

TALKING AVOCADOS

**Advancing Avocados Researcher's
Fellowship success**

**Avocado Nutrition program distributes
new research**

Avocados to feature at Blackbutt Festival

AUTUMN 2016

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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.



**Horticulture
 Innovation
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Cover: "The Money Tree" or "The Kidd Tree" as it is known, is one of the oldest commercial avocado trees at the Williams' historic Merrinee Farm at Mt Tamborine

Chairman's Perspective

The last five years have been good times for our industry and in such times of good returns and strong growth in consumption it is easy to not take much notice in the "running gear" of the industry.

We are all farmers here and we tend to take notice of our machinery when it eventually fails. Preventative maintenance is usually on a lower priority than it should be.

However, and there always is an "however", there are things on the horizon that can have significant impacts of our current good times and future prosperity.

Currently, Hort Innovation is in the process of establishing the Avocado Strategic Investment Advisory Panel and I hope any growers who are interested in contributing to the future of our industry have registered their interest.

Under the Hort Innovation model, the call is out for anyone to register, where previously under HAL the advisory committee was predominately made from the board members of Avocados Australia.

Recently, all growers have been advised about a Plant Health Australia levy proposal that will assist with monitoring and excluding a group of fruit flies in the Torres Strait. Yes, I know that the Torres Strait is somewhere far away from you, but I will remind all growers that one of the flies under surveillance is Papaya Fruit Fly (PFF). Remember PFF, it turned horticulture in Queensland upside down a few years ago and it could do so again if it and its mates are allowed entry to the mainland.

Our industry is a member of Plant Health Australia and a signatory to the Emergency Plant Pest Response Deed and in accordance with our obligations we are involved in the discussion about this particular biosecurity issue. We support the activities of all the government agencies charged with monitoring and eradicating these fruit flies. They can be a

serious impediment to our production in many regions, and our interstate and international trade. From my own experience, I know the damage and ramifications that PFF caused to our avocado trading in Australia.

There are other nasties looming on the international horizon that could devastate your orchard and in particular I refer to Laurel Wilt. This is a fungus carried in the mouth parts of a tiny Ambrosia beetle that bores into avocado branches and deposits the fungus in the wood as a consequence. The avocado tree reacts to the fungus and quickly starts to die. Australia currently has native Ambrosia beetles that carry other fungi, but luckily so far we do not have Laurel Wilt.

Last September I visited Florida, USA, and saw the devastation the Laurel Wilt caused to that avocado industry and the native laurel tree species. That incursion came to the USA from Asia in packing timber with imported goods.

Disaster is in reality just a hair's breadth away, so we do need to be in the Plant Health Australia tent to monitor, plan and react to such insurgences. The banana industry is currently going through their agony of dealing with Panama Race4 in Northern Territory and North Queensland.

Our industry is doing the due diligence to identify the biological threats to our avocados so we can develop the plans to monitor and act where needed. I see it as a sort of preventative maintenance at grower level.

Jim Kochi

Jim Kochi, Chairman, Avocados Australia Limited



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CEO's Report

Season update

Avocado supplies have been up and down over the past few months. Following the shortage of fruit post Christmas, volumes increased during January, peaking at about 270,000 trays by the last week of January. This declined during February as the last of the Hass from WA and NZ were harvested. The first Shepard fruit were seen in the market in early February, but crops have been slow to mature, with total avocado volumes sitting around 160,00 to 200,000 trays per week during March April with most fruit being Shepard from NQ and CQ regions.

Industry Communications

Our new avocado industry communications project is now well underway with a number of new initiatives planned for this year.

A social media strategy for industry communications will be rolled out in the coming months and we will be interested in your feedback on the usefulness of this approach to support our traditional communication platforms.

We will also be developing a Crisis Management Plan for the industry to ensure we have good systems and process in place to manage industry crises. Appropriate procedures are already in place to manage biosecurity issues, but this plan will ensure other potential crises that may impact on the industry's performance and reputation are also well managed. Potential crises include major weather events, food safety incidents, environmental incidents, market collapses, adverse media commentary etc.

Separate from the Hort Innovation communications project, we have recently introduced a new communication tool for Avocados Australia members called *Avo Insider*. The first edition was released in March and has been very well received. This publication aims to provide members of Avocados Australia with details about the work we are doing for our members that extends well beyond project work we do through levy funded projects.

New Avocado Advisory Panels

Hort Innovation is in the process of establishing Strategic Investment Advisory Panels for industry sectors and has sought expressions of interest for the Avocado Strategic Investment Advisory Panel.

The proposed panel will comprise industry supply chain stakeholders, a majority of whom will be levy paying growers. Geographic and sectoral diversity will be considered in forming the panel.



Although not yet developed by Hort Innovation, the 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 Avocado Strategic Investment Plan.

Panel membership will be structured with "terms of service" for members to allow for a balance of continuity and member refreshment and Hort Innovation will appoint an independent chair.

In addition to the Strategic Investment Advisory Panel, in some industries it will also be appropriate for complementary advisory processes to be established. The precise nature of these will reflect the needs of the avocado investment program. This may include tenders, program reviews and specific technical advice. Any queries regarding this process, please contact Ms Astrid Hughes at Hort Innovation at astrid.hughes@horticulture.com.au

New marketing plan

Work is progressing with the development of the Avocado Marketing Plan for 2016-17. A planning group met on 21 April with Hort Innovation Staff to review and provide feedback on the plans. It was agreed that the focus should be on 2016-17 and that further consumer research is required before longer term planning can be completed.

PHA Levy

Most readers would be aware by now that Avocados Australia is in the process of seeking changes to the Avocado Levy, to ensure the industry can meet its biosecurity commitments on an ongoing basis. All avocado growers were sent a short survey seeking feedback regarding the proposed changes. If supported, it is expected that the changes will be implemented through the Australian Government in early 2017.

New Export Project

Recently Avocados Australia was awarded a project funded through the Australian Government's grant program called Package Assisting Small Exporters. While the long term industry export strategy is focussed on opening new markets that require quarantine protocols (i.e. China, Japan and reopening Thailand) In the short term, this project is focussed on expanding the markets that we already have access to, particularly Singapore and Malaysia. A summary of this project is included on P 44.

Qualicado 2016 grower workshops underway

As part of a new one-year project funded from avocado levies through Hort innovation, eight grower Qualicado workshops will be held in 2016, one in each of the main production regions. The schedule for these is on the website at industry.avocado.org.au in the "Events" section and included on p31. The program of Qualicado workshops also includes a workshop in each of the capital city markets with wholesalers and ripeners.

The first grower workshop was held in the Sunshine Coast region on 28 April and the second was held in the Tamborine/Northern Rivers region on 5 May.

AAL Resources

As advised in the last edition of Talking Avocados, Nathan Symonds, our previous Supply Chain Program Manager, has left Avocados Australia to take on a new role. As the contracting of new supply chain development projects has been significantly delayed through Hort Innovation, we have contracted Jenny Margetts from P2P Business Solutions on a part time basis to

ensure the continuity of key supply chain programs such as Infocado and Qualicado. We are very pleased to have Jenny on board during this period, given her extensive knowledge and experience.

Orchard Info reminder

In the last edition of Talking Avocados, I prepared an article about the future supply and demand dynamics and what this might mean for the industry. This information is very valuable for industry planning, but it is dependent on businesses contributing information about existing orchards and new plantings.

Each year we aim to collect planting data from each and every grower in Australia so that we can have the most up to date information about our current and future supply base.

We encourage all growers to contribute to this important program. Although we have very good records of current growers, there may be growers that we are not aware of that are growing avocados. If you are aware of anyone new, please ask them to contact our office or drop us a line and we can follow up.

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Around Australia

South Queensland Report

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



As summer is now over, hopefully we will have seen the last of the storms.

Even as recently as late March there were still bad storms in the Crows Nest area with damaging hail.

I have not heard of any major damage to Avocado orchards, but a few small crop growers were wiped out.

The crop for Southern Queensland looks like being quite good with fruit sizes looking good and fruit clean.

The market price seems to be holding at solid levels and consumption must be still strong to support the volumes going to market.

The Shepard harvest seems to be well under way from our Northern Growers and I guess will be in the market well into May.

The way in which our levy money is or isn't being spent is still of great concern to me and I will continue to challenge the new system to make sure that we all get reasonable outcomes for our levy.

The next SQ Qualicado field day is set for Thursday 9 June and I hope you can all make it along to this event. These days have proven very popular and successful and it is the support of you all that makes that happen.

Not much more to say other than I hope you all have a great season.

Please don't hesitate to get in contact if you have any questions regarding anything Avocado and I will try and assist as best I can.

Central Queensland Report

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



The 2016 Shepard avocado season kicked off with good prices at the beginning of March in the lead up to Easter.

The market is under some pressure now after Easter, with good volumes coming out of North Queensland, Bundaberg and Childers.

This good Shepard crop will be followed up by a larger Hass crop than we experienced in 2015. This is largely due to the renewed health of the Bundaberg-Childers area's trees following the 2013 heavy rainfall event which set them back considerably, and the new trees that are now coming on line being harvested.



The main issue some packhouses in the area are encountering at the moment is management of sorting and grading of hail damaged fruit from the summer storms. However the industry here is very lucky to have a strong value-add side to it with our local processing sector, which will enable growers to still get a return for badly damaged fruit.

Our water supply remains plentiful for the upcoming grower season and weather conditions are currently conducive to good tree health.

Obviously the growers here are still concerned about the proposed backpacker tax and the impact it will have on labour availability – we hope the fact that it is being reviewed may mean a more level-headed approach might be reached to ensure continuity of labour for our industry.

The Qualicado Grower Workshops have started up for the year and I would encourage all the growers in our region to attend – Central Queensland's event will be held on Thursday 11 August and more detail about it will be distributed closer to time.

Anyone who can't make our own region's event is also welcome to attend any of the other Qualicados around the country – check out the "Events" page at www.industry.avocado.org.au.

The last few months have also brought welcome news of the appointment of Senator Anne Ruston as Assistant Agriculture Minister and her plans to shake-up Hort Innovation to ensure we get more of a say in the way our industry R&D and Marketing is funded. It is important all avocado growers become members of Hort Innovation to ensure our voices are heard. We encourage growers to apply for membership of HIA, you can do this online at www.horticulture.com.au/apply-for-membership/.

Tri State Report

By Kym Thiel, Avocados Australia Director for the Tri State Growing Area



Production in the Tristate looks set to significantly increase in the following 12 months. After a difficult but yet manageable summer the trees have responded well and generally look in excellent condition and most importantly are carrying an above average crop of what looks to be very good sized fruit at this early stage.

Blemish levels have also returned to what can be described normal (higher than last season) after a season where wind blemish was very low.

The summer turned ridiculously hot in late February to early March, but for most growers fruit drop was kept to a minimum through efficient irrigation management.

Most orchards were carrying crops that needed a large fruit drop anyhow and now that we are at the end of natural fruit drop, it appears as though we have come through with very healthy crops.

The late season heat and extra watering I believe has significantly helped push fruit size along. With the national

crop being no heavier than last season, there is no reason why we shouldn't enjoy another very good year providing natural disasters, such as frost, don't impact over the winter months.

Water allocations will once again be a topic for discussion and at the forefront of growers' minds after an extremely dry spell both locally and more importantly in the catchment areas. South Australia definitely appears to be heading for a starting allocation of well below 100%.

Like a lot of growing regions, avocado production is set to rapidly increase in the Tristate over the next 1-5 years. This will not be a problem as long as growers continue to focus on quality and be strong in their marketing, as well as being realistic about future returns after the record highs that some enjoyed at the end of 15/16.

Although the high prices were appreciated by those that managed to still have fruit at the right time, it also demonstrated what ridiculous pricing does to consumer behaviour e.g. they simply stop buying!

Accurate information is the key and the crash that followed the high spike could have been avoided with more accurate crop forecasting and better communication.

After our last successful workshop in April, don't forget the next qualicardo date is set for 28 July at a venue yet to be confirmed.

I look forward to seeing you there.

Western Australia Report

By Neil Shenton, Avocados Australia Director for the Western Australia Growing Area



At the moment Western Australia's trees are all looking good and our fruit size is looking good too.

The storms are yet to hit but the season's looking great so far.

The dams are looking great and there's been an early break to the season.

It does look like it will be another warmer winter coming up, so there may be an earlier pick than usual – and likely the same time as last year.

Simon Newett's WA Workshop saw a good turnout.

Lachlan Chillman gave a great talk on Six Spotted Mite which causes defoliation (we've experienced outbreaks of them in particular in WA) and Integrated Pest Management – using other bugs to control them.

It's early days with this program, but there will be a long-term solution on the horizon.

Warmer winters, all contribute to quality fruit coming out of WA – low disease and pest pressure.

North Queensland Report

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



In 1992, when the Shepard variety was a taste sensation for the Australian avocado consumer, a group of growers growing the new variety formed a cooperative, Shepard Australia, with the objective of making their businesses more profitable and with greater prospects of long term viability than they could achieve alone.

These growers saw the changes happening in the market place which was very tough on the small producer with fluctuating prices and little accountability in returns.

The group teamed up with an innovative marketer, The Harvest Company, and through aggressive advertising and merchandising, combined with strict attention to quality, crop forecasting, and programmed supply, gained the confidence of large retailers and consumers.

The 26 growers in Shepard Australia provided half of the Shepard supply on the Australian market between February and April.

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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, then source your Kangaroo Labels from a registered Kangaroo Label supplier listed below.



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Around Australia continued

Sadly, Shepard Australia known formally as The Northern Avocado Growers Cooperative Association Ltd, went into decline in recent times and the cooperative finally closed in January 2016.

There were many highlights arising from this group.

- A group of growers working together with commitment to a better future
- Selecting an innovative marketer to promote the variety Shepard
- Crop forecasting , and programmed supply
- Developing markets for small fruit (prepacks)
- Introducing barcode labels to identify Shepard at the checkout
- Co- promotions with associated products used with avocado (corn chips, taco, salad dressing) and being the first fruit to be stocked beside non-fruit goods and to have dry goods in beside avocados
- A Quality Assurance Programme and manual
- Internal audits of packing sheds to confirm quality
- Training sessions to train grading staff

In 1997 the Shepard Australia Business Plan identified some threats, and these included loss of unity, growers leaving the group, lack of commitment, and hostile marketeers.

The adage “build and they will come” is well known and I will add “say it and it will happen” and so it did, unfortunately.

It certainly was an exciting time and this group certainly established the Shepard variety to the position it holds now as a genuine taste alternative to Hass and I acknowledge the strong commitment and hard work of all the Shepard Australia members and The Harvest Company for what was achieved for avocado in Australia.

Tamborine and Northern Rivers Report

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



Northern Rivers/ Tamborine avocado growers continue to enjoy an excellent growing season.

Day time temperatures at the writing of this article are still quite warm, with night time temperatures just starting to cool off.

Rainfall is a little below the average, however the absence of any major catastrophic events is a plus.

Fruit is exceptionally clean for this time of year, and insect pressure seems to have been quite low.

A number of growers are now reporting better-than-expected crops from initial assessments, as fruit starts to size and show itself.

Sorry to sound like a broken record, but as growers prepare to harvest, avocado dry matter contents need to be monitored and adhered to. Don't let your fruit be the shriveled, tasteless product that turns the consumer off.

I look forward to seeing as many growers as possible at the Tamborine, Northern Rivers Qualicado Growers Workshop, on Thursday 5 May.

Central New South Wales Report

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



So far autumn has offered no respite from the hot and dry conditions. Hopefully irrigation systems are up to the task of maintaining a reasonable level of



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moisture in orchards.

The 2016 Qualicado Workshop for this region will be held on Thursday 26 May, to be held at Keven Debrecey's farm at Comboyne. These workshops have always drawn good attendance, proving growers are willing to continue the learning journey.

Fruit in the region is sizing nicely, with growers talking about when they might start maturity testing.

Avocado production in Australia will continue to rise. Consumption will need to keep pace with supply. Promoting the health benefits of avocados and its versatility in menu planning has kept the scales of supply versus demand quite well balanced. Promotion can only do so much, as consumer repeat purchasing or multiple purchases usually comes down to two things – price and quality.

Increased production should make avocados an affordable fresh food option for all socio-economic groups.

Fruit breaking down on supermarket shelves certainly doesn't encourage or entice consumers to buy.

Practices for orchard health to ensure fruit quality should not be compromised. Quality avocados are produced in the orchard, not in the packing facility.

Sunshine Coast Report

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



It is another curious 2016 season start in the Sunshine Coast area, with the picking season starting up and fickle rainfall conditions benefiting some, while impacting on others.

As can be seen from December to April 2016 the Mary Valley has only had 300mm while Maleny 467mm and Nambour with 600mm has as much as doubled that of the Valley.

While irrigation does sustain the orchards in the drier areas it is no replacement for natural precipitation. One could expect from this, variations in fruit size.

Notwithstanding these variations, the trees are looking healthy across the board; there has been a lower level of fungus and insect pests in the drier areas so the spraying regime has not been as demanding.

We are still hearing in the media about predicted food shortages, which of course is worrying for the global community, particularly the underdeveloped areas where there is poor



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Around Australia continued

infrastructure or skills for the ramping up of intensive farming. The question is what role will Australia play in the future of food production and how can Australian growers benefit from the expected demands?

Interestingly the predictions relating to Avocado production are saying that consumption of Avocados is growing by 7.5 per cent annually while production is currently matching demand.

Owing to the large increase in plantings in Australia, we have the potential of oversupply of Avocados which will put pressure on the "farm gate prices". How will we manage this?

Aggressive marketing programs to boost local consumption will be the best outcome. Exporting will reduce the oversupply of local markets to a point and we are reliant on Government bodies to facilitate access to some of the biggest markets through the free trade agreements and market access protocols.

But there is also opportunity for value adding and producing a longer lasting product which doesn't have to meet stringent quarantine regulations.

The advantages of this approach are that Australia could tap into a new avocado product line. I think that the future export

markets could be a major avenue for using fruit that does not meet fresh consumer standards. Clearly this needs some debate and if the consensus of growers is positive, then levy funds can be used for research into finding viable solutions.

Lastly, the excellent promotional work guided by AAL in recent years made avocados a food of preference and Australian consumption consequently has grown to one of the highest in the western world.

What has been very concerning to growers was the bad publicity generated by claims made in January over the exploding cost of avocados in Western Australia. This debacle certainly had a negative impact in the minds of the consumers, and recovery from this sort of adverse publicity takes time and effort by AAL to rebuild.

An analogy is similar to growers putting fruit in the market before it reached the quality standard dry matter content simply to gain short term higher returns. What happens next is the prices fall rapidly due to consumer rejection. My point is that it takes far more time to regain consumer confidence and a return to viable prices.

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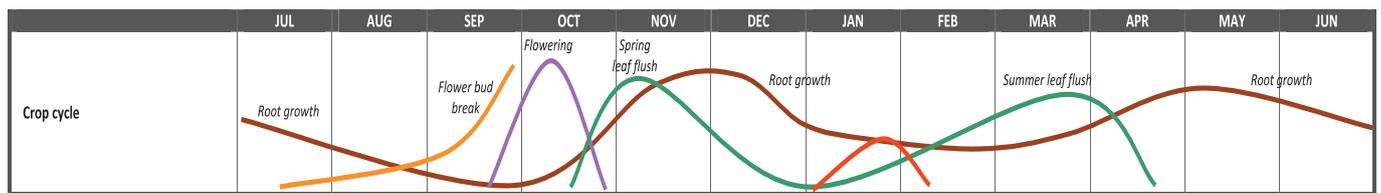
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Industry Matters

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

These case studies are part of a series collated to provide insight into how some growers approach their crop forecasting, which may provide you with some tips or tricks to help your own operation. There will be another two case studies in the next edition.

Crop Forecasting Case Study – West Moreton



Forecasting the crop

- Experience and knowing the orchard is key
- Select 'average' trees across the block as sample trees for counting
- Good forecasting allows packing and logistics to run smoothly

Michael is responsible for completing the crop forecasts for the business. Throughout the season he is consistently monitoring the performance of the crop – looking at flowering, fruit set and getting a feel for how the crop is progressing.

The final fruit drop usually occurs over the January/February period during the peak of Summer heat. After fruit drop, in February/March, when estimates are more reliable, Michael will complete a fruit count and develop a crop forecast.

Michael looks for 'average' trees in the block and selects a sample of these to undertake fruit counts. He will count a 1/4 of the tree, ensuring he counts different sides of the trees he has selected to reduce sampling bias. Taking into account an expected average size of fruit, he will then extrapolate this figure out to calculate 'trays/tree' and then 'trays/block'. In calculating these figures he usually allows a factor of 10% for wastage.

As the season progresses more fruit counts are completed and the crop estimates refined up to harvest. Not every block is counted every time, particularly when blocks are known to have similar performance.

Although historical records are often a good indicator of the expected crop, there is always a need to validate what is happening in the orchard, particularly if there have been adverse weather conditions during the season.

At the end of the season, Michael will compare his estimates for each block with the actual harvest figures. He says that most years he gets it fairly close, but there are some years where the process just doesn't work. In those years it's always important to understand why there were discrepancies so that forecasting processes can be improved the following season.

When fruit is supplied and packed for others, Michael relies on those growers to provide their crop estimates. Getting good forecasts from the grower suppliers is important as it allows packing and logistics to run smoothly and fruit to be managed appropriately so quality is maintained.

Balmoral Orchards



About.....

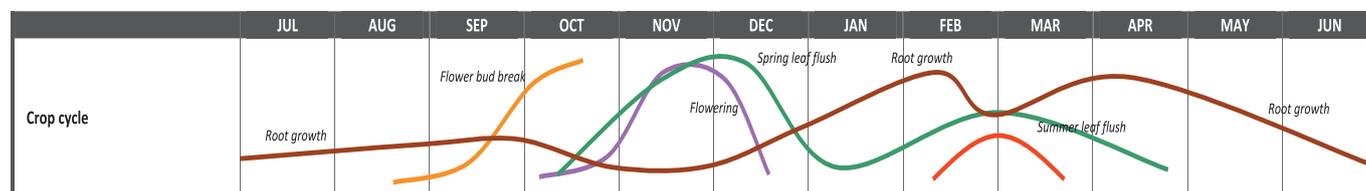
Michael Flynn manages Balmoral Orchards. The business is situated at Carbarlah, north of Toowoomba on the Great Dividing Range. The business grows, packs and markets fruit under the Balmoral Avocados brand.

In addition, it also provides packing and marketing services for other growers in the district.

The production side of the business was established in 1988 and now grows more than 12,000 Hass trees planted across 198 hectares.

The orchard is situated approximately 600 metres above sea level, providing a cooler climate and hence a later crop. Flowering occurs during September and October and harvest during late Winter and Spring.

Crop Forecasting Case Study – Western Australia



Forecasting the crop

- Knowing the crop and keeping good crop records is essential
- Managing crop forecasts at a 'block' level assists in the process

Being a packing and marketing business, having good crop forecast figures is critical for Advanced Packaging & Marketing Services (APMS). The figures underpin the development of sound marketing plans with key customers, as well as assisting in managing fruit through the supply chain.

Wayne deals with the grower suppliers throughout the season, providing advice on growing practices and assisting with crop forecasting.

He encourages growers to manage and analyse their crop at the 'block' level. This includes developing crop estimates for the block, which are recorded as bins/block.

APMS requests grower suppliers to provide crop forecasts throughout the season, which begins with flowering in late October to early December and then continues through to harvest in the following spring/summer period.

Estimates are often calculated by counting fruit (full tree) on a grid pattern and then extrapolating these figures to obtain an estimate for the block.

In addition to this Wayne will also undertake his own visual assessments of their crop through the season. Having a crop forecast from two different sources provides the opportunity to validate estimates, or if there are significant discrepancies, provides a trigger for further investigation.

In addition, as APMS keeps good planting and production records on its supplier's orchards, it is also able to extrapolate historical data to support the crop estimate process. They also encourage their growers to do the same and have recently developed proprietary software to assist their growers with collection and recording of key orchard data for decision purposes. This includes crop forecasting and historical production data.

At the end of the season, APMS provides grower suppliers with comprehensive pack-out data based on production blocks, so a comparison can be made with the crop estimate and information can be retained to inform the following year's estimates.

Advanced Packaging & Marketing Services



About.....

Jennie and Wayne Franceschi are based in Western Australia and have a life time of experience in growing, packing and marketing avocados.

Through their packing and marketing business, Advanced Packing & Marketing Services, they work closely with their grower suppliers and provide a range of support services to ensure the fruit they are sourcing is the best quality.

The business markets product under the brands 'West N' Fresh', 'Gotta Luv 'Em' and 'Avolicious'.

They are also active in developing export markets for Australian avocados through the Avocado Export Company and have recently made significant investments in high pressure processing to value add local produce including avocados

This information has been collated as part of HIA Project AV12012: Coordination of Data Management and Avocado Quality Improvement and Extension Program. The crop cycle charts used in these case studies have been developed by the Department of Agriculture & Fisheries Queensland as part of HAL/HIA project AV10002. Both projects have been funded by Horticulture Australia Limited (HAL)/Horticulture Innovation Australia Limited (HIA) using the avocado industry levy and funds from the Australian Government. More information on crop cycle calendars for different regions is available by accessing the Australian Avocado Industry Best Practice Resources at <http://bestpractice.avocado.org.au/Login.aspx>

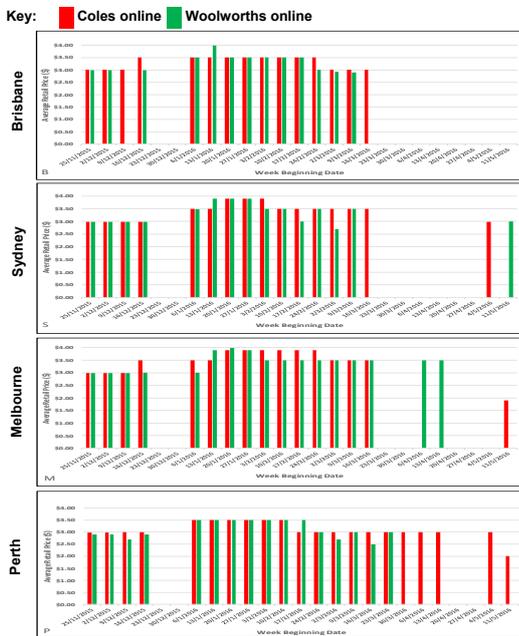
Retail Pricing

As reported in the last Talking Avocados the method for collecting retail pricing data changed at the end of 2015.

Pricing data is now collected each Wednesday from online sources - shopping sites and online catalogues. This is the main day each week that new catalogues are posted by the major supermarkets. Once collected the information is immediately posted to the Avocados Australia website (You'll find the link at the end of this article).

The reports graph the weekly retail price of Hass (single fruit) in Brisbane, Sydney, Melbourne and Perth. It also provides more detailed information on prices of other varieties that are offered for sale e.g. Shepard, as well as specials, multi-buys, packaged and organic avocados.

Below is one of the latest reports :



Online Retail Pricing Report for Single Hass Fruit for week beginning Wed, 11th May 2016 (Week 20)

The data shows that from mid-January to mid-February, Hass (single fruit) consistently sold for \$3.50 per piece in Coles and Woolworths in each capital city in which data is collected. From mid-February to mid-March prices were consistently \$3.00 per piece. From mid-March through to mid-May there were only sporadic offerings of Hass fruit as the market focussed on Shepard from North and Central Queensland.

Online offerings of Shepard fruit started from early March with pricing staying relatively consistent on the east coast markets. Most fruit over the period from early March to early May ranged from \$2.90 - \$3.50 per piece, with occasional specials in Brisbane where fruit was available from \$1.90 per piece.

To keep up to date on weekly prices, go to the 'Services' tab on the top banner of the Avocados Australia website and choose 'Retail Pricing' or enter this address into your web-browser <http://industry.avocado.org.au/RetailPricing.aspx>

Coles	Variety	Pack Type	Description	Brisbane	Sydney	Melbourne	Perth
	Hass	Single Fruit		-	-	\$1.90*	↓\$2.00*
	Hass	Multi-buy	2 for \$x	-	-	-	-
	Shepard	Single Fruit		\$1.90*	↓\$1.90*	↓\$1.90*	-
	Shepard	Multi-buy	2 for \$x	-	-	-	-
	Hass	Single Fruit	Organic	\$5.00	-	-	-
	Hass	3 Pack		-	-	-	-
Woolworths	Hass	Single Fruit		-	\$3.00	-	-
	Hass	Multi-buy	2 for \$x	-	2 for \$5	-	-
	Shepard	Single Fruit		↓\$2.50	-	↓\$2.75	↑\$3.00
	Shepard	Multi-buy	2 for \$x	2 for \$4	-	-	2 for \$5
	Hass	Single Fruit	Organic	-	-	-	-
	Unknown**	2 Pack	Ripe	\$7.90	-	\$7.98	-
	Hass	2 Pack	Organic	-	-	-	-
	Unknown**	3 Pack		\$5.40	↓\$4.75	\$5.98	\$6.00
	Hass	4 Pack	Mini Ripe	-	-	-	-
	Unknown**	5 Pack	Mini Disney	\$4.90	\$4.00	↓\$4.98	\$5.00
	Unknown**	1kg Bag	Odd Bunch	\$6.50	\$6.00	↓\$5.98	\$6.90

*denotes offer was advertised as a weekly and/or catalogue special

**denotes variety not indicated in online shopping offer

(Green) + ↑ = increase in price from previous week
 (Yellow) = same price as previous week
 (Red) + ↓ = decrease in price from previous week

Catalogue Offers

Atli - National - No catalogue offers found
 IGA - Brisbane - Hass - Multi-buy - 2 for \$4.00
 IGA - Sydney - Hass - Multi-buy - 2 for \$5.00
 IGA - Perth - Hass - Single fruit - \$2.99
 Foodworks - Perth - Hass - 4 Pack - \$4.00
 Woolworths - Brisbane - Hass - Single fruit - \$2.90 & Multi-buy - 2 for \$4.00

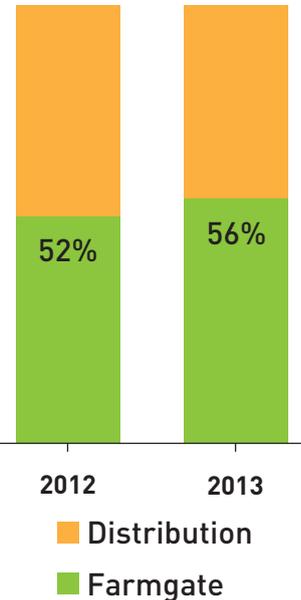
Single Fruit, Multi-buy and Pack Pricing for week beginning Wed, 11th May 2016 (Week 20)

Increase in grower share of retail value

A recent report commissioned by the Rural Industries Research & Development Council, 'From farm to retail - how food prices are determined in Australia' aims to convey a better understanding of the main factors that determine prices (and costs) in value-chains for Australian agricultural food products, involving primary producers, manufacturers, wholesalers, and retailers.

In the section on avocados, Fresh Agenda, the author of the report, makes the following conclusion: "Our analysis of grocery retail and farmgate prices for Hass avocado over two financial years based on confidential data provided to us shows the farmgate portion of the average retail prices was between 52% and 56%. Costs between producer and wholesaler include packaging and transport, which are assigned to the "distribution" share of prices in this illustration."

Share of retail price in %



Share of retail price in % (for Hass avocado)

Source: Freshagenda analysis

A full copy of the report is available at: <https://rirdc.infoservices.com.au/items/16-013>. The section on avocados is on page 82 of the report.

OrchardInfo.... 2015 data required

All growers will soon be asked to submit their 2015 orchard and production data for the **Annual OrchardInfo Report**.

This report provides an annual snapshot of trees in the ground (by variety, age and region) and the related production.

The Annual OrchardInfo Report provides important information for medium to long term planning both at an industry level and for business enterprises in the industry.

The data collected assists industry services providers, such as Avocados Australia and Hort Innovation, in planning future market development activities. These activities include supporting the case for prioritisation of market access in international markets, planning export development initiatives and developing domestic marketing campaigns.

At a business level this information can assist with decision making around future production goals and marketing programs as it provides an insight into future market conditions.

Since OrchardInfo started it has always been a challenge to get growers to submit their data, however we encourage you to participate so that we can provide the most accurate information in the reports.

Once you receive your request for information, Avocados Australia is able to provide support if you have any difficulties completing the online forms.

2014 reports are currently being finalised and will be distributed in the coming weeks.



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Managing funds to grow Australian horticulture

By Hort Innovation Relationship Manager, Astrid Hughes

The funds that Horticulture Innovation Australia (Hort Innovation) invests are provided by the Australian horticultural industry (growers and supply chain), the Australian Government and co-investment partners.

Hort Innovation invests these funds into research and development and marketing (growing demand) programs and activities that increase productivity, farm gate profitability, and boost sales of Australian produce in Australia and overseas.

Investments are aimed at giving growers the knowledge and services they require to build a profitable, competitive, and sustainable business — for today as well as tomorrow.

Investments made in **marketing** are designed to improve activities beyond the farm gate to better meet customer needs in both domestic and export markets.

Investments in **research and development (R&D)** address high priority industry needs, such as pest incursion control, food security and gaining global market access. Using systematic experimentation or analysis in any field of science, technology, economics or business, investment in R&D aims to acquire or apply knowledge that improves any aspect of the production,

processing, storage, transport or marketing of horticulture products.

Industry funding

Industry funds are derived in two ways:

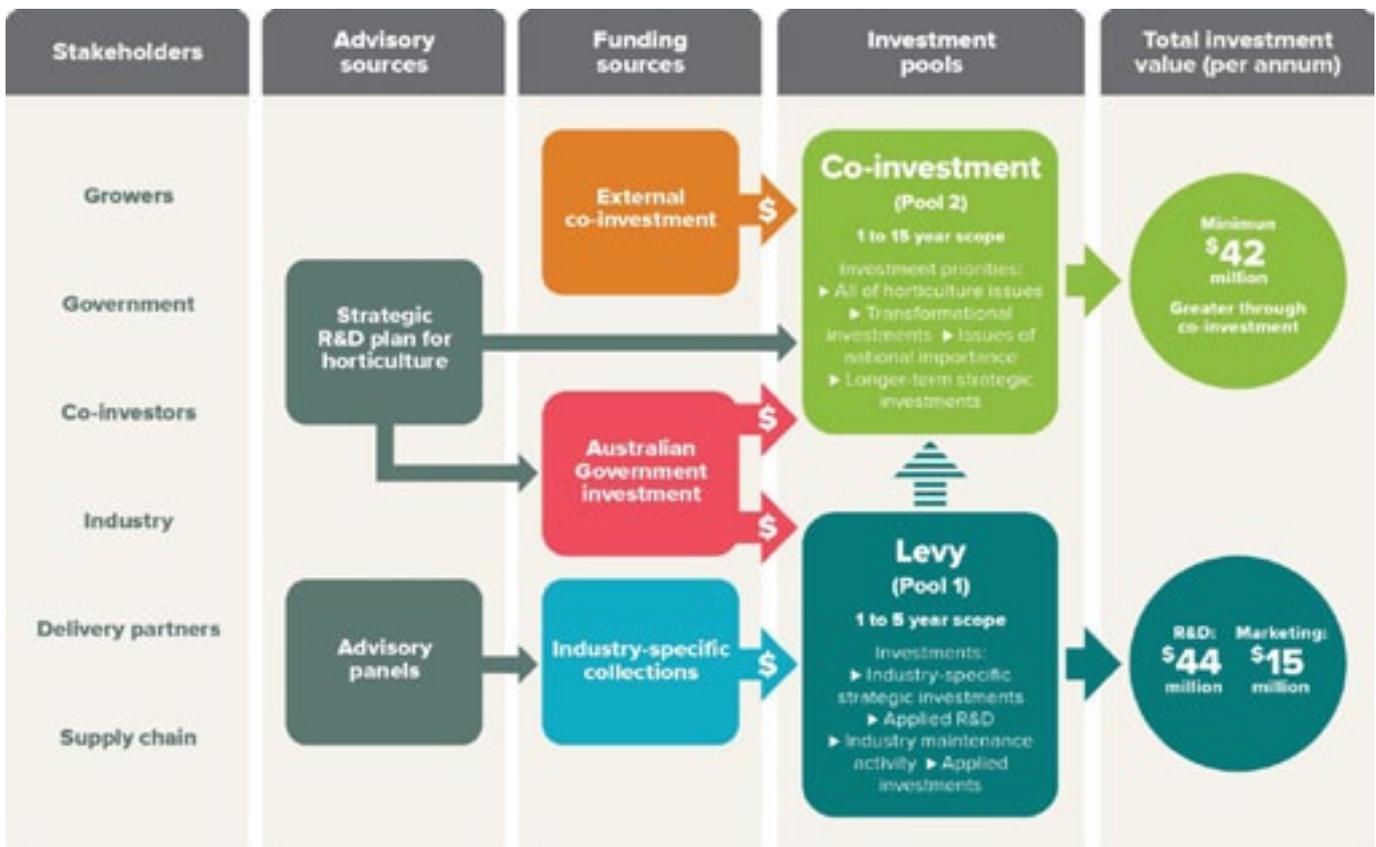
Levies

Growers of horticultural products pay a statutory transaction levy on the sale of their produce.* These levies are collected by the Australian Government through the Levies Revenue Service and distributed to Hort Innovation for investment. More than fifty levies are collected in the horticulture industry across 35 commodities.

* With the exception of the Processed Potato R&D levy which is paid by processors.

Collective Industry Funds

Industry sectors that do not have a statutory levy in place may apply to Hort Innovation to be recognised as a Collective Industry Fund, where funds are contributed by growers and managed in the same manner as a statutory levy.



The diagram above shows the Pool1 and Pool 2 investment model.

Australian Government funding

The Australian Government also contributes funding up to 0.5 per cent of the aggregate gross value of farm gate production (GVP) of all horticultural industries. These funds are then applied to research and development programs at the discretion of the Hort Innovation board.

Co-investment funding

Partners seeking to achieve similar research and development outcomes also provide funding.

Our two-pool investment model

Our investments in R&D and marketing are made for both the near and long term. This is reflected in our two pool investment model:

Pool 1

R&D and marketing investments within Pool 1 are made specifically on behalf of levy paying industries. These investments focus on the explicit needs identified and prioritised

by the industry from which the levy funds have been derived.

R&D investment within this pool is funded from grower levies that are matched with Australian Government funds up to 0.5% of the GVP for each industry sector that has a statutory levy or a recognised collective industry fund.

In general, investments within Pool 1 provide outcomes that have a 1-5 year delivery timeframe and, in the case of R&D, span a wide scope of investment types and are more applied in their nature.

Pool 2

Investments made within Pool 2 seek to utilise Australian Government funding by attracting and partnering co-investment from other sources to invest in long-term and larger strategic projects.

Typically outcomes from Pool 2 investments will provide broad all-of-horticulture benefits that will impact the longer run future needs of the industry. These investments have time delivery horizons of between 1-15 years and focus on a more concise but intensive span of investment areas.

Trees suffering the effects of waterlogging? Sub-surface drainage may be the answer



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For more information contact **Richard Gloyne** on 0428 528 054 or richard@draintech.net.au



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App assists in backpacker safety

By Ashley Walmsley,
Good Fruit & Vegetables

While politicians continue to voice their concerns over the abuse of seasonal workers, a former backpacker has launched a website and app to improve worker safety.

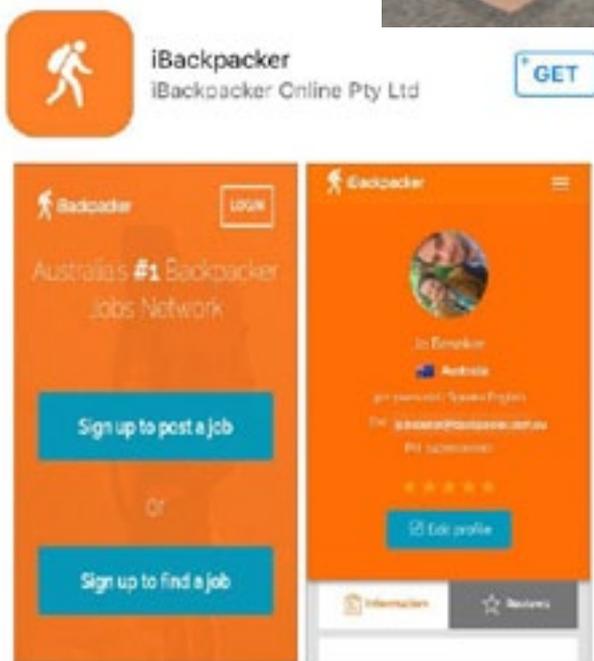
Canadian Shane Martz developed iBackpacker, a site and mobile phone app which allows workers to seek out positions and growers to post jobs.

What's more, it also allows for feedback on working conditions and bosses.

The site has become more than just a business opportunity for Mr Martz who has spoken out against the mistreatment of seasonal workers having witnessed trouble firsthand.

He said the site is about creating accountability in the backpacker jobs industry.

Mr Martz said with one-touch applying, automatic matchmaking with employers, and a rate and review system, the goal is to make things easier and safer for backpackers who are on working holidays.



ONLINE MIND: iBackpacker founder Shane Martz says his website and app is aimed at helping backpackers find jobs, growers find workers and keeping both parties safe.

"iBackpacker's rate and review system will bring accountability to both the employer and the backpacker, as they will want to build a good reputation to keep hiring or finding work in the future," he said.

Mr Martz said employers could also benefit from the app by keeping track of who they've hired, while backpackers develop a log of who they've worked for.

"Backpackers can leave comments and ratings on the profiles of employers who have hired them, confirming that they have suitable working conditions or warning other backpackers to be aware," he said.

In promoting his site, Mr Martz released a link to a shared Google document used by backpackers to document rogue operators and share information on fair and unfair treatment.

The document details specific names of farmers, agencies, labour hire companies and businesses, their locations and comments beside many of them.

Some of the comments include: "Did not pay"; "Boss is rude"; "Unacceptable working conditions"; and "Wants you to pay money for room before you arrive".

The majority of entries are from December 2014 and the most recent entry is from February 2015.

"A contributing factor to the abuse is the mostly anonymous platforms that employers hire backpackers through.

"When no one is checking who the employers are, they can remain in the shadows while recruiting backpackers who are vulnerable in a new country and continue to mistreat them without consequences."

Mr Martz said the document has been the only publicly shared spreadsheet for backpackers to go off.

iBackpacker's currently has a user base of 20,000 backpackers working in Australia.

The concept is a natural fit with travelling workers, many of whom travel only with their phones.

The app is available for free on both iOS and Android systems. Visit: www.ibackpacker.com.au





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Australia elected Chair of International Plant Protection Convention

Australia's internationally recognised expertise in biosecurity, plant health and standard-setting has been reinforced through our nation's election to the position of Chair of the International Plant Protection Convention (IPPC) Commission on Phytosanitary Measures (CPM).

In an announcement issued from the Deputy Prime Minister and Agriculture and Water Resources Minister Barnaby Joyce in April, the new chair is the Department of Agriculture and Water Resources' Ms Lois Ransom.

Mr Joyce said the appointment reflected Australia's ongoing commitment to world-class plant health practices and our state of the art biosecurity system.

"The IPPC is an important forum where international plant health experts come together to share knowledge and ensure there is a collaborative and evidence-based approach to plant biosecurity globally," Minister Joyce said.

"The upcoming CPM in Rome this month will allow us to contribute to new potential international standards and phytosanitary treatments that underpin biosecurity regulations and trade.



Ms Lois Ransom new chair of the International Plant Protection Convention Commission

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“Australia has an enviable biosecurity system—estimated to be worth up to \$17,500 each year to an average farmer—which underpins our international market access.

“Our plant health experts add significant value to global knowledge by sharing their expertise and collaborating with others at these meetings.

“We understand the importance of a globally collaborative approach to biosecurity which was recently highlighted by the emergence of a destructive bacteria called Xylella in Europe. The sharing of knowledge allowed us to develop enhanced import conditions being used today to safeguard Australian industries worth about \$3 billion a year.

“Plant health has a pivotal role in supporting our collective food security, social prosperity and economic success, so it is crucial that global standards incorporate the best practice approaches to plant biosecurity.”

The CPM meets each year to develop science-based standards to support international trade in plants and plant products.

The 2016 meeting will include 400 delegates from throughout the world and more information on the IPPC is available at ippc.int/en.



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Advancing Avocados

Researcher's Fellowship success

Submitted by The University of Queensland

Queensland Alliance for Agriculture and Food Innovation's (QAAFI) Dr Alice Hayward was successful in winning a prestigious mid-career **Advance Queensland Research Fellowship**, to develop the world-first MICROpropagator – a non-GM, non-toxic, root-inducing formula to improve clonal propagation of woody crops.



Dr Hayward's work, developed through the Mitter Lab, involves developing novel biomolecules to propagate avocado cuttings, a process which has to date had a notoriously low success rate, hampering the Queensland industry from achieving its potential. If successful, this innovation could boost Queensland's agriculture industry by enabling rapid production of elite varieties.

Rooting cuttings from elite trees is essential for clonal propagation of subtropical woody crops. Clonal propagation supports reliably higher yields and allows industry uptake of our best Queensland-bred varieties. Avocado is a high-value subtropical crop in Queensland, with huge potential for rapid industry expansion. However, root induction on cuttings of avocado and other woody species is incredibly difficult, severely restricting industry growth.

Queensland is in a unique position to both pioneer and reap rewards from innovation in subtropical agriculture. This project will develop MICROpropagator – a world-first, non-GM, non-toxic, root-inducing formula to improve clonal propagation of woody crops. MICROpropagator will be made of newly discovered molecules in plants that control root production. It will be tested in an optimised tissue-culture propagation pipeline for avocado, in addition to an industry-partner's nursery.

Furthermore, novel, UQ-invented nanoparticles will be trialled to improve shelf-life and delivery of MICROpropagator molecules to industry. MICROpropagator applies innovative biotechnology and nanotechnology to develop a world-first formulation for root induction. This could enable rapid, high-throughput



*Dr Alice Hayward
Advance Queensland Research Fellowship recipient*

production of our elite varieties, helping to support Queensland's goal to double agricultural production by 2040. Moreover, the biomolecule delivery platform could be designed to target other limitations in crops; transforming agricultural production globally.

This work is supported by the Department of Agriculture and Fisheries (DAF) and The University of Queensland. Dr Hayward's planned industry partners include DAF, as well as Millwood Holdings Pty Ltd T/A Delroy Orchards; Primary Growth Pty Ltd T/A Jasper Farms; Anderson Horticulture Pty Ltd.

Can we eat avocado seed?

By Lisa Yates

Consultant Dietitian Adv APD

Recently a dietitian got in contact with me as one of her patients adds avocado seed to his smoothies and she wondered if avocado seed was safe to eat. So we looked into the health effects of avocado seed and this is what we found.

It seems traditionally South American countries have used avocado seed extracts in the treatment of many health conditions including diabetes.(1) Recent animal studies have shown that avocado seed extracts may help control diabetes by reducing blood glucose levels and having a protective effect on pancreatic cells(2,3). Antioxidant and fibre rich avocado seed flour has been shown to reduce total and LDL blood cholesterol. (4) Traditional Mexican medicine uses avocado seed to treat infections and diarrhoea so avocado seed extract research has extended to investigate any antimicrobial effects.

It seems avocado seeds do have antibacterial properties against certain bacterial strains while having no effect on others(5-7) and extracts also possess antifungal effects(8). All of these effects are thought to occur due to the high levels of antioxidant compounds that avocado seeds contain particularly phenolics. (4,9,10) Genotoxicity tests show avocado seed extracts do not negatively affect DNA in cells and are safe in small doses(11,12) and although many years ago research identified compounds in avocado seed which cause red blood cells to clump together it seems protein and amino acids such as lysine and arginine inhibit this activity.(13)

Overall while there have not been any human studies it appears animal studies indicate avocado seed extracts and avocado seed flour may be beneficial for health.

So is it ok for patients to including avocado seed in smoothies? Its use in traditional medicine may suggest avocado seed is safe to consume but we do not know what quantity of the whole seed to consume given most research above is undertaken with extracts of seeds. I would suggest small amounts to be cautious and one final consideration may be the strength of the patient's blender!

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Avocado Nutrition program distributes new research on avocado

By Lisa Yates, Advanced Accredited Practising Dietitian, consultant dietitian to Avocado Nutrition

A new study published in the February 2016 issue of *Journal of Clinical Lipidology*¹ has provided yet another reason to include nutrient-dense avocados in the diet for heart health. The Australian Avocado Nutrition program saw this as an opportunity to engage our health professional audience so summarised and distributed the research in the form of a health professional blog and health professional media release.

Researchers from the University of the Pacific California, USA found that adding avocado in the diet daily significantly decreases key cholesterol markers associated with heart disease risk. The meta-analysis, of 10 clinical trials, combined the results of 229 participants studied over 2 to 12 weeks and consuming between 136g to 300g of avocado daily. The equivalent of the edible portion of one or two small Australian avocados a day.

Results showed avocado consumption lead to significantly reduced:

- total cholesterol by 0.49mmol/L,
- LDL (bad) cholesterol by 0.43mmol/L
- triglycerides by 0.70mmol/L.

HDL (good) cholesterol was reduced by a non-significant 0.005mmol/L.

Cardiovascular disease (CVD) is a major cause of death in Australia with 43,600 deaths attributed to CVD in 2013. That's one Australian dying from CVD every 12 minutes. Plus one third of adult Australians had measured high cholesterol, a major risk factor for CVD². Results of this new avocado meta-analysis demonstrate how a simple change to the diet, such as adding avocado, can have significant heart health benefits.

Previous research has found for each 10% decrease in total cholesterol this can result in a significant 15 per cent reduced risk for coronary heart disease related mortality.³

The new avocado research showed swapping avocado for saturated fats in the diet had the greatest health benefits, versus adding avocado to an existing diet. This supports the Australian Dietary Guideline which suggests swapping unhealthy saturated fats such as butter for healthy unsaturated fats such as avocado.⁴ Swapping avocado for butter on sandwiches and toast is a classic example.

While authors of the new meta-analysis concluded the study effectively evaluated the use of avocados in improving blood cholesterol profiles, they also advocate larger trials be conducted to determine the optimal amount and frequency of avocado consumption for specific blood lipids, as well as the specific impact of avocado on cardiovascular events.

The research paper noted some limitations of the meta analysis,

including in six of the 10 studies analysed participants' weight was measured before and after an avocado enriched diet over 2 to 6 weeks. Body weight decreased in all six studies but was statistically significant in only three. Weight loss can independently reduce blood cholesterol. If nothing else it does show avocado can be included in diets and still result in weight loss overcoming the myth that eating healthy fat foods cause weight gain.

Avocados are rich in healthy monounsaturated fats but they also offer a range of other heart healthy nutrients including vitamin C and E, potassium, fibre, antioxidants and plant sterols.⁵ All contributing to their heart healthy reputation.

This research was summarised by Avocado Nutrition in a blog and distributed to the 1344 or so health professionals on our mailing list as well as developed into a media release which was distributed to 255 on our health professional media list.

As expected these health professionals shared this information along with our avocado infographics with their own clients and followers generating 27 pieces of coverage across blogs, e-newsletters, social and online media. This has generated a potential reach of 193,000 opportunities to see. We anticipated 20 pieces of media coverage and we are also expecting information on this research to appear in long media magazine and other websites such as the Fitness First website shortly.

This exercise is valuable in that it keeps our key health professional audiences of dietitians, diabetes educators and fitness professionals abreast of key research to ensure they share the most up to date evidence on avocados with their patients, clients and followers.

This third party endorsement gives Australians permission to enjoy avocado on a regular basis and overcomes any myths that a healthy fat fruit such as avocado is unhealthy or leads to weight gain.

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Grow a better tomorrow.

Fine tuning practices using Qualicado facility checks

By Noel Ainsworth, Queensland Department of Agriculture and Fisheries

One of the key activities undertaken in the Qualicado program was the facility checks. This was a confidential process to audit the activities in packing sheds, wholesalers and ripeners against best practice for effectively and efficiently supplying quality avocados. It is now a good opportunity to examine the strengths and weaknesses of the approach, along with some findings and directions for the future of the work in 2016.

This collaborative process involving staff from Avocados Australia and the Queensland Department of Agriculture and Fisheries,

relied on the cooperation of the participating members in the supply chains. It took advantage of the considerable collection of information from past research and development and represented a great way of communicating best practice information directly to the client. Being a voluntary and confidential process, it also provides an opportunity to review a facility where there is interest from the client. This creates an environment of trust where there is the greatest likelihood of action on any identified weaknesses. Also the results of those audits have proven useful in communicating trend information to the broader industry, while maintaining the confidentiality of individual participants.

Undertaking the project has also identified some weaknesses. Despite the number of growers and wholesalers in the avocado supply chains there was slightly less demand for the service than was originally forecast under the project. Undertaking audits across Australia has also presented some logistical challenges. Where possible, visits have been grouped to increase the efficiency of time and travel and it has not been easy to coordinate the audits with the annual schedule of Qualicado workshops either. Given this approach, it has also not always been possible to audit the facility while the facility is handling avocados to offer the chance to see the facility working and the supporting systems (QA etc.) in operation. Because the facility checks were performed on points in chain, they did not examine how well the chain is working.

In the past year, seventeen pack shed and wholesaler/ripeners facility checks were undertaken in Qld, WA, Vic, NSW and SA. Each of these businesses received a written report in response to the one hour inspection/discussion.

Not surprisingly, most pack sheds were set up to run very well, all fine tuned to the needs of the individual businesses. Areas identified for improvement more than once included;

- Machine improvements/design to remove impacts equivalent to greater than 100 mm drop,
- Improved use of sanitiser in dump dips or in sprays over brushes,
- Dry matter testing of fruit for the first six weeks of harvest and of fruit received at the pack house,
- pH adjustment of post-harvest fungicide application,
- Pre cooling fruit prior to dispatch,
- Temperature logging to ensure adequate cooling of fruit in the cool rooms, prior to dispatch and to improve capacity for transport temperature management, and
- Improved communication in the supply chain.

The improvements in sheds have focused on improvements likely to reduce bruising and rot development that emerge late



Innovative efforts by growers in reducing the risk of fruit damage at the bin tipper stage - Tipper directing fruit into a water bath



Innovative efforts by growers in reducing the risk of fruit damage at the bin tipper stage - Full immersion bin tipper

in the supply chain. There were notable recent improvements using a variety of innovative mechanisms at the bin tippers stage in the pack-sheds. Many grower packers also 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. Checks highlight the following weaknesses;

- 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 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.

- There is room for better integration of data recorded at the different stages in the supply chain. This identifies inefficiencies and duplication (waste) but also identifies areas for improvement in supply chain communication and relationships,
- Chasing grower dry matter results to inform ripening processes is an area for improved efficiency as well as providing a feedback loop to encourage better dry matter monitoring and a better tasting product for consumers,
- Some wholesalers are holding their fruit at higher than ideal temperatures i.e. 10°C rather than 6°C potentially reducing shelf life in the chain, and
- There is room for improvement in staff training and keeping of staff training records.

The facility checks planned for 2016 are set to continue under the HIA project AV15004. This year efforts will continue to focus on getting out to more of the businesses in the industry. The facility checks will do more work on how actions at one point in the chain links with other parts of the supply chain. They will also look for more integration between management systems and paperwork (e.g. Interstate Certification Assurance) to reduce business workload and confusion.

In closing, I would also like to recognise the efforts of AAL for their contribution and coordination role in this work over the past year. *This project has been funded by Horticulture Innovation Australia Limited using the Avocado levy with co-investment from Department of Agriculture & Forestry and funds from the Australian Government.*



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How long have you been working with the avocado industry? What industry were you in before this?

I have worked specifically with the Australian avocado industry on postharvest water loss and waxing & film wrapping while with CSIRO Division of Horticulture from Nov. 1990 - Dec. 1995 and now on skin spotting and flesh bruising with DAF from Jan. 2011 to the present.

I have worked since Nov. 1984 on the postharvest biology and technology of fruit, vegetable, and ornamental crops. In this time, I worked with a broad range of temperate (e.g. Chinese cabbage, rose), subtropical (e.g. melon, basil), and tropical (e.g. banana, mango) horticulture crops.

What prompted you to work with this industry as a researcher?

Avocado is an inherently fascinating and unique fruit crop in biological and technical terms as to its production and postharvest management needs, its strong and growing appeal to consumers, and its dramatic economic growth worldwide as an industry.

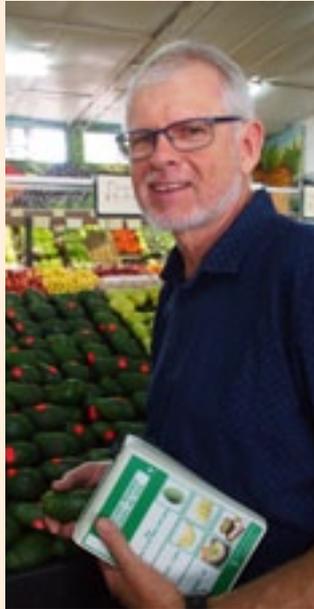
Flesh bruising in ripening avocado fruit is a particularly interesting and topical aspect to work on as, unlike many other supply and value chain issues, it is relatively poorly understood in biological, technological, sociological, and economic terms. While everyone has a pet theory on what to do about flesh bruising, the evidence is often more anecdotal than real. Accordingly, there is latent opportunity to fully understand the matter and to develop sustainable knowledge-based solutions to ensure consumer satisfaction and their repeat purchases.

What in particular interests you about avocados?

'Hass' and Hass types that have strong browning activity in their flesh are of particular interest, including because they by far comprise the greater proportion of avocado fruit sales.

What is it that you believe makes avocados unique?

The softening of ethylene-gassed avocados from comparatively bruise-resistant hard green mature fruit at harvest to relatively



bruise-susceptible softening and ready-to-eat fruit that are preferentially selected from retail displays upon squeezing by shoppers makes them relatively unique.

Are there any general practices you'd like to see more widely recognised as standard practices (that you would like to share)?

The inherent consumption quality of avocado fruit in appearance and eating terms is determined by genetics, environment and production management and harvest practices. Thereafter, best practice postharvest treatments, handling, and transport practices aim to ensure that the consumer has the best possible eating experience.

'Short cuts' at any point in the production and handling chain result in consumer concerns that feedback negatively upon all value chain players whether or not he / she took that short cut. Moreover, multiple short cuts can increase the quality problem(s) that the consumer ultimately has to deal with.

What are the biggest issues affecting avocados in Australia?

From a postharvest perspective, Hass fruit are most susceptible to bruising when they are softening or ripe. As Australian avocado consumers like and are accustomed to selecting 'ripe-n-ready' (i.e., fit for consumption purpose; e.g., softer for guacamole, firmer for salad) fruit, improving the practices in the parts of the chain that are handling ripening fruit is the vitally important issue to be addressed.

At some as yet undetermined level, impact and compression bruising and disease expression seemingly interact. Both maladies cause consumer concerns and so it is imperative to understand this probable interaction in the interests of increasing repeat purchases.

What's the best advice you would give to someone who has just started/entered growing avocados as a business?

Fruit 'quality' is undisputedly 'king' in terms of ensuring sustained competitive growth of the Australian avocado industry. Consequently, practicing 'world's best practice' at every point in the value chain from selecting the tree at the nursery to handling the fruit at retail and in the home is critically important. Everyone involved should take an active interest in the whole 'paddock to plate' process.

Do you have a favourite avocado recipe? What is it?

Yes, spooning the flesh sprinkled with lemon and pepper from a halved firm ripe fruit :)

Avocado is good news for everyone concerned and that's why I like to work on it in the service of this industry.



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Avocados to feature at Blackbutt festival

What was formerly known as the Bloomin' Beautiful Blackbutt Festival has now become the Bloomin' Beautiful Blackbutt Avocado Festival.

Festival organiser Jeff Connor said the event, set for 10 and 11 September this year, had adopted the avocado focus to showcase one of the region's agricultural specialties.

This will be the festival's eighth year. "When we set up, we looked at associating ourselves with historical, natural and cultural strengths of our community," Mr Connor said.

"Last year, one of our growers, Barry Trousdell put up some prize money for an "Avocado Roll" competition – so for \$5 entry, the adult who could roll a Reed avocado and get the closest to a steel peg could win \$1000, while the kids could win \$100," Mr Connor said.

"This was such a fun competition and it was so successful in highlighting avocados locally that Barry has doubled the prize money and we made the decision to try to get more growers involved.

"As a result, we have 17 growers supporting the festival and with that, we dedicated the festival to the avocado."

Mr Connor said this year's festival will showcase "everything avocado", from games and competitions, to propagation, pruning and planting demonstrations as well as an expo of all

the locally grown varieties.

"There'll also be cooking demonstrations and recipe competitions with the magic ingredient, farm visits, and while it's late in the season, the community will still be able to get a good understanding of where their fruit comes from.

"It also coincides with a Queensland Week visit from singer Josh Arnold who helps local community children create a town song – we'll launch his Blackbutt song and video to the public at this time and hopefully avos will feature in the song."

Mr Connor said the festival will also give the growers a good reason to come together.

"Where it goes next year, we don't know, but the support from our local growers has been fabulous and we're looking forward to the festival," he said.



Barry Trousdell local avocado grower
Photo: Barclay White/South Burnett Times

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Qualicado workshops up and running...

Avocados Australia are again running Qualicado Grower Workshops through 2016.

Save the date for the following Qualicado Workshops:

- South Queensland (Kumbia) - Thursday 9 June 2016
- Western Australia - Thursday 23 June 2016
- North Queensland - Thursday 14 July 2016
- Tri-State - Thursday 28 July 2016
- Central Queensland (DAFQ Bundaberg Research Station) - Thursday 11 August 2016.

The Sunshine Coast Qualicado workshop was held on 28 April at Joss & Neil Donovan's farm at Bellthorpe and we report on this event and the Mt Tamborine-Northern Rivers events in this issue.

The Central NSW workshop held in late May will be reported in the next issue of Talking Avocados.

As usual the Qualicado workshops cover a range of topics aimed at informing growers and packers about the latest R&D. This year we'll be continuing the push to improve fruit quality and productivity and we'll be tailoring each workshop content to meet the needs of the local region. On the program for the Sunshine Coast and Tamborine-Northern Rivers workshops were a range of topics including:

- Managing disease for productivity and quality
- Optimising nutrition for your trees
- Organic options - new technologies
- Managing fruit after harvest to maximise quality
- Plus updates on the Industry outlook, marketing program, export initiatives and other R&D activities.

Growers and other industry participants are more than welcome to attend Qualicado workshops outside of their home region. Being able to see what producers and packers are doing in other regions is often a valuable exercise.

Programs for the upcoming Qualicado workshops are published in the fortnightly e-newsletter 'Guacamole'.

Qualicado workshops for wholesalers, consolidators, ripeners and transport companies, focusing on supply chain issues, are also being planned. The first of these workshops will be on Wednesday 22nd June at Market City (Perth Markets). Workshops will also be held in the other major capital cities in August.

Presentations on key orchard and supply chain management topics are now available on the Avocado Industry Best Practice Resource at <http://bestpractice.avocado.org.au/Login.aspx>

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Strong turnouts for both Sunshine Coast and Mt Tamborine/Northern Rivers Qualicado events

The first of the 2016 Qualicado Growers Workshops was held on 28 April at **Joss and Neil Donovan's Bellthorpe farm** with more than 40 people attended the event – a very strong turnout for this region.



The day featured interesting and informative sessions including an industry update, phytophthora, an update on how to use the Best Practice Resource, avocado nutrition, pollination, export development and organic inputs as well as a marketing update, and a discussion about what's happening in the South American industry, followed by a supply chain update and an orchard walk.

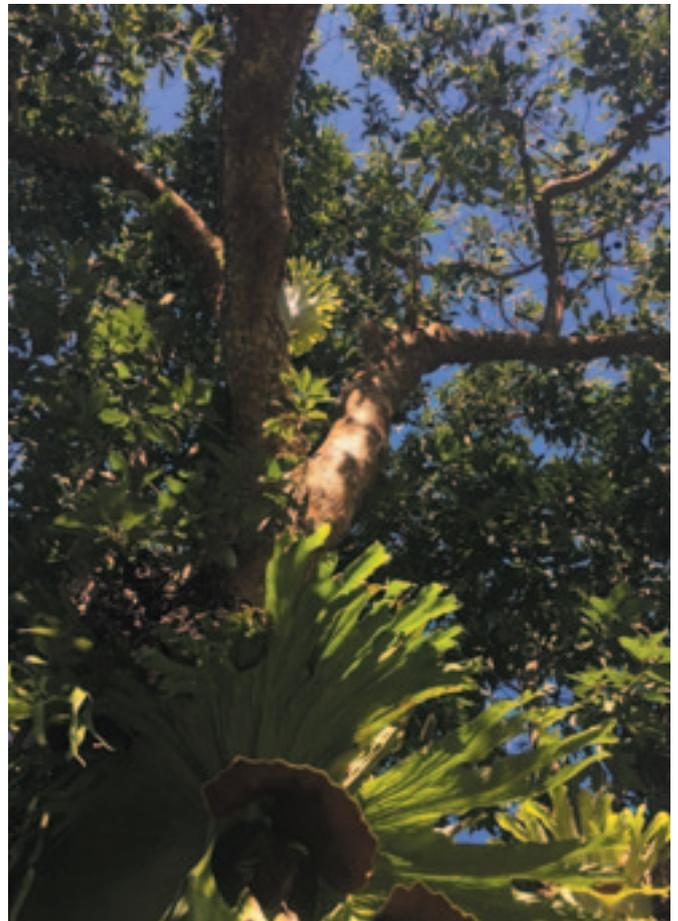
Special thanks must go to Joss and Neil Donovan for hosting the event.

More than double the usual number of attendees participated in this year's **Mt Tamborine Qualicado** on Thursday 5 May at **Lindy and John Williams' Merrinee Farms**, one of the oldest commercial avocado farms in the country.

Avocados Australia's CEO John Tyas said more than 80 people attended – compared to an average of 31 attendees from the same area in the past.



Sunshine Coast Qualicado speakers (from left to right) John Tyas, Jenny Margetts, Simon Newitt and Lisa Martin.



One of the oldest trees on the William's Merrinee Farms property is more than 80 years old.

"The Williams' farm is a lovely property to start with and is historical to the industry in its own right, which might have been one of the drawcards," he said.

"It was originally planted by Alec Kidd and some of the trees are quite old – one in particular is over 80 years old and still fruiting. This tree I understand Alec had planted as a youngster."

During his early years of avocado farming, Mr Kidd planted a range of varieties include Hass, Reed and Fuerte, as well as some more unusual varieties like the Choquette, experimenting to see which were best suited to the climate and conditions at Mt Tamborine.

Attendees came from as far as Northern New South Wales and the Sunshine Coast and presenters discussed a range of topics including nutrition, pests and disease control (both organic and non-organic) and production management.

The current state of the industry and export potential was discussed, as well as insights from the South American avocado industry.



John and Lindy Williams, Liz Dann, Simon Newett, John Tyas and Tom Silver

Lindy Williams also provided a brief history of the property just prior to the orchard walk which provided extra historic context for the group.

"We'd like to thank the Williams for opening their gates to us," Mr Tyas said.

"It was a fabulous day and everyone attending indicated they had learned a lot from the sessions."



More than 80 people attended the event



Mt Tamborine Qualicado event at Lindy and John Williams' Merrinee Farms

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Food Service Program

By Stewart White, Whiteworks Public Relations

The culinary magic of the fertility fruit unleashed

This year's Australian Avocado Masterclass Lunches for Chefs got off to an early start with the first being held in Melbourne at restaurant ESP (Estelle by Scott Pickett) on 4 April.

If avocados have been called the fertility fruit, then Scott Pickett and his ESP team deliciously plumbed their collective fertile minds to design a thought provoking take on fresh Australian avocados as an integral ingredient across the menu.

As one of Melbourne's foremost new generation chefs, Scott Pickett comes from a classically trained Salon Culinaire background and at 18 years old he was dubbed as 'the one to watch'.

ESP is the newest of his three restaurants. Previously he has worked at both three star Michelin and three hat Australian restaurants before opening his own first restaurant, Estelle which was followed by Saint Crispin and then his dream restaurant ESP.

With a glowing reputation for producing simply named dishes on the menu that belie the experience - the ESP avocado masterclass was no exception with some 50 influential chefs attending.

Wine and beer partners Azahara and Lion (James Squire) were procured to augment the experience.

The menu comprised a canapé for the assembling guests, followed by a sensory plate of raw, salted, sugared and aromatic flash fried avocado pieces to focus guests on how simply avocado flavour can be changed. This was followed by an inventive entrée, main and dessert.

Scott Pickett, together with food consultant and communicator Kate McGhie and Avocado Masterclass program manager Stewart White, delivered insightful and entertaining commentary around the dishes - their technique, application and versatile menu potential while exploding avocado myths.



Avocado masterclass opening sensory plate



Chef Scott Pickett of Estelle

Internationally acclaimed chef, Heston Blumenthal has described avocados as 'potentially one of the most versatile pieces of produce you can have. I'm not sure it has ever been better received...it's now taking on something of a new persona.'

That new persona has been increasingly pushing the envelope in Australian food service.

Over the past years it has been spearheaded by some of Australia's influential chefs, like Scott Pickett, who have hosted what have become must-attend Australian avocado masterclass lunches for chefs.

The menus created by the host chef highlight the spectrum of avocado uses to inspire the attending chefs to ignite the creative juices to widen their avocado recipe repertoires to think well beyond the guacamole, wrap and salad parameters.

Heston has said of avocados, 'It's all about being expressive, and ambitious' and Scott Pickett's menu saw him take the avocado challenge bit between his teeth and bolt.

The next chef Masterclass will be held on 30 May in Brisbane's iconic, hip Gerard's Bistro with lauded chef Ben Williamson and his team inventively showcasing avocados in a lunch before their food service peers.



Chefs attending the Melbourne Masterclass

An avocado postcard: Vietnam

By Jenny Margetts, P2P Business Solutions.

Like Australians, Vietnamese consumers are increasingly looking for healthy, nutritious foods and as the message about the benefits of eating avocados is becoming more wide spread so is the demand for the product. As a result the Vietnamese avocado industry is seeing substantial growth and at the same time growers are receiving good returns especially for quality fruit harvested outside the main production season.

The market preference is for large green-skin fruit, which are usually consumed in avocado smoothies. On the menus of most cafés you'll find an avocado smoothie alongside a mango or pomelo juice. If you talk to the locals about putting avocado on toast for breakfast or in a pasta for dinner, they think you're just weird.

There are large plantings of avocados across the Central Highlands of Vietnam - in provinces like Dak Lak. Knowing the exact area of plantings is difficult as most are grown in small plots and often inter-planted with coffee, durian or black pepper or used as a windbreak for the coffee fields.

In the Central Highlands provinces, where coffee has often been the economic mainstay of the communities, low prices over the years forced growers to diversify their income. Growing avocados was one option that was adopted to achieve this. The local authorities also promoted this initiative, as avocados provided the opportunity to address the often low-nutrition diets in rural communities.

Being one of the main centres of production, the Central Highlands is known as one of the places to go to buy avocados - it's like going to the Adelaide Hills to buy cherries. As you drive



Coffee is often inter-planted with avocados



Avocados for sale in Lotte supermarket, Hanoi



Avocados for sale in Dalat night markets



Dakado product and advertising (source: www.dakado.com.vn)

through the villages there are clusters of road stalls dedicated to selling avocados. In the night markets in the centre of Dalat, avocados take pride of place and there are plenty of buyers at good prices - at around 10,000 - 15,000 dong (A\$6.50 - A\$10.00) per kilogram for better quality varieties.

Over the last decade there has been increased investment in improving fruit quality and developing supply chains, which has led to the development of a professional avocado industry. One trader/marketer in the business is Dakado. As a small family business with an entrepreneurial spirit and the support of an international development program and a good consulting company, they adopted a new approach to sourcing supply and managing product. As a result they have successfully developed fresh supply chains into the major retailers in Ho Chi Minh and beyond. Their success has become a benchmark for the industry in Vietnam.

Marketing Program Update

by Hort Innovation Marketing Manager Julie Willis

Over the past quarter we've focused on reigniting people's love of avocados. By applying our learnings from previous marketing campaigns and consumer research, we delivered a major online content campaign, developed engaging and consistent social media activity and created new website content with the aim of capturing the hearts and minds of our audience.

Social media

Social media is the main way we facilitate communication with our consumers to keep avocados top of mind (and top of the shopping basket). The purpose of our social media activity is to inspire people with new recipe ideas and ways to use avocados to drive more people to buy. We want our audience to help generate the conversation and encourage them to share their favourite recipes along the way.

We develop content based on three themes, each promoting avocado consumption in a different way.

1. The 'Gourmet Everyday' theme demonstrates how avocados can be used in simple to prepare recipes with a gourmet feel. For example, the 'Chefs Love Avocados' video series aimed to elevate the appeal of avocados by showing how professional chefs incorporate the fruit in a variety of gourmet dishes.
2. The 'Avocassions' theme connects avocados to specific occasions demonstrating their versatility and increasing the frequency of purchase with consumers. For example, our inventive Australia Day Pavlova and Avocado recipe video was posted and shared extensively on Facebook.
3. The 'Avopedia' theme serves to educate the consumer about avocados. For example, a video on how to peel and ripen the fruit or tips on how to select the perfect avocado at the supermarket. This theme gives people new information about avocados and primes them for purchase

as they become more comfortable with using avocados in their daily meals.

Perfect Match campaign

A key insight uncovered from our consumer research was the lack of motivation for consumers to use avocados in non-traditional ways - beyond guacamole and salads. In response we created the 'Perfect Match' campaign which ran from mid February for four weeks.

The main objective of the campaign was to expand consumer knowledge about how avocados can be used and the key foods that they can be paired with - some of which are not normally thought of by consumers.

Working alongside our creative agency, Ikon Communications, and production company, The Precinct, our idea centred on our beloved avocado going on first dates with potential candidates including chocolate, chicken, trout and haloumi, in order to find its perfect match.

To create the date scenes, we built custom-made miniature sets intricately styled to look like a restaurant, café and bar - right down to the disco lights at the club. Real ingredients were used in our quirky dioramas and played up the humour of the scenes.

Through plenty of jokes and puns, the videos brought the realities of an awkward first date to life. We created four 30-second short videos tailor-made for social media while still versatile enough to be used again throughout the year. At the end of each video an inspiring recipe featuring the avocado and his/her potential match is revealed, prompting viewers to try out and taste the pairing for themselves. The videos were promoted through tongue-in-cheek Facebook and Instagram posts and an e-newsletter (EDM). A consistent and clear message was communicated across all digital channels.

You can watch the final videos here:

<https://www.youtube.com/user/AustralianAvocados>



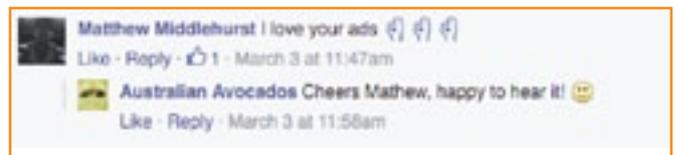
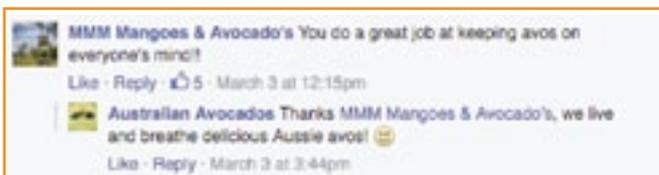
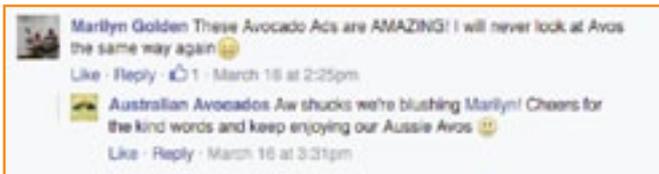
The Perfect Match campaign had plenty of puns and quirky one-liners.



Custom-made miniature sets were built to look like a restaurant, café and bar – right down to the disco lights!

Shifting consumer attitudes

The campaign gave avocados an identity that people could relate to and most importantly, be entertained by. The campaign also introduced a humorous way to communicate a product not traditionally promoted in this way.



Our Facebook fans loving our campaign.

Results

Some initial campaign results:

- Engagements (the number of likes, comments, shares, clicks, and video views) increased by 193 per cent month-on-month, from January to February 2016. This large increase shows us that our content is resonating strongly with our audience as their interaction with Australian Avocados continues to grow.
- Shorter and sharper videos have been working well on our social channels, as seen through a lift of almost 70 per cent in the number of people reached by social media.

Marketing Program Update continued

- By using online videos, we were able to achieve a far greater reach and return on investment, with the price per video view decreasing by 6 per cent, allowing our budget to stretch further. This shows that people were becoming more engaged as the entire campaign story unfolded.

The 'Perfect Match' campaign allowed us to communicate a unique story with a specifically targeted message that people loved and will remember. Undertaking similar social activity in the future will aid in increasing both the efficiency and effectiveness of content marketing as a whole.

Website & EDM

Website optimisation

Last November we changed our website agency and over the last quarter, the focus has been to ensure we are making the site perform at its best.

Content updates are made monthly with particular respect to recipes and industry trends ie what we are publishing in the newsletters and on daily spread (health messages; seasonality information; any other things that are 'trending' in the food space) on the consumer website. Ongoing updates to content and improvements to the sign-up and search functions of the website are also being implemented across the consumer, health and food professional web pages.

What are the results?

Due to the niche category Australian Avocados sits in, the best benchmark for website performance is to compare results year-on-year and month-to-month rather than looking at an external industry benchmark.

For the period January to March, website traffic grew steadily. Over the three-month period, the total number of visitors to the website increased by 30 per cent year-on-year.

The number of people visiting the site in January reached 13,486 (up 13 per cent from December), with most of the traffic coming to the site through our social media activities.

The most popular pages continue to be nutritional information, recipes, how-tos and new articles such as variety announcements (e.g. Shepard avocados now in season).

The total number of unique visitors on the site fell by 14 per cent from January to February. This was mainly due to January naturally being a higher traffic month following the Christmas holiday season. Website performance and traffic will be monitored closely over the coming months as we gain greater learning and understanding about how consumers use and navigate through the website.

EDM & results

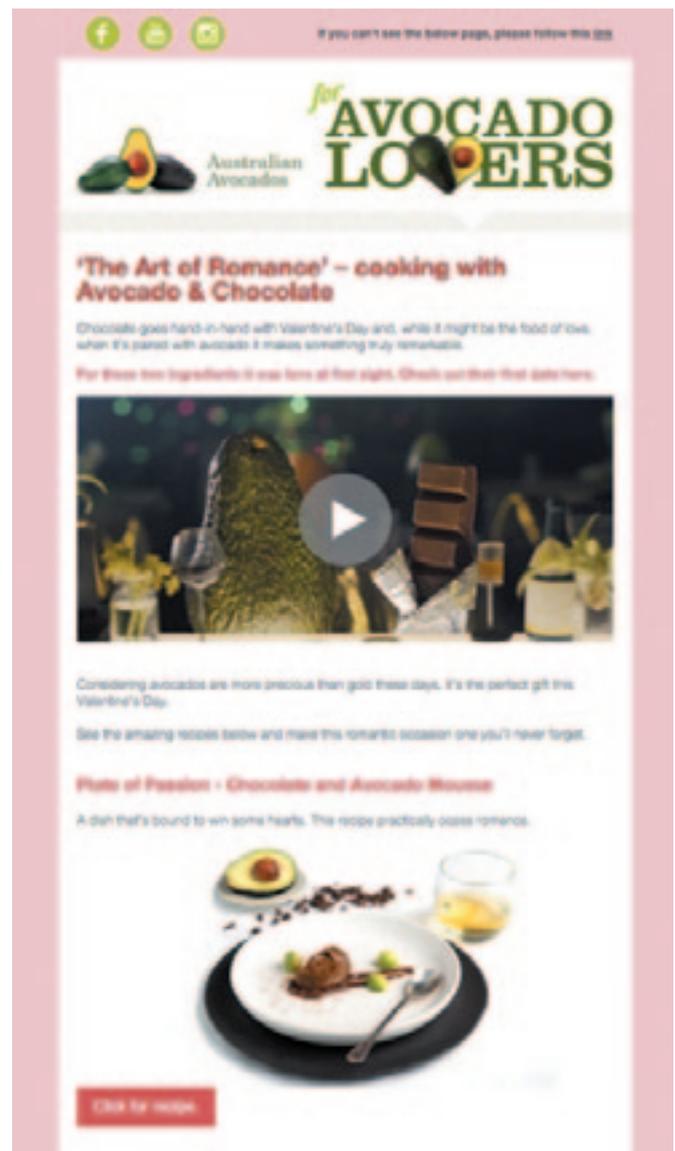
We have sent out three e-newsletters (EDMs) which have all performed positively, with the EDM open rate falling only

marginally month-on-month from 19 per cent in January to 18 per cent in February. This is on par with an overall benchmark of 21 per cent (Email Marketing Study, IBM 2015).

The purpose of our EDMs is to communicate the launch of new campaigns like 'Perfect Match' and release of new content on the website including recipes.

The EDMs also are in line with our content strategy, and include popular occasions – for example in January it was Australia Day, February was themed Valentine's Day and March was all about Easter.

The effectiveness of our EDMs in engaging consumers and driving traffic to the website is being closely monitored each month to ensure improvements are made on an ongoing basis. Now we have some more data behind our EDM performance, we are incorporating strategies to build our subscription.



Our EDMs promote our campaigns and provide recipe ideas.

	SYD	MEL	BRIS	ADE	PER
Sunday					
Monday					

Media buy

In preparation for the large increase in avocado supply over the next few months, we launched a high-reaching national TV campaign in April. TV activity ran for 3 weeks from 10 April to 30 April. To complement our TV, we ran a digital campaign to promote our TVC and 'Perfect Match' content online.

The TV buy is based on reaching female grocery buyers aged 25 to 49 years. For this demographic, networks 7 and 10 have both seen increases in reach year-on-year by 7per cent whilst network 9 saw a decline of 21 per cent year-on-year. As such, networks 7 and 10 have been selected for metro areas and Southern Cross and WINNBN for regional areas. The TV commercial will feature alongside key programs including Sunrise, 7 News, Family Feud and Home and Away. Popular programming amongst food lovers has also been selected including 7's My Kitchen Rules and SBS' Nigella Feasts, Food Safari and Heston's World. With 15per cent of the budget going towards subscription TV, we've targeted popular channels amongst our key audience including Lifestyle, Arena, Showtime and Fox 8 channels. As a result of this activity, our TV commercial will reach 1.2 million unique viewers in metro areas and 481,000 unique viewers in regional areas.

What's next from the marketing team?

To continue the momentum of activity over the next few months, and following the success of the 'Perfect Match' campaign, we will focus on developing smaller social media-based campaigns, with a Mexican month in May and winter-themed campaign to be launched in June.

Website and EDM channels will continue to support these marketing campaigns, with key improvements to be made on the website to enhance the user's experience. By focusing our content strategy on particular occasions and themes, we will gradually see Australian avocados owning more moments in the

year that will cement their place in Aussie kitchens, now and into the future.

We are also in the process of developing the three-year marketing strategic plan and the second marketing workshop took place in Brisbane on 21 April. A number of growers and AAL Board members attended to discuss the priorities.

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Best Practice Resource

For all the latest on production and supply chain practices



– log on to the Australian Avocado Best Practice Resource

Don't forget that Avocados Australia is continuously loading new information onto the Best Practice Resource (BPR).

All the key presentations from 2016 Qualicado workshops are posted in the days following the event, so if you weren't able to make it along you can still see what was presented.

The 'Grower Self- Assessment' template has been loaded in the 'Growers' section so that those who wish to monitor their production practices, and hopefully improvement, against industry recommended practices, can do so.

The 'Grower Self-Assessment' approach was introduced through the Qualicado workshop program in 2014 and repeated in 2015. Its aim is to assist growers to review and monitor practices and identify areas for improvement. Growers can also use the action plan to assist in prioritising the changes to existing practices they consider worthwhile. Ideally the self-assessment process should be undertaken annually.

We also have a range of resources soon to come, including a video on boron management in avocados (produced by DAQ).

Avocados Australia's new Retailer Training Manual a must-read.

Avocados Australia's Retailer Training Manual is now available on the Best Practice Website in the resources section of the Retailer page.

The 24-page manual provides retailer ready

reference guidelines for staff detailing how to and how not to receive, store, handle and display avocados.

The manual provides a good basic industry overview which is handy for all staff and all levels of the supply chain to be across.

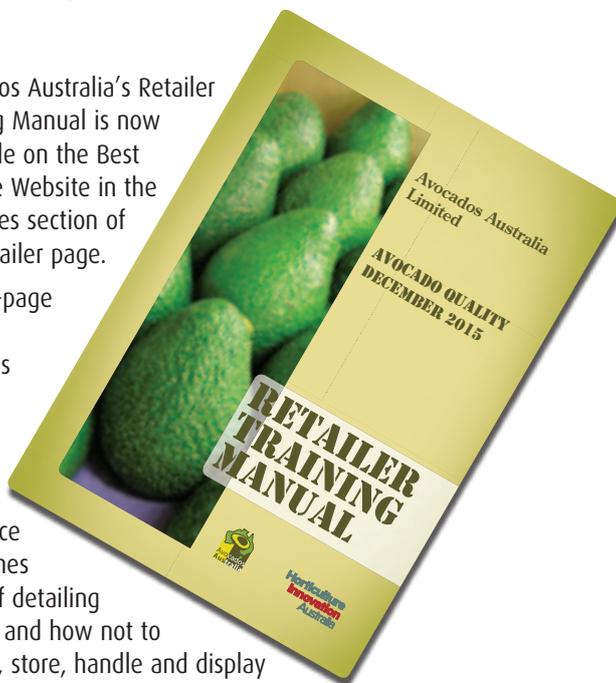
It also discusses avocado quality issues in depth, enabling supply chain professionals to identify both external and internal damage resulting from handling, storage and pest damage, to immaturity and rots.

It also tackles how to reduce avocado waste with instruction on correct handling and how to optimise fruit display.

The Retailer Training Manual provides tips on providing handling and selection advice to customers who are responsible for a lot of fruit bruising.

It also provides a list of Avocados Australia reference material available to all retailers and a series of frequently asked questions.

The Retailer Training Manual can be found in the "Retail Resources" section of the Retail page in BPR (<http://bestpractice.avocado.org.au/retail.aspx>).



Avocado Supply Chain Workshop

By Astrid Hughes, Hort Innovation Relationship Manager

“To agree the R&D priorities for improving fruit quality through the avocado supply chain”

A workshop was held 14th March 2016 to address the above objective – bringing together key industry stakeholders from across the supply chain – including AAL CEO, Chairman and Directors, key experts, researchers, wholesalers, retailers and growers - the day successfully harnessed the expertise in the room.

Briefly the workshop ran through identifying the key barriers/pain points across the avocado supply chain that are impacting fruit quality and thereby reducing consumer satisfaction (and in turn, consumption and demand).

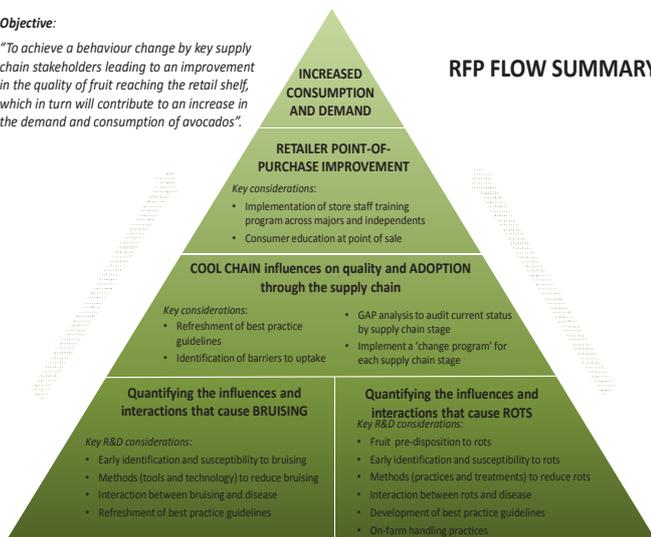
Presentations on investment to date were given to the workshop which then lead into an interactive session with attendees agreeing the barriers/pain points impacting quality followed by a prioritisation and solution process.

The workshop led to the development and request for proposals (RFP) that were then put to market. The diagram below shows the linkages between the prioritised areas developed in the workshop. The closing date for responses was 16th May 2016, the intention being to contract the next iteration of work in this space with the successful service provider by the end of June.

Objective:

“To achieve a behaviour change by key supply chain stakeholders leading to an improvement in the quality of fruit reaching the retail shelf, which in turn will contribute to an increase in the demand and consumption of avocados”.

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Retail quality improvements still needed

Avocado quality is recognised as having significant impact on consumer purchase behaviour and over the last 8 years Avocados Australia has been reporting on the findings of retail quality projects that have been monitoring the level of fruit quality available to consumers at retail stores across four capital cities.

Earlier industry research helped understand consumers' expectations of avocados in regards to maturity, ripeness and internal quality. From this research it was possible to develop minimum industry standards so that the industry's performance against these standards could be measured.

The findings from the latest industry research show that although fruit quality at retail is improving there is still more to be achieved.

The results for Hass show a clear trend of reduced damage in fruit at retail level. In 2008, 28% of Hass fruit had damage of greater than 10% and did not meet consumer expectations. In 2015, this figure had reduced to 20% (see Figure 1 below). In other words 80% of Hass fruit was meeting consumer expectations. (The current industry strategic plan challenges the industry to achieve 90% of fruit meeting consumer expectations).

Research undertaken by DAFQ (*AV10019: Reducing Flesh Bruising and Skin Spotting in Hass Avocado*) identified that a large portion of bruising was caused by supply chain handling with most of the bruising occurring at retail level. It is thought the increased Hass damage over the last three years (2013 - 2015), observed in Figure 1, is possibly due to higher retail prices during this period encouraging consumers to be more discriminating and handling the fruit more before they make a selection, which has resulted in increased bruising in fruit on display.

The results for Shepard indicated low levels of total damage - less than 10% over the first 7 years of monitoring. However, there was a spike in total damage in 2015 which is attributed to bruising, diffuse flesh discolouration and vascular browning late in late season (May) fruit (see Figure 2).

The research also clearly demonstrated the range of internal defects that consumers were experiencing with both Hass and Shepard, with bruising being the most significant internal defect followed by fruit body rots. See figure 3 & 4 below.

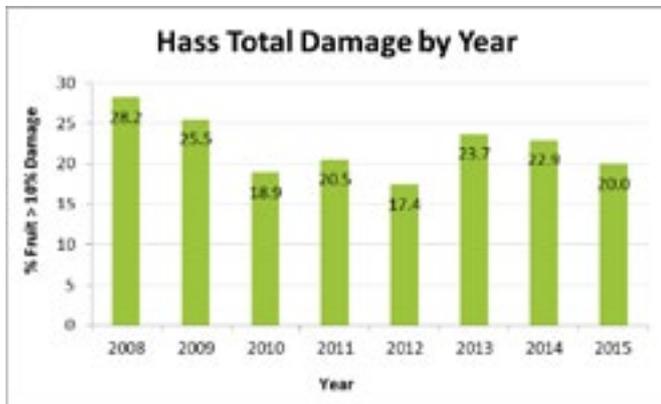


Figure 1: Hass - Total Damage by Year - 2008 -2015

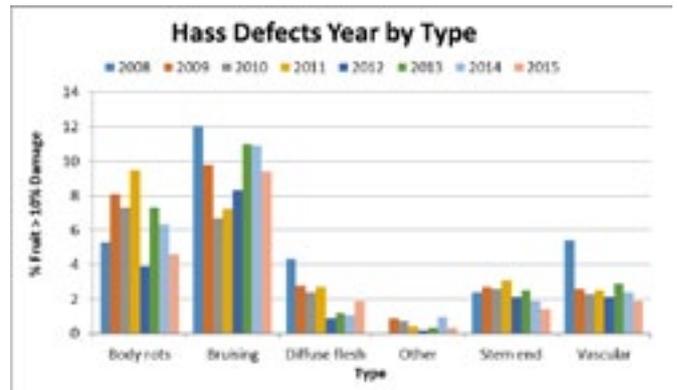


Figure 2: Hass Defects - Year by Type January 2008 - December 2015

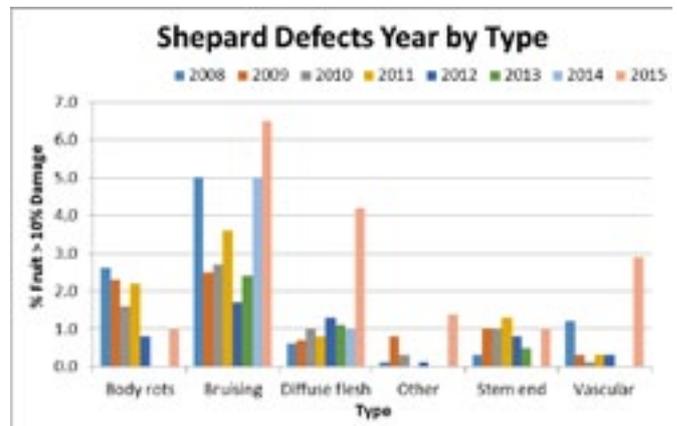


Figure 3: Shepard Defects - Year by Type January 2008 - December 2015

Analysis of dry matter levels of unripened fruit sampled from wholesalers in Sydney Markets identified the presence of immature fruit on the market as an ongoing issue. This was particularly a problem at the commencement of harvest in each region. The results from the dry matter testing were reported each month through the Infocado Report and individual results were also sent to businesses that had fruit sampled.

The data was also analysed to look at the damage and incidence of bruising by store type. The results show that independent retailers consistently have lower incidence of total damage and bruising compared to other store types, including the major supermarkets and independent supermarkets.

The findings of this research have been shared extensively with all sectors of the supply chain as the project has been progressing. In addition to articles in *Talking Avocados* and presentations at Qualicado workshops in the regions, meetings

have been held with wholesalers and major retailers to explain to the findings and their implications for business; and to discuss how issues might be addressed. The findings also informed retail training activities that Avocados Australia were conducting across five capital cities.

At the time of writing of this article HIA have redesigned and are tendering future research work aimed at improving retail quality outcomes for the industry.

Project details: This research work was undertaken by Avocados Australia over the last 3 years as part of HIA project AV11015: Avocado Industry Fruit Quality Benchmarking. It was completed in March 2016. Predecessor projects include AV07018: Avocado Retail Quality Surveys and AV08034: Avocado Retail Quality Surveys Phase II. The consecutive projects ran from 2007 to 2015. Detailed final reports on the research are available from HIA.



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...ISN'T IT TIME YOU CAME ON BOARD?

Avocados Australia to develop ripe-and-ready markets in Asia

Avocados Australia has been awarded a funding grant from the Australian Government under the Package Assisting Small Exporters (PASE) program to support the development of export markets.

The project is being undertaken in partnership with the three grower-owned avocado export companies - The Avocado Export Company, Sunfresh and The Avolution - which are also each providing a financial contribution towards the project.

Avocados Australia is undertaking the project in partnership with researchers and service providers from the Queensland Department of Agriculture and Fisheries, P2P Business Solutions and Trade and Investment Queensland.

The aim of the project is to research how Australia can open markets and deliver a high value offering of our avocados into selected Asian and Middle East markets.

Titled *Improving Market Access for Australian Avocado in Asia and the Middle East* the project will:

- Undertake a market analysis to scope the opportunity, market conditions and requirements to enter a new Asian market (the Philippines) and provide a platform for Australian exporters to enter this market.
- Deliver a differentiated premium product in the Singaporean and Malaysian markets by providing the knowledge, skills and tools for selected supply chains to develop a 'ripe and ready' program for the retail category to drive demand for premium Australian avocados.
- Assess the potential of selected markets in the Middle East (likely to be high-end food-service) and encourage exporters to develop these markets for premium avocados.
- Work with Australian growers so they are aware of the need for the industry to proactively develop export markets, have

the confidence and skills to participate in export supply chains and understand the potential of different export markets and their specific requirements in terms of quality, size and phytosanitary requirements.

In these markets the focus will be to provide a high quality, premium product and service offering to differentiate and achieve a competitive advantage against cheaper producing countries (e.g. South Africa, South America).

A major component of the project is to develop and test a 'ripe & ready' marketing program into Malaysia and Singapore to build export demand for the Australian avocado category.

This approach is driven by consumer research in Australia and overseas confirmed by Trade & Investment Queensland (TIQ) that indicates one of the key constraints in increasing avocado consumption is the inability of consumers to choose ripe avocados and/or ripen an avocado.

The research concluded up to 85 per cent of consumers prefer to purchase avocados that are ready to eat and/or use immediately, yet this product is not readily available in many Asian markets.

This project's work will also be applicable to re-established or new markets in Thailand, Japan and China once quarantine barriers have been overcome.

The project commenced in February with a project team meeting in Brisbane. A desk top assessment of the Singapore, Malaysian, Philippine and Middle East market has been completed and will be published in future issues of Talking Avocados. A retail partner for the 'ripe and ready' pilot program in Singapore has been secured and work is underway to identify the most appropriate collaborators for managing the fruit ripening and other steps in the supply chain.



Snapshots - International Avocado Research Update

These snapshots are compiled from abstracts of published scientific papers collated in the CAB Direct database. Dates provided reflect the date research was published.

If you would like a copy of the abstract related to these snapshots please contact Jenny Margetts, P2P Business Solutions, at jmargetts@bigpond.com or 0418215276.

Production

Pollination and fruit set

USA (2016): Determining the causes of distinct periods of excessive flower and fruit drop in 'Hass' avocado is critical for the development of strategies to increase fruit set and yield. Research to determine pollination and fertilization rates of abscising flowers and to quantify the viability of developing seeds and hormone concentrations of abscising versus persisting fruit through fruit drop events was undertaken. The results provide strong evidence that the majority of flowers and fruit of 'Hass' avocado abscise due to a lack of pollen germination and subsequent fertilization. In addition, the results suggest that abscisic acid accumulation is related to seed abortion and reduced fruit growth in abscising fruit.

Fruit set - carbohydrate and boron content

New Zealand (2016): Avocado trees invest heavily in flowering but fruit set percentage is unusually low. Research showed that starch and all individual sugars were higher in the styles from flowers that went on to successful fruit set. Boron content was significantly higher in the styles from flowers that successfully set fruit in New Zealand but no significant difference was observed in the boron content of styles from Spain.

These data support previous findings that suggest sink strength of flowers is predetermined at anthesis and influences the probability of fruit set for that flower.

Sunblotch viroid detection

South Africa (2015): The presence of avocado sunblotch viroid disease (ASBV) leads to significant losses in yield and fruit quality. Detection of ASBV is important in controlling this disease, as symptomless trees pose a threat in the spread of ASBV. Fruit from infected trees usually develop a range of symptoms however there is no report of ASBV detection on 'Hass' fruits. Contrary to previous findings that the viroid was not necessarily detected in the leaves of avocado trees showing ASBV symptoms, in this study ASBV was detected in all fruits showing ASBV symptoms as well as in associated seeds.



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Snapshots - International Avocado Research Update

Rootstock and uniconazol effects

Chile (2015): The combined effect of rootstocks and uniconazol-p application via irrigation on the canopy of 'Hass' avocado trees was investigated. The study used nine-month-old 'Hass' trees with Duke 7 clonal rootstock and Mexicola rootstock from seed, together with different rates of uniconazol-p. It was found that the differences among variables were at rootstock level; Duke 7 showed greater vigor and earlier flowering than trees with Mexicola. In addition, Duke 7 had no response to the application of uniconazol-p, whilst there was no effect on either shoot length or the proportion of potential flower buds in relation to the total number of buds where uniconazole-p concentration was above 0.007 g.L-1.

Harvest

Non Destructive Maturity Testing

South Africa (2016): The feasibility of near-infrared spectroscopy (NIRS) as a rapid non-destructive method for predicting maturity parameters of individual avocado fruit was evaluated. NIRS prediction results showed that Moisture Content and Dry Matter could be predicted accurately and demonstrated the potential of this system for non-destructive evaluation of avocado fruit maturity status.

Postharvest

Postharvest high pressure washing

New Zealand (2105): The need to improve market access and reduce biosecurity risks has led to a range of innovations around high pressure washing (HPW) of fruit to remove surface pests and other contaminants before packing. Two systems have been successfully commercialised, including one for use in avocado.

Products and other research

Oil extraction methods

Italy (2015): A review of traditional and modern extraction methods with particular focus on extraction processes and technology for cold pressed avocado oil production was completed.

Use of avocado peel in tea formulation

Brazil (2016): Dehydrated avocado-peel tea was manufactured and the antioxidant activity was evaluated to determine its value as functional product. Avocado peel, especially dried avocado peel, contains major phenolic compounds and flavonoids. The avocado-peel tea showed good antioxidant activity and had good acceptability by sensory analysis as a promising product.

Kidney stones

Turkey (2016): Avocado leaves and Viburnum opulus (guelder rose) fruits have been used for years in Turkey to reduce the formation of kidney stones. A study evaluating the effect of these plants in rats showed oxidant damage and crystal formation was prevented in kidney tissue samples.

Novel food ingredient for dogs

Canada (2015): Mannoheptulose (MH), a sugar found in avocados, has been preliminarily investigated as a novel food ingredient for dogs. This study aimed to determine the effects of dietary MH, delivered as an extract of un-ripened avocado, on energy expenditure in healthy adult dogs. The results suggest that MH affects energy balance of adult dogs.

Osteoarthritis (knee) management in humans

Canada (2016): Studies have shown that there is a rationale for use of antioxidant supplements in management of osteoarthritis of the knee. The supplements with most evidence for benefit for pain relief and function with this ailment were based on curcumin and avocado-soya bean unsaponifiables.

Osteoarthritis management in dogs

Belgium (2016): A review of dietary supplements, including avocado-soya bean unsaponifiables, for the management of osteoarthritis in dogs in studies from 2004 to 2014 was completed.

Management of foodborne pathogens in processing facilities

South Africa (2016): Control of pathogens in ready-to-eat food products is a challenge, specifically in foods that cannot undergo a heat-treatment during processing. The study was able to develop successful control strategies for the management of Listeria in an avocado processing facility.

Biodegradable film

Brazil (2015): The use of avocado peel extract in the development of innovative packaging solutions using active biodegradable films with antioxidant activity was studied.



News from Around the World

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

Overview Global Avocado Market

Global avocado consumption is growing by about three percent every year; however, production growth remains a little behind. For now, the market is big enough for all players involved. Consumption is growing rapidly especially in North America and Europe. At present, Europe is recording high prices due to slow supply. In America, prices remain at a reasonable level. China is a major import market. Worldwide investments in the product are on the rise.

Europe

Western European markets mostly prefer ready-to-eat Hass avocados, while Eastern European, Greek and Italian customers still often go for green skin avocados, such as the Fuerte and Pinkerton. The popularity of Hass avocados is expected to grow. The biggest challenge in the coming years will lie in the sourcing. Three years ago, not a single avocado was imported by China and now the country receives thirty containers per week. Importers are preparing for a worldwide shortage of avocados in the coming years.

The Chilean season came to an end in February with good volumes. Afterwards, in March and April, there is always a gap in the market, which is normally filled by Spain and Israel with high price; however, productions in these countries have been limited due to the heat wave recorded in May last year. Last month marked the arrival of the first South African avocados. South African avocados were hit by hail and the supply would have been 25 percent lower, but new plantings have made up the deficit to bring estimates to around the same as last year.

June is normally the peak month for avocados in terms of arrivals, and this will still be so this year, but while in 2014 we

saw prices in June of up to 5-6 Euro, last year it was no longer the case and importers expect prices this year not to fall under the 7.50-8 Euro per kilo.

Benelux: a good market

A Belgian importer affirms that the impact of the terrorist attacks on sales can still be felt in the capital of the country. There are fewer tourists in Brussels, which takes a toll on the market. Avocado prices are currently high, ranging between 14 and 18 Euro, depending on the variety, quality and maturity. The supply consists mainly of Fuerte and Hass from Peru from Mexico. Due to the high prices, sales concentrate mostly in the gourmet sector.

While avocados are increasingly popular in many European countries, the Dutch market was a little a little behind. This trend has now been reversed, as Dutch consumers are learning to appreciate the fruit. Avocados are also known as the new tomato.

UK market growing

The UK market has grown by 30 percent YOY and suppliers cannot keep up with the rising demand. At present, there are Spanish, Moroccan and Israeli avocados on the market. Moreover, there is some supply from Peru, but the quality of these avocados is not up to the highest standards. A trader says: "Five years ago, we had never imagined we would sell so many avocados, and that applies not only to the British market." The exchange rate is unfavourable for British importers. The British retail chain M&S recently presented an extra-large avocado which is only available for two weeks.

Sweden: growing demand despite high price

The growing consumption in Sweden is being driven by two factors, according to a trader: effective promotions via social media and the publication of articles on the health benefits of the fruit. Also, Mexican tacos are popular and in Sweden people

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News from Around the World continued

like to make their own guacamole.

The market is doing well. Demand is growing, despite the high prices. One importer explains he is concerned about the danger of growers harvesting too early to take advantage of the high prices.

Norwegian market growing

Prices are also high in Norway; nevertheless, demand is on the rise. Last year, imports grew by 10 percent compared to 2014. Over the past 25 years, avocados have gone from being just a niche product in the hospitality industry to becoming a popular supermarket product. The supply comes largely from Spain and some of the fruit arrives also via the Netherlands.

Italy: a stable market

The demand for avocados remains stable in Italy. Even though the fruit is still considered a niche product, traders believe there is potential for growth. The market share of avocados is growing steadily and Italians are also learning to identify quality and the different varieties. The largest consumer groups are Italians who want to live healthy, as well as vegetarians.

At present, imports are arriving from South Africa and South America. The Sicilian season, which overlaps with Spain and Israel, has already finished.

The supply is low, so prices are high. While prices normally stand at around 4 Euro per kilo, they are currently twice as high. On the wholesale market in Bologna, the avocados currently available come from Chile and Peru, but avocados are a sensitive product. With high temperatures, sales are low.

The Sicilian season kicks off in September/October and lasts until April/May. With the introduction of new varieties, growers expect to extend the season until June.

Spain switching to imports

The Spanish domestic production is falling and the market will soon switch to imports from Peru, South Africa, Colombia, Mexico and Kenya. In this period, there are shortages on the market which drive prices up. Those supermarkets which didn't sign enough contracts are struggling to fill the shelves. The Peruvian supply is slow and South Africa will benefit from it.

Traders expect Mexico to gain a solid foothold in the coming years because of the stable quality of its production. Colombia has also shipped significant volumes to the Iberian Peninsula. According to traders, avocados are the only fruit recording an upward trend both in terms of volume and prices.

Israel, a top avocado exporter

The Israeli export sector is one of the largest in the world. Israel is in the top 10, with annual exports totalling 50,000 tonnes. This corresponds to 6.2 percent of the global avocado trade. Furthermore the domestic market is also large. The average per capita consumption stands at 5 kg per year, making Israel one the largest consumers worldwide. Of the 80,000 tonnes produced annually, about 35 to 40 percent is sold on the domestic market.

Europe is the main export destination. During the winter months, Israel has the largest share in this market. Demand is growing steadily and this is boosting the expansion of the

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acreage, with about 250 new hectares per year. One of the biggest advantages for the growers comes from the cultivation of different varieties at different production stages, which results in a longer export season. The most popular variety is still the Hass, with 35 percent of the existing acreage and 60 percent of all new plantings. Other varieties grown are mostly green, such as the Ettinger, Fuerte, Pinkerton, Arddit, Nabal and Arad. These varieties do particularly well in the domestic market, although there is also a shift towards the Hass.

Mexico sees bright future ahead

The Mexican avocado industry has a great future, according to a trader. The country's large production capacity and its climatic and geographical advantages make it possible to supply the fruit all year round. Prices for exports to the US have declined in recent years, but the downward trend seems to be stabilising. While Europe generally pays lower prices than the US, things have changed this year. At the moment, prices in both markets are at the same level.

Guatemala investing in year round production

In recent years, Guatemala has made huge investments in avocado crops. Production has grown by 42 percent in the last two years. Because of changes in the cycles, the season could be extended from December to March to an almost year-round program. Some export tests have been carried out, with shipments to the Netherlands. This year, the volumes are large enough for exports to grow. Exporters aim to fill the gap in the product's supply in July and August.

Costa Rica: problems after closing of the borders

Last May, Costa Rica closed its borders to imports from Mexico, which had dramatic consequences for the market, with reported price increases of up to 90 percent. Importers had to set their eyes on Chile, which managed to cover 35 percent of the disappeared Mexican supply. Moreover, there has been some smuggling from Panama.

Colombia is working on trade agreement with US

The Colombian authorities are working on a free trade agreement with the United States. For now, exports go only to the EU. Furthermore, coca plantations are being cleared and replaced with avocado crops. The government is backing this development.

Peru records delayed harvest

The harvest in Peru has been delayed by one month by El Niño. However, the country's prospects remain positive; demand is



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 or call toll free 1300 303 971.

For Associate and Affiliate membership application forms please go to: 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

For more information or assistance please go to www.avocado.org.au or call on **07 3846 6566**

News from Around the World continued

high, as are the prices. The government proposed a new quality control to guarantee the quality of its exports.

Argentina: mainly Torre

The most exported variety by far is the Torre, which is slightly larger than the Hass and with a smaller pit. The UK and France are the markets where the variety is most demanded. The harvest takes place between September and November, with exports taking place also during those months. The rest of the year, the production goes to the domestic market.

Brazil focuses on growth

The supply of Brazilian avocados to the European market is on the rise. This season, a total of 280 containers are expected to be shipped to Europe. The peak is reached in April and last until the second week of May. In the coming years, the acreage is planned to expand. A company reports to have plans to plant 200 new hectares.

South African acreage expanding

Strong investments are being made in the cultivation of avocados. A company reports to have plans to go from 700 hectares to 2,000 hectares in the coming years. In total, the country has 15,500 hectares; an acreage which is expected to increase by 500 hectares annually in the coming years. Estimates for the coming season point to a production totalling 12.8 million 4 kilo boxes, which is about 250,000 boxes more than last year. Despite the rainfall recorded in the north of the country, there are still concerns for the coming season. The heat is good for the quality, but some extra rain will also be needed in the short term.

The bulk of the country's exports go to Europe, but shipments are also made to the Middle East and Africa. Moreover, we are look for new markets in the Far East. Traders see a growing trend in all these markets.

Kenya aims to strengthen its position in the market

The Kenyan season, which usually lasts from March to July, has recently started. While torrential rains caused some problems for the sector, the production is good and demand shows an upward trend. The size of the Hass avocados is small, also because growers are harvesting early to take advantage of the good prices. The main market is Europe, particularly the Netherlands. A trader hopes to benefit from South Africa's downward prospects.

US: Mexican supply keeping prices low

The US imports avocados from all producing countries. A Mexican exporter, therefore, expects the US market to set the international price trends. The Mexican supply is keeping the prices of the Californian production under control. Estimates

suggest that California's harvest this year will be greater than in 2015. Due to the greater supply, prices are below the level recorded last year. On 12 April, Californian avocados (Hass, 32s) cost between \$23.25 and \$25.25, while Mexican avocados (Hass, 32s) stood between \$20.25 and \$23.25.

In the coming months, import volumes will fall, namely in the summer months. This lower supply will be absorbed by California. Towards the summer, demand will continue to rise.

Canada prefers Mexico

The Canadian market prefers avocados from Mexico. About 90 percent of the fruit imported by the country comes from this country. Last year, Canada's imports from Mexico totalled 63,000 tonnes. Imports have grown by 27 percent over the past two years. Canadians annually consume 250 million tonnes of avocados.

Australia sees opportunities

The Australian avocado market has developed particularly well in the past few years. During the summer months, the demand often exceeds the available supply, resulting in good prices for the growers. The downside is higher supermarket prices, which can potentially be a deterrent to consumers. The market growth recorded by avocados is partly the result of the fruit's healthy

properties, but also to the successful promotions carried out in recent years. Also, avocados are available all year round. Besides the domestic production, there is also supply from New Zealand.

Furthermore, the market has managed to respond to the wishes of the consumer. The sizes that are not popular are exported, which stimulates the domestic market. However, there are some concerns about imports from Chile, Peru and Mexico. The Government has said to be worried about the risks for the country's agriculture involved in the import of avocados from other countries, including Mexico.

China: a growing market

Southern China, namely the provinces of Guangzhou and Hainan, has a small avocado production. The planting remains limited and there is no commercial production. Avocados are becoming a popular import fruit, especially in the big cities on the East Coast. Mexico and Chile have access to the Chinese market, and last year, Peru received also permission to export. The Peruvian minister estimated China's potential at 50 million dollars.

Ready-to-eat avocados are a novelty in the market, as they were only recently introduced. Investments are going to ripening facilities and to promotions to further develop this market.

Author: Rudolf Mulderij

Source: www.freshplaza.com



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