orchards as you can (not only your state) to be able to determine what is **best practice** in each area (watering, fertilization, pruning etc) and to



be committed to your orchard fully to gain the best results. Keep up to date with sampling and be guided by the trees scientific requirements. Place a heavy emphasis on your water management all year round.

**Do you have a favourite avocado recipe?**

I don't have a favourite avo recipe but the good ol' avo on toast with pepper and salt and you can't go past a good guacamole in the summer!

**Lisa...on being a member:**

*I like to be kept up to date with the latest information ...and that's why I'm a member.*

**Do you have a family farming story you'd like to share?**

Our Pemberton farm is on 260 acres and has been in the Roche name for generations. The locality would have to be one of the best places in the world to farm with our climate, soils and water quality. The decision to put avocados on the farm over 20 years ago was a well thought out decision (and risk) by my parents who have been very hard working and are the reason why our farm is still here and prospering today.

I am grateful for the opportunity to be working with them in this industry and other farming areas such as cattle. I hope that the avo industry as a whole and our area continues to flourish and advance. Good luck to everyone for this coming season.



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# The *Amblypelta lutescens* pheromone trap

## A new system for pest monitoring and better pesticide application decisions

By Ian Newton and Donna Chambers, Queensland Department of Agriculture and Fisheries

### Introduction

In the coming months avocado growers will have access to a new pheromone trap for managing the fruitspotting bug *Amblypelta lutescens* (the Banana Spotting Bug).

The Fruit Spotting Bugs *Amblypelta nitida* and *A. lutescens* are the key insect pests attacking avocados in Australia. These insects are almost impossible to find in avocado orchards as they are camouflaged and will actively hide. Often their presence is not determined until after damage is noticed on the fruit. As a consequence, growers often have no choice but to apply regular calendar sprays of broad-spectrum insecticides. Regular use of such insecticides leads to induced flaring of other pests, such as mites, scale and thrips.

After many years of research by the Queensland Department of Agriculture and Fisheries (QDAF) and other collaborators, a pheromone trap has been developed for *A. lutescens*. As part of the soon to be completed Horticulture Innovation Australia

(HIA) project MT10049 A multi target approach to fruitspotting bug management, we have fully optimised the *A. lutescens* lure, designed a panel trap that effectively traps spotting bugs, optimised monitoring use patterns for trap placement and developed damage thresholds, which will allow growers to make better informed decisions on when to apply insecticides. Furthermore, we may be able to develop a lure and kill strategy to not just monitor bug activity, but also to control bugs.

Through an open tender process, Organic Crop Protectants (OCP) was selected as the commercial partner that will manufacture and distribute the *A. lutescens* pheromone traps.

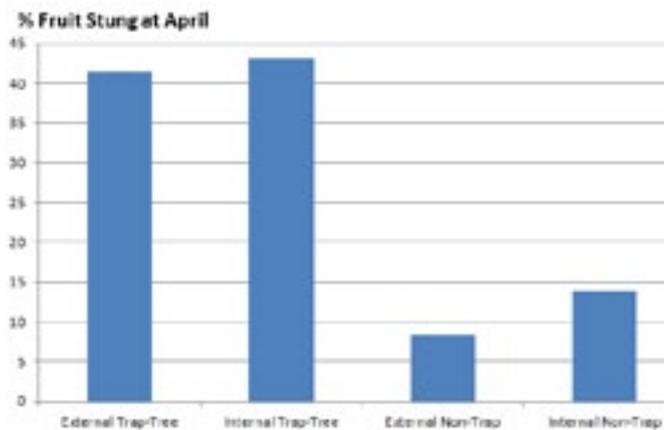
### How does the pheromone trap work?

The trap is made up of a lure containing pheromone chemicals and a special sticky coated panel designed to attract the *A. lutescens* bugs but it will not attract the *A. nitida* (the other spotting bug species). The pheromone is thought to be an aggregation chemical, rather than a sex pheromone, meaning it attracts males and females, adults and nymphs.

In field trials it has been found that the lure is very powerful and can attract the spotting bugs from approximately 20 metres away. However, not all of the bugs are trapped straight away, so a considerable amount of damage can be caused to the fruit in the *trap-tree* (the tree that contains the trap). In recent field trials, it was shown that the level of fruit damage was significantly higher in *trap-trees* than in *non-trap-trees* (Figure 1).



An adult and nymph *Amblypelta lutescens*



**Figure 1:** The percentage (%) of Shepard fruit damaged (with at least one sting) for trap-trees and non-trap trees, showing both the proportion with external visible damage and internal (under skin) damage. Destructive samples (peeled fruit) were taken in February and April 2015 (at harvest).

The high level of fruit damage observed in *trap-trees* may initially be alarming to growers. However, from the associated work by Karel Lindsay (PhD student on HIA project AV11021), we know that there is a steep *drop-off* in damage, even at the immediate neighbouring trees, next to *trap-trees*. It was found

that the neighbouring trees only showed about 35% of the damage as *trap-trees* so in effect, the traps concentrate the bugs within the *trap-trees*. This can be used to the grower's advantage where a grower may be able to harvest the relatively clean *non-trap-trees* first, before harvesting the damaged fruit from the *trap-trees*, and thus reduce sorting time. It should also be emphasised that *trap-trees* only represent about 5% of the total orchard.

### Use patterns: trap placement for monitoring

Through extensive field trials, we have determined the optimum use pattern for monitoring purposes to be at 10 traps per Ha (placed at least 40 metres apart). Traps could be placed even further apart, but should not be placed any closer than 40 metres. At least 10 traps in total should be used to get a reasonable estimate of pest pressure. The more traps used, the more accurate the spray decision. A placement of 20 traps over at least two hectares is ideal.

The traps should be placed at a height of about two metres above the ground (or within reach) and well within the canopy, so that the traps are shaded from the sun. The traps should be monitored at least once a fortnight and lures should be changed every six weeks.

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The *Amblypelta lutescens* pheromone trap continued

Damage thresholds and when to apply insecticides

Damage threshold models have been determined for avocados, so that growers can use the pheromone traps to make more accurate decisions on when to apply insecticides. As the damage is greater in trees containing traps, we have determined damage thresholds for both *trap-trees* and *non-trap trees*.

In unsprayed Shepard avocados, our model predicts fruit damage in *trap-trees* four weeks after the bugs are caught on the trap (Figure 2). This showed that 0.5 bugs per trap (equal to five bugs caught per 10 traps) in a given fortnight will result in 3% of the fruit suffering visual damage in the following four weeks. A catch of 1.5 bugs per trap (per fortnight) would result in 15% fruit damage in the following four weeks.

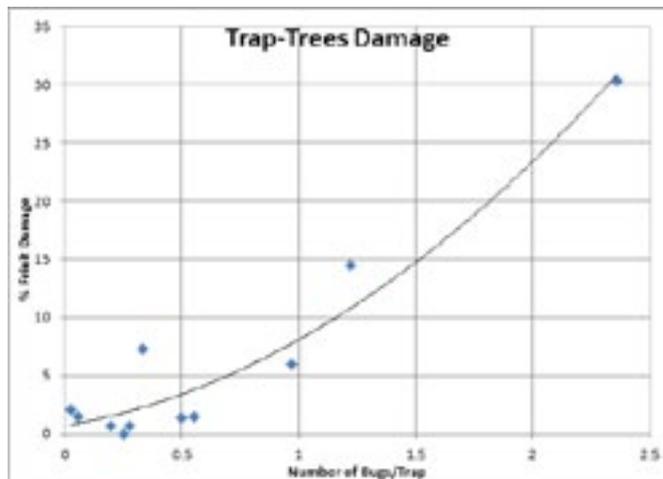


Figure 2: Trap-trees damage thresholds. The relationship between the mean *A. lutescens* bugs caught per trap per fortnight (bugs/trap) and the percentage of avocado fruit in trap-trees with visible damage four weeks later. The exponential model (curved line) explained 91% of the variation.

The relationship with the *non-trap-trees* and avocado fruit damage is not quite as clear. Figure 3 shows that the peaks in fruit damage can be seen approximately coinciding with the peaks in bug numbers (bugs/trap). The fitted model with no lag, i.e. fruit damage observed at the same time, is shown in Figure 4.

The non-trap trees had approximately five to 10 times less damage than the *trap-trees*, so 0.5 bugs per trap (per fortnight) resulted in approximately 0.5% of the fruit suffering visual damage and 1.5 bugs per trap (per fortnight) would result in approximately 1.5% fruit damage.

Over two seasons, we have found that very little damage occurs to fruit in non-trap trees at densities of less than 0.5 *A. lutescens* bugs (per trap per fortnight). And although the damage is

higher in *trap-trees*, our modelling shows that 0.5 bugs (per trap per fortnight) will result in less than 5% fruit damage in *trap-trees*, which account for less than 5% of total trees.

Based on this data, we recommend that growers should apply insecticides if 0.5 *A. lutescens* bugs (per trap per fortnight) or more are found. Table 1 summarises the damage thresholds with expected fruit damage (if no action is taken). It also shows the recommended course of action for avocado growers.

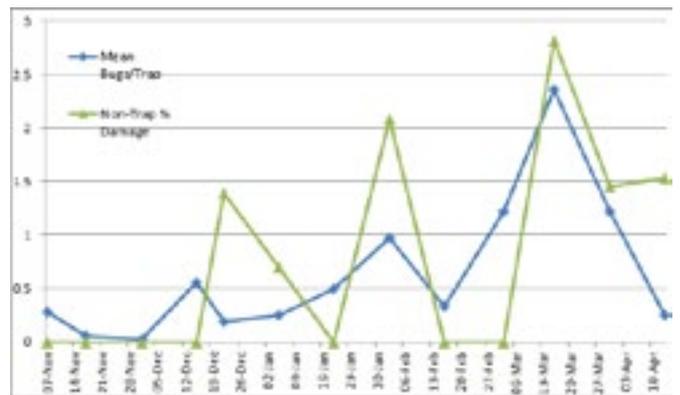


Figure 3: Mean bugs/trap/fortnight and the percentage (%) of externally visible fruit damaged during that fortnight in non-trap trees.

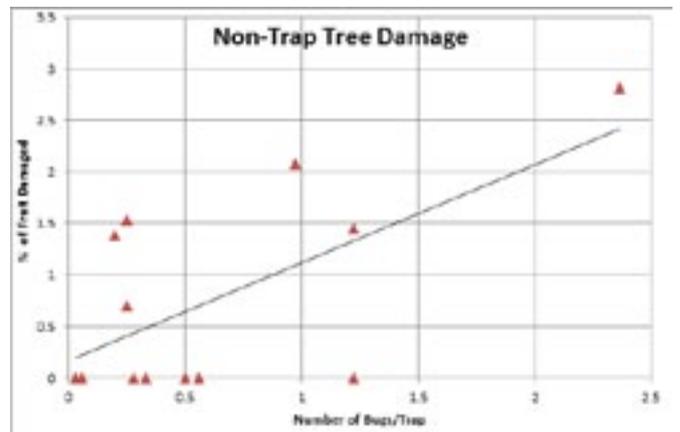


Figure 4: Non-trap trees damage thresholds. The relationship between the mean *A. lutescens* caught per trap (bugs/trap) and the percentage of damaged fruit in non-trap trees that was observed at the same sampling time. The fitted linear model (straight line) explains 35.7% of the variation at this time point.

Number bugs per trap	Number bugs per 10 traps	Fruit damage in trap-trees	Fruit damage in non-trap trees	Action to take by grower
Less than 0.5	Less than 5	Less than 5%	Less than 1.5%	Continue to monitor
0.5 to 1.5	5 to 15	5 to 15%	1.5 to 2%	Apply pesticide and monitor
Above 1.5	Above 15	Above 15%	Above 2%	Apply regular pesticides

**Table 1: Action threshold table.** The number of *A. lutescens* bugs caught in pheromone traps per fortnight and the expected damage (each fortnight) if no action is taken. It is recommended that growers apply a pesticide treatment if 0.5 bugs/trap/fortnight (or five bugs per 10 traps) or more are found.

## Where to next: Can the lure be used to control Spotting Bugs?

We have developed the *A. lutescens* pheromone trap and demonstrated it can be used as a monitoring tool for detecting the insect presence and estimating the current pest pressure. We have also developed threshold models that allow avocado growers to make more accurate decisions on when to apply insecticides.

However, we have also recently shown that the lure is very powerful at bringing in *A. lutescens* bugs to the *trap-tree* where considerable fruit damage can occur (if not treated), whilst

*non-trap* trees suffer significantly less damage. This leads to the possibility that the lure could be used in a system of monitoring integrated with a lure and kill strategy, where *trap-trees* or trap rows are sprayed at a certain threshold and then the entire orchard may be sprayed if a higher threshold is reached.

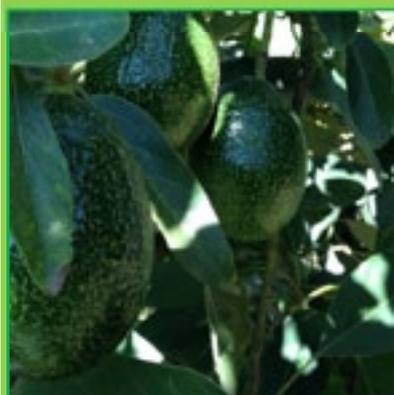
This strategy has not been tested with spotting bugs yet, but similar systems have been used overseas for other pests. Such a strategy could be developed in an IPM system, where broad spectrum insecticides are restricted to a limited area, thus providing refuge to beneficial insects in the remaining orchard and reducing economic input costs by reducing the amount of pesticide use.

We have yet to fully optimise a pheromone lure for the other spotting bug species (*A. nitida*). We propose a new research project be implemented that will optimise the *A. nitida* lure and investigate lure and kill IPM strategies for managing *A. lutescens*.

## Acknowledgements

This research has been funded by the Queensland Department of Agriculture and Fisheries (QDAF) and by Horticulture Innovation Australia (HIA) using the Avocado, Macadamia, Papaya, Lychee, Custard Apple and Passionfruit levies and matched funds from the Australian Government. The *A. lutescens* lure was initially developed by Harry Fay (QDAF) and Ashot Khimian (United States Department of Agriculture). We acknowledge and thank Lindsay Chandler-Jentz (QDAF) for technical assistance, Carol Wright (QDAF) for statistical assistance and Karel Lindsay (University of Queensland) for collaborating and photography.

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# Flies can be doing most of the pollination in some Australian avocado orchards

By Brad Howlett, David Pattemore and Brian Cutting, The New Zealand Institute for Plant & Food Research Limited and Romina Rader from The University of New England

Honey bees are assumed to be the best pollinators of many crop plants, including avocados. They are particularly favoured because they can be moved into orchards in large numbers. However, there are often better pollinators, such as flies, working behind the scenes. These may even be doing the bulk of pollination, without growers realising that they pollinate at all. Research in other crops has shown that combinations of insects provide a better pollination service, with flies pollinating at times honey bees are not. A study being conducted within avocado orchards around the border between South Australia, Victoria and New South Wales by Plant & Food Research and funded by Horticulture Innovation Australia (HIA) is revealing the important role these non-bee pollinators play. In fact, it appears they are doing all the pollination in some orchards, with excellent resulting yields. So who are some of these fly pollinators of avocados?



## Blow flies (*Calliphoridae*)

A few of the many species of blow flies can be annoying, entering houses and laying eggs in garbage; more seriously, they can be responsible for fly strike in sheep. As larvae, they often feed on meat and other protein products and play an important part in ecosystems, by breaking down animal carcasses. However, as adult flies they can be excellent pollinators. In some avocado orchards in the study area, data suggest they are doing most of the pollination. Bigger species have been found to deposit more pollen (1.7 grains on average per visit) to the stigmas of receptive avocado flowers than honey bees do (0.9 grains on average).



## Flesh flies (*Sarcophagidae*)

The larvae of some flesh flies feed on faecal material, while others consume decaying meats. Adult flies can often be seen consuming nectar from flowers. Like blow flies, flesh flies have been found to deposit more pollen than honey bees do on the stigmas of receptive avocado flowers (2.0 grains on average per visit).



## Hover flies (*Syrphidae*)

Hover flies commonly look like wasps or bees. The drone fly, for example, is often confused with the honey bee because of its similar appearance. The larvae of some hover fly species provide additional benefits to avocado growers by consuming pests such as aphids. Even smaller species, such as those examined in the present study, play their part as pollinators, depositing on average 0.4 pollen grains per visit onto the stigmas of receptive flowers.



### Nose flies (*Rhiniidae*)

Nose flies can be very abundant flower visitors of avocado. A number of species have larvae that eat other insects. Findings from our study indicate they are pollinators of avocado, depositing an average of 1.0 pollen grain onto the stigmas of receptive flowers for each visit.

### Can flies be better utilised for avocado pollination?

The early findings from the research indicate that flies can be very abundant in at least some orchards. Ongoing work is now focusing on whether the key pollinating species are common across many orchards, or are localised to specific sites. Understanding the roles, distribution and lifecycle requirements of the key pollinating species is important for developing strategies to boost their numbers for avocado pollination. Some of these strategies may be very simple and inexpensive, such as providing resources for larvae to develop and for adult flies to shelter and feed before and after avocado flowering, to ensure numbers are maintained at the time they are required. At the end of our two-year project, growers will know more about the effectiveness of key non-honey bee pollinators within their orchards and will be provided with recommendations to better utilise populations of currently unmanaged species. The findings will also provide a crucial platform for developing improved management strategies targeting the best pollinating species so that growers can improve the rate of pollination in their orchards reliably.

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### ST15008 - Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation

By Andrew Robson, University of New England

Federal Minister for Agriculture, Barnaby Joyce has announced the first tranche of funding for the R&D for Profit Scheme. The Minister has approved funding of up to \$26.7 million for twelve research schemes. One of the successful projects submitted through Horticulture Innovation Australia (Hort Innovation) and supported by Avocados Australia, Australian Macadamia Society and Australian Mango Industry Association, was awarded \$3.4 million that will be matched with funding and in-kind contributions from industry and collaborating research bodies.

The ~\$7 million worth of funding will be led by the University of New England Precision Agricultural Research Group (PARG) includes numerous leading tree-crop producers, University of Sydney, University of Queensland, Central Queensland University, DSITI, QDAF and AgTrix. The project will integrate the latest imaging and robotics technologies to provide mango, avocado and macadamia farmers with decision-support tools to help improve production and profit. The data collected through this project, and the tools it develops, will help farmers to predict fruit quality and yield, and to monitor tree health including early detection of pests and disease outbreaks.

The project will also commit resources to investigate the Panama disease outbreak in banana. Coinciding with the tree health and quality mapping will be a national audit of commercial avocado, mango and macadamia orchards. This data will provide essential information to industry to assist with annual production estimates and to identify regional changes in grower demographics. The audit information will also provide Biosecurity Australia with an up-to-date resource to draw upon in response to future biosecurity outbreaks.



## Facility checks

By Noel Ainsworth, Queensland Department of Agriculture and Fisheries and Nathan Symonds, Avocados Australia

The facility checks that have been offered to packhouses and wholesalers have continued through project AV12012. This project also encapsulates the valuable industry extension program, Qualicado.

Through the facility checks a number of recommendations have been made to packhouses and wholesalers. For wider industry understanding these have been listed below.

In reference to the packhouse facility checks, areas for improvement have focused upon:

- Machine improvements/design to remove impacts equivalent to greater than 100mm drop
- Improved use of sanitiser in dump dips or during cleaning over brushes
- Dry matter testing of fruit for first six weeks of harvest and at fruit receipt at the packhouse
- pH adjustment of post-harvest fungicide application
- Pre-cooling fruit prior to dispatch
- Improved communication in the supply chain.

The improvements in sheds have focused on areas that are likely to reduce bruising and rot development that emerge later in the supply chain. Areas of significant recent improvement have been through a variety of innovative mechanisms at the bin tippers stage in the pack shed. Many grower packers continue to monitor the effectiveness of their operations through library tray records.

The wholesalers and ripeners are generally doing a good job maintaining optimal cool chain and ripening conditions for fruit. Facility checks have highlighted two weaknesses in the supply chain:

- There is little trust and communication through the chain with inefficient and duplicative quality checks done through the supply chain, some within hours of each other as the fruit changes custody as it is moved through the chain
- Due to the complexity, uncertainty and short response times of order sizes for retailers, there are a number of orders supplied with mixed source and fruit from different ripened batches. This is likely to provide retailers with fruit that will ripen at different rates producing variability in the fruit ripeness in store, even within the same order.

The overall results of the facility checks have been invaluable in the design of the Qualicado workshops helping to identify areas of knowledge that stakeholders may be requiring. Further facility checks are being planned before the end of the year when project AV12012 will come to a close.

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# Marketing Update

## Television and social media takes off!

By the 'Love Avocado' marketing team

The Australian Avocados marketing team has had a very busy year, implementing a number of exciting activities and campaigns as part of the avocados marketing program.

This marketing update provides a snapshot of the current marketing campaigns including television and online advertising, social media and the latest news around the food service and health programs.

### Television

The Australian Avocados television campaign kicked off on 20 September and ran through to 17 October 2015. The campaign aimed to reach a target audience of female grocery buyers aged 25-49. Ikon - Australian Avocados media buying agency - negotiated advertising with Channel Nine and Channel Ten in metro markets and across Prime and WIN in regional markets, to ensure avocado enthusiasts and avocado lovers were captured.

The high-reach programming included the first season of The Bachelorette Australia, the new season of The Block, Celebrity Apprentice, House Husbands, The Biggest Loser Families and The X-Factor. For the food lover, advertising occurred across SBS food programming including Nigella Feasts. Other popular programs included Modern Family, Nine News and The Project.

On launch night, Australian Avocados advertising appeared during the programs below.

To reach even more of the target audience, advertising will also appear on subscription television channels such as Lifestyle, A&E, Fox8, Arena, Showcase and Lifestyle Food. Australian Avocados are also buying online ad space known as pre-rolls - this is when the advertisement comes up before a television show or a YouTube video. These ads aim to reach a potential 750,000 online users throughout the campaign.

It is anticipated that the target audience will see the avocado television commercials between three and four times across the campaign period. Additionally, there will also be a two week television campaign for New Zealand Avocados running from 25 October to 7 November 2015 in Sydney, Melbourne and Brisbane

across Channel Nine and Channel Ten.

Market research to capture consumer sentiment around the television campaign is currently underway, so watch out for more information in the next edition of Talking Avocados.

### Social media

The past 12 months have seen the Australian Avocados social media campaign go from strength to strength. Total engagements increased from 185,518 to 613,800 people - a staggering 365% increase from last year and the Facebook page became Australia's number one destination for avocado lovers.

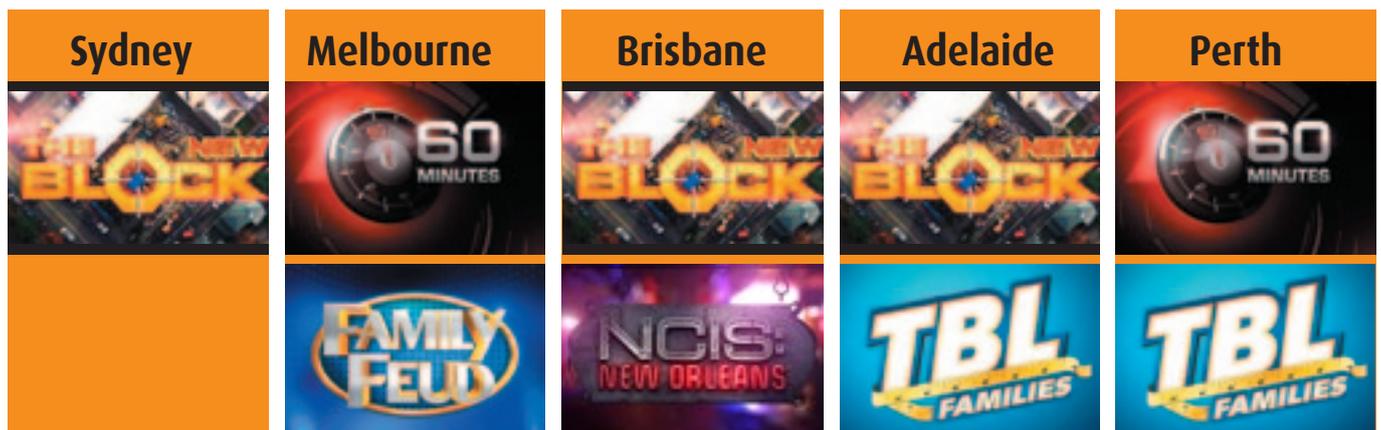
A great year culminated in the launch of the 'Avocado Mash Up' video series. The simple idea - take Australia's favourite recipes and add avocado to create a uniquely delicious dish, presented in a short and sharp 'mash up' style video clip - and in 30 seconds we'll serve up your new favourite meal! The series of quick-fire recipes took two popular meals with the core ingredient being an avocado and gave them the 'mash up' treatment. Pizza + avocado = avocado pizza pie, which received comments such as, "I want this for breakfast!" and "Can we do this please" and "Mmm, yes that could work!"

Rolled out over 12 weeks, the 'Avocado Mash Up' series has been Australian Avocados' most successful video content to date. The campaign reached a total of 1,487,388 Australian main grocery buyers (our primary target audience). The total number of views achieved was 539,294. Across all 12 mash up videos, there were 19,325 social comments, likes and shares with 90% positive feedback. Users were proactively vocal about how delicious they found the content within the videos, with feedback from one Facebook fan saying, "These videos are beautifully shot and created!"

To complement the love from the avocado social community, the 'Avocado Mash Up' series has been shortlisted for the 'Best Use of a Small Budget' Award at the BEfest Branded Content Awards. An amazing achievement for the marketing team.

### But it doesn't stop there!

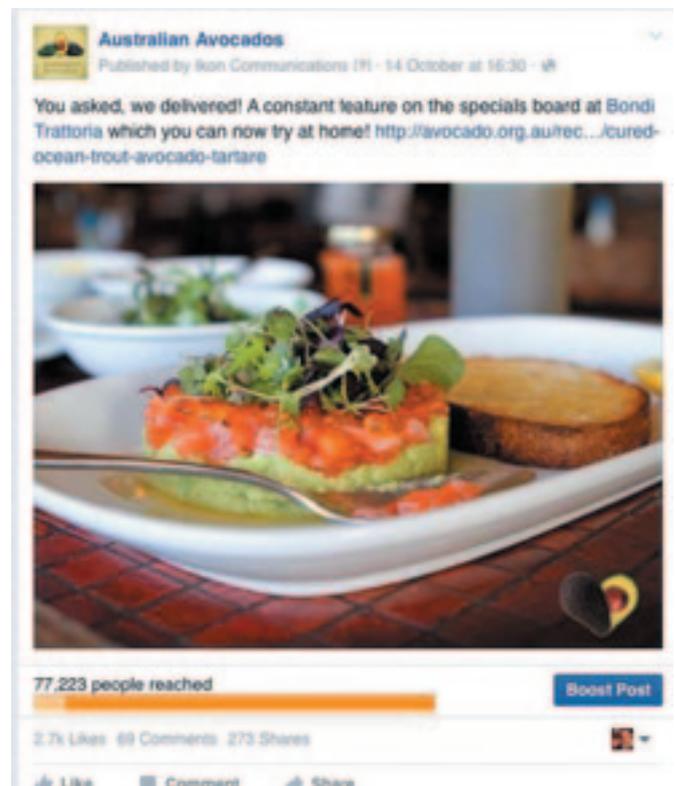
The launch of the groundbreaking 'Chefs Love Avocado' video series saw Australian Avocados team up with chefs from three of Sydney's most iconic cafes in order get the lowdown on their



avocado menu must-haves: Kristan Gamble – Ripples, Milson Point; Andy Davies – Bondi Trattoria; and Adam Starr – Bar Muda. The chefs couldn't wait to tell us why avocados put the **special** on their Specials Board. The campaign launched on 12 October 2015 and has been extremely well received, reaching a whopping 780,524 avocado consumers in the first week. This series is proving to be incredibly popular and successful and we look forward to sharing these results with you over the duration of the campaign.

In conjunction with the launch of the 'Chefs Love Avocados' series, the revamped Australian Avocados Instagram channel

was launched. Each month, we will be on the lookout for the best avocado content provided by our followers. Each month, a new theme will be set and users can share their image related to that particular theme (through tagging or a private message). During October, we challenged our Instagram followers to show us their best café avocado dishes (there's a trend emerging here) using **#loveavocados**. To date, we have received an impressive number of entries into the competition and acquired more than 1,000 new followers (and growing daily). The general buzz on Instagram is that Australian Avocados is definitely one to watch!



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Marketing Update continued

What's next?

The social media activities will continue to engage and build our Facebook and Instagram sites. Our first Instagram winner will be announced next month, with another five competitions to follow. Television will start again early next year, while planning and market research will commence soon to prepare for the next three-year marketing strategy. More information will be provided in the upcoming editions of Talking Avocados.

Educating health professionals about the health benefits of avocado

By Lisa Yates, Advanced Accredited Practicing Dietitian



In the 2014-15 Australian avocado industry's strategic plan, 'health and nutrition' was identified as a platform to increase avocado consumption. The industry's Australian Avocado Nutrition program educates key audiences about the health and nutrition reasons why Australians should 'Love Avocado'. The Avocado Nutrition program is lead by Lisa Yates Consultant Dietitian and Joseph Ebbage Marketing Consultant.

Key messages and target audiences

Previously the Avocado Nutrition team were tasked with identifying a 'nutrition space' that avocados could 'own' - similar to red meat owning iron or bananas owning potassium.

**Folate – an important B group vitamin needed during pregnancy and healthy fats** was chosen as the nutrition message.

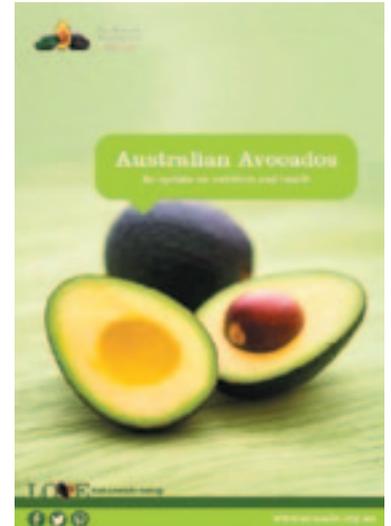
Given the Avocado Nutrition program is funded through Horticulture Innovation Australia's R&D program, our main role is to educate health professionals of the key benefits of avocado in an effort to improve their knowledge and attitude to avocado and help them become 'avo-cates'.

Health professional target audiences for 2014-15 included: dietitians, fitness professionals (personal trainers and exercise physiologists) and diabetes educators. These groups were chosen because of the important role they play in helping clients prevent and treat heart disease, diabetes and obesity. Each of these medical conditions is a risk factor for the others and avocado,

as part of a healthy diet, also has a role to play. In addition, these health professionals can influence pregnant women and help spread our folate key message.

During 2014-15, the Australian Avocado Nutrition programs principle channels of engagement with our target health professional audiences were via:

- Development of resources
- Major partner of the Dietitians Association of Australia (DAA) with nearly 6000 members
- Dietitians bloggers project – reaching 200 dietitian bloggers with resources
- Three major health conferences
- Health Professional section of avocado website
- Electronic Direct Mail (eDM) – Daily Spread Nutrition - to the 676 health professionals on our database
- Health Twitter account - @avonutrition with over 600 health professionals following us.



Program Highlights

Resource development

During the 2014-15 program, a comprehensive review of the nutrition science was undertaken and published – *The Avocado Nutrition and Health Report*. This report summarises the research findings that are relevant to the 'hero' attributes of avocados and to the major health issues identified by the Australian Avocado Nutrition program. DAA also provided an endorsement of this report as part of our partnership program.

This report was distributed to approximately 200 health





Along with The Avocado Report, four nutrition *infographics* were developed to help bring the nutrition messages to life in a shareable social media format. Sharing The Avocado Report and Infographics with health professionals and extending this public relation activity to consumer media (through a separately funded consumer PR program) generated 101 traditional and social media clips with a potential reach of 5.6 million opportunities to see or impressions.

In 2013-14 we developed a simplified report to help explain the benefits

professionals through the dietitians blogging social media project, at health professional conferences as outlined below and was included in the first health professional electronic direct mail. The report is housed in the health professional section of the Avocado website as well as the DAA website.

The development of The Avocado Report involved a lengthy discussion by all on the serving size of avocado and it was agreed it should be 50g which is a 1/4 of a larger or a 1/3 of a smaller avocado.

of *folate* which was incorporated into our *Nutrition and Health Claims Substantiation Report*. In 2014-15 we developed a similar report for *healthy fats* which has been included in an update to the substantiation report.

Follow @avonutrition on Twitter. Health professionals use twitter as a continuing professional development tool by sharing snippets and links to research. We had just over 600 followers by the end of June 2015. We are following over 1000 health professionals – dietitians, diabetes educators, doctors and fitness



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Marketing Update continued

professionals as well as many health organisations such as Heart Foundation and Diabetes Australia. Some tweets have used the #avonutrition hashtag and a Radian 6 analysis shows this hashtag featured in 108 tweets generating a potential reach of 63,674 impressions. However many more tweets did not use the hashtag and hence reach is difficult to track.



The Australian Avocado Nutrition program exhibited at three major **conferences** during 2014-15:

1. The Australian Diabetes Educators Association (ADEA) annual conference in Melbourne: August 25-29, 2014 with about 1500 delegates
2. The Flex and Fitness Expo in Melbourne: April 10-12, 2015 with more than 1000 fitness professionals attending
3. The Dietitians Association of Australia's annual conference in Perth: May 13-16, 2015 with 640 delegates.

All up the Avocado Nutrition exhibit included the new banner system and distributed 500+ copies of The Avocado Nutrition Report and 100 copies of each of the infographics print outs. Visitors sampled freshly made guacamole on crackers and a 'Win a tray' competition generated 401 entries and email addresses for our eDM database.

The Avocado Nutrition program also undertakes submissions to food regulators and public health policy makers on areas such as health star ratings and food regulations. Avocado like all other fruit, vegetables and nuts score 4 to 5 stars out of five. A general horticulture submission by Lisa Yates ensured most fresh produce scored an extra ½-1 star with – avocado now scoring 4.5 stars. This star rating device would be of value to marketers producing multi-packs with plastic wrapping. Our substantiation of health claims report also provides nutrient content claims that industry members can use to ensure consistent messaging on websites, packs etc.

The 2015-16 Avocado Nutrition program is underway and will build on the gains made in 2014-15.

**Avocado Chef Masterclasses – Light years beyond guacamole**

*By Stewart White, Whiteworks Public Relations*

Since its inception five years ago, the Fresh Australian Avocado Masterclass program successfully established itself as a keenly anticipated event on professional Chef's calendars. In that time, the program reached more than 3000 cooking professionals with face to face presentations. Some 350 chefs attended the 2014/15 series held in Brisbane, Sydney and Melbourne.

Each new program successfully achieved light bulb moments, showing avocados to be a sophisticated ingredient, light years beyond wraps and guacamole. Attending chefs were challenged to open their minds to the endless possibilities of Australian avocados.

Accolades from the chefs who were present were unanimous in their praise for each event and the take out messages and inspiration they generated.

The last of the recent series of Australian avocado masterclass lunches was held at Sydney's Bishop Sessa restaurant with a menu developed by head chef and co-owner Paul Cooper.

"This was amongst the best exposé into any product imaginable...seriously wonderfully creative dishes based on a really fine palate and brilliant technical skills," said legendary chef, Damien Pignolet who attended the event.

Cooper pushed the outside of the avocado envelope with a five course menu that ranged from entrée to dessert. It included smoked avocado crème caramel, mussel, beetroot nori, Kingfish tartare, avocado and oyster ice cream, fennel jelly, radish followed by fresh avocado cheese, onion, turnip, goose prosciutto then potato wrapped red wine braised organic wagyu, avocado choucroute and finished with avocado and white chocolate bavarois, passionfruit ice cream and kiwi fruit.

In other states, this avocado masterclass series saw the team at iconic Melbourne restaurant Donovans bend their minds to showcase avocados across a five course lunch. Starting with a whimsical take on the unstoppable popularity of avocados as a breakfast ingredient: brioche toast with avocado mousse, quail egg and toasted quinoa as a canapé, followed by avocado as a tempura, as a panzanella hero, pickled and for dessert as a brûlée.

Brisbane Times Good Food Guide Citi Chef of the Year, Josh Lopez put fresh Australian avocados through their paces at award winning GOMA Restaurant. Playing on the colour and sensory nuances of avocados and marrying it sympathetically with local ingredients, Josh produced a thought-provoking six course menu that was a seamless showcase for avocados.

The team at the Intercontinental Hotel Sydney, Double Bay hosted a session that showed how avocados can easily fit across the many food offering opportunities in a five star hotel. From fine dining to banquets and functions, from buffet to room



service, the possibilities with avocados proved endless under executive chef Julien Pouteau and executive sous chef Santiago Fernandez and their team.

In addition to the hosted lunches, a series of hands-on tutorial sessions were held with leading catering groups, clubs and teaching institutes and their students.

Exit surveys conducted across all the segments indicated that new recipe ideas, the calibre of the presenters along with handling and storage tips and myth busting were the three top responses.

The program continued to change attitudes and kindle creative interest in avocados among chefs. On average, 92% of masterclass attendees indicated they were more likely to feature a new avocado dish on the menu and 84% indicated that they were more likely to use avocados more frequently on the menu.

Attendees were asked to provide feedback on the masterclass (anonymously) and praised the skill and creativity of the host chefs, the variety of the dishes, flavours and combinations presented.



"The event was fantastic and well presented. Avocados are already on the menu; I always use them in entrées and will now move into seeing how I can use them in mains as well. The literature was very informative."

"I was very impressed by the evening and the dishes presented were excellent. I have used the information package extensively with the apprentices and have put the growth and ripening chart on the wall of the kitchen."

The masterclasses demonstrated that by thinking outside the 'guacamole/wrap/salad' square, avocados can easily and creatively be incorporated across the whole menu. They have infinite culinary possibilities from casual to fine dining and everything in between. Australian avocados are available all year (but are in peak season and most plentiful during the colder months).

These masterclasses showed chefs how versatile fresh Australian avocados are but also stressed the no-brainer notion of 'playing to the house' - which means giving dining patrons what they want and love...avocados!

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# News from Around the World

*News from Around the World contains reproduced articles that have been published by various international news sources.*

## US: USDA funds help Florida researcher study avocado disease

A University of Florida researcher has received federal funding to study how to stop the laurel wilt disease that is harming Florida avocado trees and could affect California production.

The researcher plans to update Florida and California avocado growers on the disease's status, consult them on project objectives and inform them on advances in its management, according to a news release.

Randy Ploetz, a plant pathology professor at the University of Florida Institute of Food and Agricultural Sciences Tropical Research and Education Center in Homestead, plans to use the \$3.4 million grant to study how to stem the effect of laurel wilt on avocados.

Ploetz seeks to develop cost-effective measures to manage and

control the disease, according to the release.

"Laurel wilt is a complex and difficult problem, as it involves unknown beetle vectors, a virulent and unusual pathogen, *Raffaelea lauricola*, and a highly susceptible host (the avocado tree)," Ploetz said in the release. "The disease is poised to destroy Florida's avocado industry, and threatens significant avocado production in California and areas outside the United States."

The funding was part of \$11 million in grants distributed by the US Department of Agriculture's National Institute of Food and Agriculture.

Source: [www.thepacker.com](http://www.thepacker.com)

## Peru: Avocados from Peru concludes 2015 campaign season

The Peruvian Avocado Commission (PAC) has closed its 2015 season with more than 100 million pounds of fruit imported into the United States over a three-month period. Since it began importing to the US, Peru has become an increasingly important supplier of avocados during the summer peak season.



**costa farms**

Costa Farms is the central market presence of the Costa Group where we market our own Avocados from our farm in Renmark (SA) alongside that of our closely aligned 3rd party grower base. We follow the principle of providing our aligned Avocado growers with quality service and strong financial returns because we understand the challenges of growing from the grower's standpoint due to our direct investment in the industry, from growing to ripening to marketing within our national footprint. Costa Farms maintains a solid commitment to the grower base and we continually strive to provide our growers with the latest industry information. We support our growers from the standpoint of being a grower ourselves and work diligently to develop long-term, trusting and sustainable relationships that are mutually beneficial. Costa Farms strives to be known by our customer base for consistently the highest quality products in the marketplace.

- 
**Melbourne Wholesale Market**  
 West Melbourne VIC  
 Contact: Simon Owen - 0401 711 606
- 
**Brisbane Wholesale Market**  
 Rocklea QLD  
 Contact: Ryan O'Keefe - 0427 604 211
- 
**Adelaide Wholesale Market**  
 Pooraka SA  
 Contact: Andrew Christophides - 0400 177 594

Much of the success of the 2015 season can be attributed to the innovative promotional campaign that combined a number of first-in-category events and programs.

One strategic element of the 2015 multi-faceted and multi-media marketing campaign was the support of a social media campaign that was designed to drive engagement and focus on quality content across multiple channels. The brand's social media strategy made a strong impression with consumers and had a measurable impact on brand awareness with millions of impressions.

Throughout the season, PAC partnered with thoughtfully selected Flavor Ambassadors who embody the brand and messaging to drive strategic PR initiatives with significant impact. Flavor Ambassadors for the 2015 program included Chef Martin Morales, chef-proprietor of London's Andina and Ceviche restaurants; and Washington DC's Peruvian Brothers, who operate a renowned food truck.

The primary goals of PAC's 2015 marketing program were to reinforce consumer awareness of the flavor and nutrition found in Avocados from Peru and to support retailers during the peak summer season.

To bookend the successful 2015 season, the Peruvian Avocado Commission will host more than 1,000 international attendees at the 8th Annual WAC in Lima September 13-18. One of the



## Grower Member Application Form

### Avocados Australia Limited

ACN 105 853 807

The Australian avocado industry is a growing, successful and progressive industry. As the Australian avocado industry's peak industry body we work closely with all of the stakeholders that can have a direct impact on the marketplace. If you are looking to gain the maximum benefit from being a part of the Australian avocado industry we recommend that you become a member of Avocados Australia.

Avocados Australia provides online and offline information, programs, materials and events to advance the industry. On top of this there are other services we can provide that are only made possible through the support of our members. Join today. All membership enquiries can be directed to [admin@avocado.org.au](mailto:admin@avocado.org.au) or call toll free 1300 303 971.

For Associate and Affiliate membership application forms please go to: [www.avocado.org.au](http://www.avocado.org.au) or call **07 3846 6566**

### Member Details

Business name and/or trading name: \_\_\_\_\_

ABN: \_\_\_\_\_

Key contacts: \_\_\_\_\_

Preferred address (postal): \_\_\_\_\_

Address of property (if different): \_\_\_\_\_

### Contact Details

Business phone: \_\_\_\_\_

Home phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Mobile: \_\_\_\_\_

Email: \_\_\_\_\_

**Grower Member Application Form continued**

**Corporate Structure**

How would you describe the nature of your operations (please tick)?

- Individual     Partnership     Company  
 Trust     Lessee     Cooperative  
 Other (please specify) \_\_\_\_\_

Please indicate the area of property that you crop for avocados (please tick)

- 0.5 - 5 ha     6-19 ha     20-49 ha  
 50-99 ha     100-149 ha     150-199 ha  
 200-499 ha     500 ha+

**Payment Options**

Grower Membership of Avocados Australia is **\$143 pa** (including GST).

You can pay your membership by cheque or credit card. To pay your membership fee, please choose one of the following options:

- Cheque**  
 Please find enclosed a cheque for **\$143.00** made payable to Avocados Australia Ltd.  
 **Credit Card**  
 Please charge \$143.00 to my credit card.  
 Details are listed below.

Credit card type (please circle):    Mastercard    Visa

Credit card number: \_\_\_\_\_

Name on credit card: \_\_\_\_\_

Expiry date: \_\_\_\_\_

Signature: \_\_\_\_\_

Once you have completed this form please place it in an envelope addressed to:

**Avocados Australia**  
**Reply Paid 8005**  
**Woolloongabba Qld 4102**

(no stamp required within Australia)

Or email [admin@avocado.org.au](mailto:admin@avocado.org.au)

For more information or assistance please go to [www.avocado.org.au](http://www.avocado.org.au) or call on **07 3846 6566**

*News from Around the World continued*

highlights of the congress is a Scientific Program focusing on health and human nutrition and updated information regarding agricultural management, production and commercialization. The Congress will also include research presentations of scientific, marketing and commercial subjects from all parts of the world that influence the future of the industry.

Source: [www.freshplaza.com](http://www.freshplaza.com)

**China: China lifts quarantine on key Chilean avocado regions**

China has lifted its quarantine measures that had been in place on three entire Chilean regions due to fruit fly detections, and authorities say Hass avocado exporters will benefit the most.

China's General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) had applied the measures to the IV (Coquimbo), V (Valparaiso) and RM (Metropolitana) regions, but now quarantine zone will be limited to within a 27.2km radius of each fruit fly detection, as previously agreed by both countries in 2009.

With the development, cold treatment will no longer be required for fruits including grapes, blueberries, apples, kiwifruit, and plums being shipped to the Asian giant.

Hass avocado exports can also resume, as they had been on hold to due to the effect the previous measures would have had on the variety. The three regions collectively produce the vast majority of Chile's avocado export volumes.

"A couple of days ago China officially informed us it had adopted a procedure to safeguard its phytosanitary health, which is gradually being adapted to international standards," Chile's Agriculture Minister Carlos Furche said.

"The consequence of this is that we effectively have, as of now, an open Chinese market for all our products. It was already open for many, but now this favors in particular avocados, which were our biggest concern.

"Some key destinations for our avocado exports are currently the European Union and the United States, but I believe that it is excellent news for our producers and exporters that the Chinese market has opened in favorable conditions."

Chilean Fruit Exporters Association (ASOEX) president Ronald Bown said there would be great opportunities for shippers in China now that the 'complex restrictions' had been lifted.

"This week has certainly been beneficial for our industry. I also want to highlight the important visit made by US authorities to the country, who told us the process for easing restrictions for our lemon exports is advancing rapidly," Bown said, adding that lemon exports currently required treatment.

"All this will improve the quality on arrival of our fruits, and therefore also our competitiveness."

According to ASOEX, during the 2014-15 season Chile exported a total of 67,626 metric tons (MT) of avocados, with more than

45,000MT going to Europe, around 10,000MT to Latin America, followed by the US and the Far East.

Exportadora Santa Cruz general manager Javier Fuchslocher said while avocados were not a basic consumption item in China, there was a lot of potential. He said currently in China between 20-30 containers were consumed on a weekly basis, but this 'could soon multiply ten-fold'.

Source: [www.freshfruitportal.com](http://www.freshfruitportal.com)

## India: IG International brings New Zealand avocados to India

IG International Pvt. Ltd. (IGLPL), one of India's leading fresh fruit importers and exporters, has recently started importing Hass avocados to Mumbai by air for their distribution in all major cities from mid-September until February. These avocados are shipped by Delica Ltd. (currently undergoing rebranding to the T&G brand), a renowned producer and exporter based in New Zealand.

Delica's avocados are a premium, Class 1 product of Delica Global. The fruit is small/medium in size (calibers 20-22) and flat/oval shaped, with a rich green colour. It has a very intense

flavour, as well as good resistance to shipping and storage. The fruit is imported in 5.5 kilo tray packs and a total of 1,000 boxes will arrive every week.

According to Mr Sanjay Arora, of IG International, the main reason for the import of these avocados, besides their unquestionable health benefits, is the fact that there was a gap, as there was no-one importing, and we believe we can develop a market for it. It is about profitability, about branding and giving new things to the end consumer.

He assures that interest in the product is growing as consumers are becoming more health conscious, stating that the company's alliances with supermarket chains across India have helped in this direction. "They initially picked up small volumes, but they were able to market them and educate their customers with small banners and posters."

While the fruit is considered an exotic product and prices are rather high, ranging between 700 and 900 INR per kilo (between 9.42 and 12.11 Euro), Mr Arora affirms that "Indian customers are now ready to spend money, with a segment of the population which has a high disposable income. Avocados are considered healthy and they will thus be sold."

Source: [www.freshplaza.com](http://www.freshplaza.com)

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