

# Talking Avocados



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**PMA Fresh Summit 2006**

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**Silicon & the control of Phytophthora**

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**Canopy management strategies**

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**Summer 2006**

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# Chairman's Perspective

This is my first column for *Talking Avocados* as the incoming Chair of the Avocados Australia Board. I commenced in this role in September 2006, and by the time *Talking Avocados* goes to press, I will have had the benefit of a good transition and handover from Rod Dalton, the out going Chair.



I come to the position with a range of emotions and thoughts. Certainly I am excited at the prospect of heading the Avocados Australia Board. Avocados Australia is highly regarded as a grower peak body and has a great future. There are very few grower groups that are as cohesive or effective.

Equally there is some trepidation at the challenge of building on the success that has been Avocados Australia over the past decade. Grower peak bodies are challenging 'beasts' to grow and to keep moving in the right direction, so I have great admiration for the achievements of all concerned over that time. In particular in this regard, I acknowledge the leadership Rod Dalton has provided.

I am enthusiastic about the chance to lead a team of capable and dedicated Board members and management. It is evident that the management and Board members have great loyalty and ownership of the organisation. This is a great asset.

My goals for Avocados Australia include addressing real and potential issues facing the industry. These include substantially increased production, which is looming on the horizon, potential increased numbers of imports, and of course the possibility of some devastating incursion of pest or disease. I am also passionate about increasing the concept of smart marketing and the investigation and development of export market opportunities for our industry.

It is vital for us to continue to increase membership of Avocados Australia, ensuring that this body stays vibrant and relevant, taking into account the whole range of needs and interests of all sectors of the avocado industry across Australia. Increased membership will be built around the provision of high quality services and commercial benefits that deliver value to our members.

## Avocado Blight (*Sphaceloma perseae*)

As you are aware, there has been quite a deal of discussion about the discovery of avocado blight in New Zealand.

Avocados Australia has been working behind the scenes to secure a strong system of science based protection for Australian avocado growers. Following meetings with Avocados Australia, Biosecurity Australia has implemented some mitigating measures for the control of this disease. These will be mandatory for all avocados exported from New Zealand to Australia. Avocados Australia considers that those initial measures are not sufficiently effective for in field and post harvest treatment. I can assure you that Avocados Australia is doing its utmost to obtain a satisfactory outcome with robust preventative

measures in place to control the disease in New Zealand, to ensure avocados coming to Australia are disease free. Avocados Australia is working with Biosecurity Australia to secure increased measures that will be effective and sure. The bottom line is that Australia does not have this disease and we don't want to get it.

The matter will not be put to rest until Biosecurity Australia identifies and enforces scientifically based, appropriate, robust and effective preventative measures.

I would like to give my special thanks to Antony Allen, who spent a large proportion of his annual leave (spending precious time with his wife Anna and baby Aiden) addressing this matter. Thanks also to Avocados Australia Board members who have put considerable time and energy into seeking an appropriate solution.

If you have any queries about this matter, please direct these to Antony Allen at the Avocados Australia office.

## Avocados Australia Board Members

### Farewell

There have been three changes to membership of the Avocados Australia Board in the last 12 months.

Wayne Franceschi resigned from the Board in October 2005 and Rod Dalton in September 2006. Ron Simpson retired from the Board at the end of his term in September 2006.

I would like to pay tribute to each of these people for their significant contribution to the Board. Wayne was on the Board for nine years and worked tirelessly for the good of the whole avocado industry. Ron has also played a significant role, providing noteworthy experience and a wealth of knowledge. I am sure you would all know the contribution that Rod made. I would like to sincerely thank all these people and let them know that they are certainly missed.

### Welcome

Representing Western Australia, Jennie Franceschi joined the Board in the capacity of a casual replacement, and in the September 2006 elections, was elected in a full capacity.

John Walsh joined the Board in September 2006, representing Central Queensland, and Daryl Boardman now represents South Queensland.

I welcome these three new Board members and I am confident they will all make a significant contribution to Avocados Australia.

*Henry Kwaczynski*

Henry Kwaczynski  
Chairman, Avocados Australia



# Industry Matters

Written, edited and compiled by

**Antony Allen** CEO of Avocados Australia

## Quarantine: Avocados Australia wins tougher protections

Avocados Australia has won important changes to the mitigation measures to protect the domestic industry from contracting avocado blight from imported fruit. But it says more improvements are needed to the implementation of the rules by the Australian Quarantine and Inspection Service.

Quarantine measures to protect Australia from avocado blight were first implemented on the November 21, prompting criticism from Avocados Australia.

It recently uncovered the disease in New Zealand and wants to prevent it spreading into Australia. Australia and Chile are the last two avocado producing countries free of the costly disease.

“The measures that were put in place on the November 21, 2006 lacked scientific rigor,” says Chair of Avocados Australia, Henry Kwaczynski.

“We sought expert advice on a number of aspects, and were extremely concerned about the lack of science to prove the effectiveness of two out of three of the chemicals being used to protect Australia growers.”

Mr Kwaczynski says Australian growers have a number of competitive disadvantages to contend with, without being lumbered with the potentially devastating exotic disease of avocado blight.

But he says if implemented and policed effectively, the improved mitigating measures that were put in place as of December 5 should offer protection to Australian avocado growers.

Avocados Australia is still concerned about the effectiveness of policing the mitigation measures in orchards and packing sheds in New Zealand.

It says there have been a number of breaches of the first set of measures, and New Zealand avocados are still being held in Melbourne, Brisbane and Sydney due to errors in the clearance process in New Zealand. There have also been a number of containers prevented from being loaded on to ships in New Zealand for similar errors.

“The written protocol won’t protect us,” Mr Kwaczynski said.

“AQIS has to effectively implement and police the protocols.

“The verification of spraying in orchards and the effectiveness of the in-orchard spray application continues to worry us.”

Source: Queensland Country Life

## The risk to Australian growers greater than cold wet NZ

The risk to Australian growers is much higher than colder, wetter New Zealand avocado orchards. Reports are now coming to the surface of previous New Zealand avocado seasons that have had large amounts of visible avocado blight symptoms. It is becoming apparent that the different yearly temperatures in New Zealand have affected the visible signs of the disease. About 4 to 5 years ago there was a large outbreak of the disease.

The New Zealand weather is clearly reducing the severity of the disease. Australian growing conditions will not give our growers the same reduced effects. Australia has warmer and more humid growing environments, the perfect breeding environment for Avocado Blight.

Trade can continue, Avocados Australia has never asked for a permanent ban on fruit, but only with robust systems in place to ensure Australian growers are protected from this destructive disease.

## Quarantine protocols imposed on New Zealand avocados

Biosecurity Australia has imposed new quarantine protocols on avocados imported from New Zealand. The disease avocado scab has been found in New Zealand and is not known to be in Australia. The new rules will require fruit to be sprayed before harvest and dipped in copper after harvest.

Hugh Moore from New Zealand Avocado Growers says 90 per cent of the crop comes to Australia in a market worth \$30 million and he is rejecting any suggestion that fruit imports should be banned. “The spraying mechanisms do work and that’s in their own science,” he said.

“It’s quite clear it does work and I would say that’s slightly protectionism, in fact, I think the Australian grower wants to remember that we’ve grown the segment of their market, the business at retail has certainly been growing to the benefits of both parties.” Source: ABC

# WARNING

Avocados Australia has for a number of years paid a large amount of money for the industry’s right to use the Heart Foundation “Heart Tick” on avocados.

**If you are using a “Heart Tick” logo from anyone other than the label companies “Label Press” or “Compass Labels” you are acting illegally.** No other label printers are able to legally print the “Heart Tick” for use on avocados.

Avocados Australia is undertaking a clean up of the “Heart Tick” printing. We will lose access to the “Heart Tick” logo if it is used illegally.

Avocados Australia, AUF and the Heart Foundation will enforce their Registered Trademark rights to the fullest extent.

If you have non-genuine labels do not use them. If you know of label companies offering to print non-genuine “Heart Tick” labels for you please let us know on **1300 303 971**, so we can all help keep this valuable tool.

**All growers could lose access to the “Heart Tick” logo if you don’t act now.**



CERT TM

Industry Matters  
continued

### **Northern Territory growers brand small mango trays a flop**

New, smaller trays used to transport mangoes have been branded a failure by many growers in the Northern Territory. The major supermarket chains Coles and Woolworths introduced the 12 per layer trays to reduce handling.

But they are estimated to have cost Territory packing houses more than \$2 million, which is not being recouped in the marketplace. Karl Gygar from Pinata Marketing says the supermarkets will have to accept the trays are not working.

“Customers are looking at these boxes and thinking that they’re either rejects from Coles and Woolworths, and so obviously not worth a premium price,” he said. “I know for a fact that a lot of Queensland growers have cancelled their 12 per layer box orders just due to the reaction in the market.” Coles and Woolworths have not been available to comment. Source: ABC

### **Levies on imported avocados**

Avocados Australia has been working on a future system that would ensure that all avocados that imported into Australia would be required to pay the same levy towards generic promotions and marketing in the Australian market that Australian growers pay. Australian growers have developed the Australian market over many years, increasing consumption in the last 5 years from 1.2kg/person/year to 2.5kg/person/year. This market development has ensured that the Australian avocado industry has remained viable.

The issue facing the Australian industry into the future is the increased freeloading of imported avocados on our grower funded marketing and promotion program. The Australian industry continues to invest in growing the overall consumer market. The current situation is that New Zealand only contributes to the supermarket programs, as do all Australian growers that supply the supermarkets.

We are working with both the New Zealand avocado industry and many of the other Australian horticultural industries to ensure that there is equity in the costs/benefits when developing the Australian market into the future.

### **Top banana does dirty on Chiquita**

Nothing undermines a board quicker than having one of your largest shareholders, and namesake, of all things, go against your recommendation and accept a hostile takeover bid. So it will be interesting to see the outcome after Chiquita Brands South Pacific’s parent company and second biggest shareholder - US top banana Chiquita International - accepted the 74.5c per share offer from Tradefresh.

The 10 per cent stake helped Tradefresh, a joint venture between agribusiness Timbercorp and family-owned green grocery Costa Group, increase its stake from 31.76 per cent to 43.05 per cent. Tradefresh says the acceptance was a major step forward for its \$110 million bid, which

represents fair value for Chiquita shareholders.

“The offer price is 3c above Chiquita’s share price and represents a premium of 35 per cent to Chiquita’s share price prior to the bid,” Tradefresh chairman Robert Costa said. The stock closed unchanged at 71.5c yesterday, still 3c below the takeover offer, which values Chiquita at about \$110 million.

Chiquita Brands has rejected the bid, saying it does not reflect the benefits of strategic changes the company has made in recent years, which are yet to flow through to earnings. The banana and blueberry grower has also said the offer failed to reflect the benefits of its acquisition of Queensland Mushroom.

Chiquita, which had a tough 2005-06, is forecasting a significant rise in earnings in fiscal 2007 and 2008. In 2005-06, the company was forced to issue three profit downgrades, culminating in March when Cyclone Larry wiped out its banana farms in Innisfail and Tully in north Queensland. Source: Sydney Morning Herald

### **Horticulture vision receives \$900,000 government boost**

The Federal Government and industry will jointly fund the development of a strategic vision for the horticulture industry in Australia.

The Government has approved \$900,000 to fund the program, which is to be matched by industry contributions.



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## Industry Matters continued

“I understand that the bulk of the industry funds have already been pledged with supermarkets, wholesalers, central markets, managed investment schemes and grower levies all contributing,” Agriculture Minister Peter McGauran said.

The project will begin in the New Year with the first step being the appointment by the Minister of a leadership group, with representatives from all sectors of industry.

“For the first time we are developing an industry plan for the whole of the horticulture industry that takes a realistic and detailed look at what is happening and adopts a cohesive approach to adding value in the future,” Mr McGauran said. “The new plan will provide guidance for the whole industry and involves all of the major players throughout the supply chain, from growing produce through to buyers and consumers.”

The plan will influence the industry over coming decades in fundamental ways by driving competition and competitiveness.

Other areas for attention of the plan are:

- preparing for a greater export focus, particularly gaining market access and improving export marketing;
- better identification of consumer needs to improve production and marketing;
- the development of measures to raise quality, consistency and reliability throughout the industry;

- encouraging greater cohesion along the supply chain in areas where break downs are reducing value;

- raising the efficiency and sustainability of participants throughout the industry;

- the investment and direction of R&D and marketing resources.

Source: Rural Press National News Bureau

## **Wanted: Innovative product and marketing entrepreneurs**

Today's supermarket shopper is most likely to be single, shops almost daily and makes a decision on what to have for dinner based on what's available in the supermarket, according to research commissioned by NFIS Ltd. The research into Australian retail market trends, undertaken by *freshlogic* and presented to the National Food Industry Council at its November meeting, also revealed that the shopper is more frequently looking for ready prepared meals rather than ingredients and is more likely to head for the local café or restaurant to get that meal if they can't find one in the supermarket. All this means that the share of stomach is moving to food service - at the rate of 11.8 per cent in the nine months to August, 2006. Opportunities for value-adding abound for the innovative producer and marketer.

Interested in the freshlogic report? Visit [www.nfis.com.au](http://www.nfis.com.au) and see our Facts and Figures/Market Trends area.

## **Looking for a piece of the export pie?**

Australia's export credit agency, Export Finance and Insurance Corporation (EFIC), has launched a new product called EFIC Headway that can boost access to working capital for SME exporters by up to 20%. EFIC Headway is a guarantee from EFIC to a bank that enables it to lend additional funds to eligible SMEs without obtaining additional security. The guarantee is attached to existing business lending facilities and supports general export funding rather than a specific export transaction.

For more information visit [www.efic.gov.au/headway](http://www.efic.gov.au/headway) or contact EFIC on 1800 093 724.

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To find out more about the Brisbane Produce Markets visit [www.brisbanemarkets.com.au](http://www.brisbanemarkets.com.au) or phone the free Grower Hotline on 1800 631 002.








Industry Matters  
continued

### **Mandatory Code of Conduct for Horticulture Industry**

Regulations contained in a mandatory code of conduct for the horticulture industry have been finalised by the Government ahead of their tabling in Parliament in early February next year.

Minister for Agriculture, Fisheries and Forestry, Peter McGauran, said the code, now publicly available, would give growers transparent terms of trade currently lacking in the fresh fruit and vegetable markets.

“The code will improve trading practices in the horticulture industry, and clarify the trading responsibilities of growers and wholesalers,” Mr McGauran said.

Mr McGauran said there was a campaign under way by the wholesale markets to discredit the code and they were circulating misleading information to both wholesalers and growers.

He said the key requirements of the code would be that:

- wholesalers publish their preferred terms of trade;
- growers and wholesalers use written agreements;
- wholesalers clearly identify themselves as either agents or merchants;
- wholesalers provide written transaction information to growers;
- independent assessment is available on transactions;
- compulsory mediation occurs if disputes arise.

“Agreements entered into on or after today, 15 December 2006, that continue beyond the code’s introduction next year, will be subject to the code from the date it comes into affect,” Mr McGauran said.

“And, contrary to misleading information being circulated by some groups, there will not be a levy on growers or wholesalers to fund the code’s administration.”

An extensive education and awareness campaign with all relevant parties is under way and will continue until the code is introduced.

Information about the code is available from the Department of Agriculture, Fisheries and Forestry’s website at [www.daff.gov.au/hortcode](http://www.daff.gov.au/hortcode)

### **Tax breaks for city farmers under fire**

Senior federal cabinet ministers worried about the future of farming families want to slash the tax breaks offered to speculative agriculture schemes.

“Collins Street farmers” pouring money into almond and olive orchards and other such ventures promoted as “managed investment schemes” have been accused of distorting traditional markets and gaining unfair advantages because of their enormous buying power.

Liberals expect a party room showdown in February, a senior



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### Industry Matters continued

Government source told The Sunday Age. Several senior ministers and the Tax Office want to see the Managed Investment Schemes (MIS) stripped of their ability to promote horticulture products to city-based investors looking for tax breaks.

A seven-month brawl between cabinet ministers over the future of similar tax breaks for MIS plantations was finally settled last week. It was agreed to allow 100 per cent tax deductibility for investments in blue gum and pine plantation enterprises that could prove 70 per cent of their management fees were actually spent on tree husbandry.

There had been concern about the size of managers' salaries and investment in projects rather than legitimate forestry enterprises. Tax incentives were initially offered in 2000 to MIS promoters such as Macquarie Bank, Timbercorp, Gunns and Great Southern Plantations to encourage investment in the plantation timber industry and reduce dependence on logging in native forests.

Since the tax incentives were extended to horticulture in 2001, there has been rapid expansion into new markets such as nuts, citrus, tomatoes, avocados and even dairy. But many regional MPs are under increasing pressure from traditional farmers, who believe the MIS managers are motivated by the windfall to be made offering tax breaks rather than long-term profits, growth of agricultural businesses or what is good for the rural community.

The cashed-up schemes have been accused of buying up the water rights of desperate farmers, inflating rural property values and distorting commodity prices. It is believed regional MPs will press for a crackdown, and that the Government will be less sympathetic to lobbying for these ventures than it was to the politically sensitive forestry industry. Source: The Age

### **Storm damages Childers avocado crop**

Wild storm damages avocado crop and trees in Childers area. Sunday 17 December saw hail and wind damage to trees and crop across the Childers area. Hundreds of trees were ripped from the ground along with damage to sheds and houses. The true cost of the storm will not be known until the effect of the hail is evaluated.



### **Dimethoate and Fenthion Forum**

A wide range of industry and Government representatives met at a workshop in Brisbane held on Wednesday 13<sup>th</sup> December. The meeting was held to consider life without dimethoate and fenthion and other options for fruit fly control.

A summary of the information provided includes:

**Dimethoate:** The APVMA review is close to concluding for the toxicology, public health and occupational health and safety sections. The data assessment of trade and residue issues will then commence.

**Fenthion:** This review was split into two parts. The first part dealt with non food uses. This part is nearing completion and a preliminary review is available.

The second part dealt with food production and this part of the assessment is continuing.

From the information provided at the workshop it appears that there is doubt over the future of both products, especially for post harvest use. Pre harvest use should be okay but until the reviews are complete and the preliminary reports are released it would be unwise to speculate too much.

Use on fruit with an inedible skin (such as avocados and mangoes) has a much better chance of being retained under current or similar use patterns as exist now, compared with products that have an edible skin.

A number of residue trials have been undertaken on mangoes in past years but there may be a need for further trials if data is needed to support the continued availability of both products.

The need for all industries to look for methods of fruit fly management

Industry Matters  
continued

that limit the use of these products is also necessary.

The citrus industry has taken a lead with the development of area-wide management for the Burnett region in Queensland, and other area-wide management systems are being trialled in other regions. While these systems don't eliminate fruit fly, they reduce the population to levels that have a much lower impact on fruit.

The use of new lures and also the use of bait sprays offer other potential alternatives, albeit at higher costs and more work.

Avocados Australia has been working on acquiring the extra information that is necessary to retain access to these important chemicals. More trials may be necessary. More information: [www.apvma.gov.au/chemrev/chemrev.shtml](http://www.apvma.gov.au/chemrev/chemrev.shtml)

**Merry Christmas  
and Happy New Year**

On behalf of the Avocados Australia Board and staff we wish to thank everybody for the tremendous support we have received throughout what has been an extremely busy and challenging year.

We wish you all a very safe and happy Christmas and holiday season and look forward to working with you in 2007 as we continue to grow our industry.



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# Australian Roundup

## Central NSW Report

By *Chris Nelson, Avocados Australia Director for the Central NSW Growing Area*



Most growers have finished for the season with only a few in the cooler areas continuing to harvest through the summer months. Crop volumes were close to forecast and prices were very solid all season, showing that the increased production is being met by demand through successful Avocados Australia marketing. Of course we also owe some of our good fortune to Tropical Cyclone Larry's legacy allowing Bundaberg growers to flow their crop on time.

In general terms the fruit set along the whole coastal belt is looking above average while the cooler/late areas appear to have not done quite as well.

By now all growers should have received a copy of the Horticulture Code of Conduct. Many points of concern have been raised already so please take time to read it. Compare your interpretation with your expectations and if you have any concerns, take them to your peak industry bodies and your local federal Member of Parliament.

I take this opportunity to wish everyone a happy Christmas and the best of seasons next year. I also wish to express on behalf of our growers in this area our warm appreciation to Antony, Eva, Jo and John for their extreme efforts and selfless dedication not only through this recent difficult disease issue but also throughout this last year.

All the best for 2007.

## Central Queensland Report

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



The orchards throughout Central Queensland are looking very good and generally the crop hanging on the trees is looking very impressive. The Shepherd crop is probably the biggest it has been for a while and Hass is not far behind. Of course there is still a long time before this area starts picking and anything can happen and often does. At this stage we could do with more rain. Surface water allocation from the Bundaberg scheme at present is on 46%, but hopefully will increase through the year.

Our sincere condolences go to Mary Ravello's family. Mary has done a lot for the industry over many years and our thoughts go out to her family.

Avocado Blight has taken up a huge amount of our time over the last month or so. Our issue is all about keeping this fungus out of Australia. We don't have it and we don't want it! We do know it favours high humidity and warm climates, is an endemic pest in Mexico and causes a huge amount of financial loss. We don't know how big a problem this fungus could be, but the climatic conditions in most of the avocado producing areas of Australia favour its development and we just don't need this.

This disease has nothing to do with trying to keep New Zealand out of the market. On the positive side, with the extra requirements which New

Zealand now has to meet to be able to send fruit to Australia, we should be receiving a much better quality avocado and this will eventually help both our industries.

## North NSW Report

By *Peter Molenaar, Avocados Australia Director for the North NSW Growing Area*



With the 2006 crop harvested many coastal growers would be happy to see the end of all the sooty blotch and burnt fruit. An extended fruit drop was also experienced by many growers from the coast to the inland. These factors impacted heavily on their productivity. A positive for the season was the favourable price. Here's to a more productive 2007, as well as the favourable price.

This season has started off on a much better note than in recent years. Excellent rain in late August and early November along with some storms has given us a good start. It seems that we have been one of a few lucky areas in NSW to receive any worthwhile rainfall.

It would appear that the set is a mixed bag. This is to be expected when you take into account the great variation in climatic conditions and orchard age. At this stage the overall crop looks like being similar to last season.

May I wish you all a happy New Year and keep up the fungicide sprays.

## South Queensland Report

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

Firstly, I would like to thank everyone for your support in being elected for the Avocados Australia Board and to represent the South Queensland Growing Area. Don't hesitate to get in touch with me if you have any issues or concerns. I will do my best to help.

I would like to thank Rod Dalton for all the time and work that he put into our industry and wish him all the best for the future.

Henry I congratulate you on stepping up to the Chairman's position and I look forward to working with you, the other Board members and management of Avocados Australia.

As we finish up picking this season's crop, which has been quite good for most in this region, we head into what seems to be another dry period. Other than isolated storms with some being quite wild, we don't seem to be able to get any decent rain. Water and lack of it is going to be a major problem for some orchards for the next crop and I wish for everyone that this situation changes soon.

This season we found that dry matter levels and fruit maturity were high early in the season. I expect this was the case for most in this region. This was caused by the continued dry and heat that we had this season. This has caused fruit that has been left until November/December to have a much shorter shelf life and a lot of colour when picked. I urge you all to keep this in mind for future years and try to get your fruit into a coolroom as soon as possible after picking to

give your fruit the best chance of getting to our customers in the best condition possible.

I hope you all had a great Christmas and wish you all the best for 2007.

## North Queensland Report

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



HOTTER, WETTER, WILDER may be the future of the avocado industry in North Queensland, according to UNSW Professor Matthew Wales who says, "Australia will experience extreme droughts, more bushfires and intense storms and cyclones due to the greenhouse effect" (<http://science.unsw.edu.au/news/2006/ClimateTalk.html>).

We have already experienced a Category 5 cyclone this year with devastating effect to our trees and crop. The forecast for the Mareeba Shepard crop is for a similar sized crop to last season but the Shepard crop in Atherton area will be very much reduced. Similarly, the Hass crop will be reduced. Atherton and Ravenshoe were closer to the centre of Tropical Cyclone Larry and hence sustained more wind and rain damage.

Today we have ample warning of impending cyclones from the Bureau of Meteorology (BOM) so we can prepare to limit the personal damage. We can insure against structural damage but there is nothing we can do to protect our trees, our crop, and our financial future from an "Act of God". All farmers have accepted that fate forever.

From 1896-2006 (some 130 years) about 200 cyclones have impacted on Queensland. If you think you are safe in South East Queensland (SEQ) or Northern New South Wales (NNSW) then look at the web site [www.windbreaker.com.au/qldcyclones.htm](http://www.windbreaker.com.au/qldcyclones.htm) and see how close previous cyclones have come to you.

Today, also, we have another warning issued. This is for a "cyclone" called Avocado Blight that has been forming in New Zealand for the past 16 years. Our early warning system for plants, Insecurity Australia, have only just become aware that the threat exists and are now dancing around the South Pacific with no definite plan to advise or protect the Australian crop from this threat.

There are, at this very moment, New Zealand avocados which are untreated and therefore a potential source of infection of Avocado Blight in fruit stores in Atherton, Mareeba, Cairns, Bundaberg, Nambour, and elsewhere just a spore's breath away from an avocado tree and the start of a new disaster. This fungus just loves warm, wet and wild conditions and where better to find a home than an orchard near you.

We know that Avocado Blight is in every avocado producing country in the world except Australia and Chile. This indicates that the disease will spread and colonise in avocado crops everywhere. Your orchard is just as suitable a home.

The "precautions" imposed on the New Zealand industry for fruit being exported to Australia are inadequate. They offer no confidence of

effectiveness. There is no proven science behind the recommendations, therefore it can be equated to a BOM cyclone advice stating "brace yourself, it could hurt".

Sure as cyclones, Avocado Blight will come to hit us and it will hurt, unless Biosecurity Australia heeds the advice of the Australian avocado industry and adopts the measures Avocados Australia has proposed.

The North Queensland industry is used to cyclones and diseases of avocado and has adopted comprehensive treatment programmes using proven science as required by the QDPI registration authority. The treatment protocols imposed on New Zealand fruit for entry into Australia are far, far less than what we now do in North Queensland for control of anthracnose and stem end rot and from that experience we can say that the risk from New Zealand Avocado Blight is great and unacceptable to our industry.

We do not want this disease, and we call on our own Biosecurity Australia to take the appropriate measures to prevent the disease from entering Australia and our crops.

We can accept an "Act of God", but we will not accept inaction by Biosecurity Australia.

I end this report with the sadness that comes with the death of Mary Ravello, a gracious, wonderful lady who gave so much inspiration and support to the avocado industry in North Queensland and Australia. Our thoughts and blessings go out to all her family.

## Sunshine Coast Report

By *Henry Kwaczynski Avocados Australia Director for the Sunshine Coast Growing Area*



November meant virtually the end of the picking season for avocados in the Sunshine Coast region. It has been a mixed bag this year (so what's new?).

Again climatic conditions played a major part in the outcome. In particular, lack of water in some areas is at the top of the problems list.

Initial indications of the crop set for next year are looking positive. However, a number of people are reporting a large early fruit drop. Again, I suggest that the lack of water is playing its part.

Growers who are in a drought declared area may wish to consider accessing drought relief through the Federal Government Department of Agriculture, Fisheries and Forestry. Support is available to people who fall within the guidelines.

Production over the last several years has been static, with very few new plantings. The competition with 'tile farming' continues, as the population projections for this area are staggering. It is hard to understand where all these people will fit. I have recently attended meetings with Federal and State politicians, and there is widespread concern about the numbers of people coming to South East Queensland. It is estimated that around 1,000 people each week are moving to the South East corner.

## Western Australia Report

*By Jennie Franceschi Avocados Australia Director for the Western Australia Growing Area*



The Perth growing region is on the last leg of their harvest season with only a few growers left still picking, while the South West of Western Australia is just starting to gear up for a bumper harvest. A number of growers were hit by frost over the winter and while over all there is plenty of fruit, from what I have seen, it tends to be much smaller than is normally the case. I expect that some of the lack of size is due to the frost, some to the large crop and possibly to some extent older trees.

Flowering is patchy with some frost affected trees either not flowering or having a very light flower. Areas that were not affected by frost seem to be having a good flower, but it is too soon to guess just what sort of crop Western Australia is heading for next season.

We have been running a promotion over the summer months on pre-packs in Western Australia with the chances of winning an ipod. . . . well a number are up for grabs. We also decided to add onto the "add an avo" program by making available the recipe booklets to add into the pre-pack. This seems to have gone down favourably, with an increase in pre-pack sales and numerous entries for the competition.

I wish you all a happy, healthy and safe festive season and a prosperous and successful year ahead.

### Tri State Report

*By Colin Fechner Avocados Australia Director for the Tri State Growing Area*



Most growers are nearing the end of their harvest season with only Gwen and Reed still to harvest in the New Year. As they harvested their crops, growers have found that they had less fruit than expected, due to the frosts, wind, heat etc.

Growers that I have spoken to during the last few weeks are saying that the coming crop of Hass is very light. Areas that had been affected by frosts in June didn't flower, and those that did flower had fruit that did not set or was very weak and fell off at pea size.

The night time temperatures during flowering and fruit set were cold, with average temperatures around 5°C.

Growers in this region have to make big decisions on how to manage on a 60% water allocation. If there is no substantial rainfall in the catchment areas of the Murray Darling area during Autumn/Winter we could start July with even less allocations.

Growers will have to turn the water off on low production/low value varieties so they have enough water for areas that will produce an income.

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# Thanks Rod

Rod Dalton was on the Board of Australian Avocado Growers' Federation (AAGF) and then Avocados Australia from 1991, until his resignation in September 2006.



In a nutshell, Rod's history with the avocado peak body goes back 15 years:

- At the AAGF AGM at the end of 1991, Rod was appointed to the AAGF Board, with his name first appearing in *Talking Avocados* in the Nov/Dec '91 issue.
- He became Vice President in March 1994 and President in September 1995.
- In addition to his Chairmanship, Rod has also had a range of appointments, including time on the Varieties Committee and the Marketing Committee.

Rod had a vision for the avocado industry – he was determined to transform the peak body into a viable organisation. He saw that the time was right for the industry to move forward and to securely position itself at the head of the queue in the ever changing horticulture industry.

At the core of moving the industry forward, Rod successfully led the transformation of its peak body - from the original federation (AAGF) to a company "Limited by Guarantee" structure, that is the current Avocados Australia Limited. He has repositioned the organisation and set it on a path forward, so it is now seen by other industries as a strong, cohesive and effective peak body, and as a model for other industry bodies. Under Rod's leadership, Avocados Australia has become a body well positioned to successfully deal with both government and commercial entities. There has been much behind the scenes activity, including the creation of a new constitution, the creation of strategic plans in both 2000 and 2005, and the growth from part time office manager to the establishment of a full time secretariat, led by industry CEO, Antony Allen. Avocados Australia is now well positioned to take the avocado industry forward into the future. I am sure there will be many more changes on the horizon, but Rod's leadership has ensured that the template for the organisation has been well established, and will stand us in good stead for future challenges.

Rod has managed to pull the industry together. He has made significant progress with levies and promotion campaigns – clearly visible in the current multi-million dollar campaign which is making its mark in so many directions. My two year old grandson can now sing a song about avocados, having watched a segment on ABC Kids, Play School where they learnt about avocados and how to make guacamole!

Rod has such an amazing grasp of our industry – whether he is liaising with growers and talking about the challenges of weather or phytophthora, or dealing with politicians determinedly seeking

their support and understanding. Rod's influence has spread in all directions and he has guided and led many significant changes in the avocado industry.

Strong links have been forged with New Zealand, and several joint Australia/ New Zealand conferences have now taken place. These have been well attended, hugely cooperative and successful. Australia and New Zealand now have a much better understanding of each other's industries, issues and challenges.

In addition, Rod has overseen the establishment of international relations with other avocado growing countries, for example USA and South Africa. Visits have taken place to the Californian Avocado Commission and to the South African Avocado Growers Association - there has been sharing of information and good will.

During the last 11 years under Rod's guidance, Avocados Australia has also taken a strong and opportunistic stand towards the development of export opportunities – an example of this is a submission to open up export to USA.

It's a measure of the current status of the avocado industry and its future, that managed investment schemes see the industry as a viable area for investment. Whether you think this is a good, or not such a good move, without a doubt it shows that these companies have confidence in the future viability of this industry. The avocado industry is strong and vibrant.

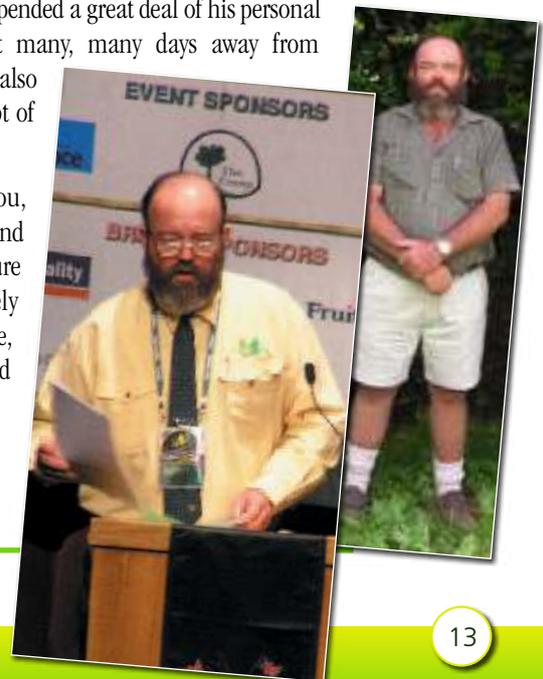
In successful industries, Boards strive for great things for their companies. Throughout his tenure as a Chairman, Rod has continuously kicked high value goals – he didn't just go for the flashy kicks, he was focused on the vision and simply went for it.

Rod has been hugely enthusiastic and conscientious in the avocado industry. He worked tirelessly and often unrecompensed, and was always ready to expend time, energy and passion – and we have all reaped the benefits.

Behind every good man is a great woman and Jeanette has been a great support to Rod in all his time in the industry. Rod's contribution has meant that he has expended a great deal of his personal time and has spent many, many days away from home. We certainly also owe a significant debt of gratitude to Jeanette.

Rod, we thank you, we wish you well, and you can be very sure that we will hugely miss your presence, your knowledge, and enthusiasm.

Henry Kwaczynski  
Avocados Australia  
Chairman



# Avocados flavour PMA Fresh Summit 2006

Avocados were a highlight at Fresh Summit 2006. Held in San Diego over 4 days in October the event was a huge success for the Produce Marketing Association. The Summit was attended by more than 18,000 participants from the fruit, vegetable and floral industries and there was a strong focus on the avocado.

The Australian fruit and vegetable industry was also well represented with more than 80 participants attending from a range of industries and supply chain sectors. Henry Kwaczynski, Chris Nelson and Antony Allen attended on behalf of Avocados Australia.



A highlight of the Summit is the Exposition which hosted 800 exhibitors from over 70 countries. The quality of the trade displays was outstanding and there was strong emphasis on the avocado trade. Many private companies with products and new technologies used PMA Fresh Summit to promote their offering.

Chile and Mexico both had stands at the event and their main focus was avocado

reflecting their strong relationships with the US market.

The Californian Avocado Commission and Hass Avocado Board were also represented. Like Avocados Australia the Californian Avocado Commission and Hass Avocado Board have responsibilities to promote the avocado category and PMA Fresh Summit is one of the key events for these organisations to showcase the industry's promotional activities to wholesale, food service and retail sectors of the market.

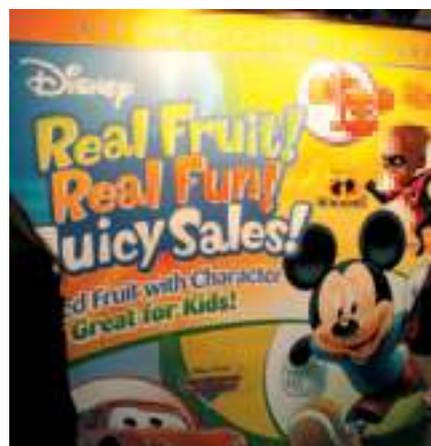
## Key themes

As well as the trade event PMA Fresh Summit offered a range of workshops for participants to attend. These focused on a number of areas including consumption



and marketing, food safety, food service, global trade, packaging, professional development, technology and transportation.

One hot topic was food safety. A recent outbreak of E. coli in spinach in the US resulted in the death of three people and this event has had significant impact on how supply chains in all sectors of the industry are now conducting business to manage food safety risks moving forward.



'Organics' was also a hot topic with growth in the sector predominantly being driven by consumer concern for the environment rather than health consciousness.

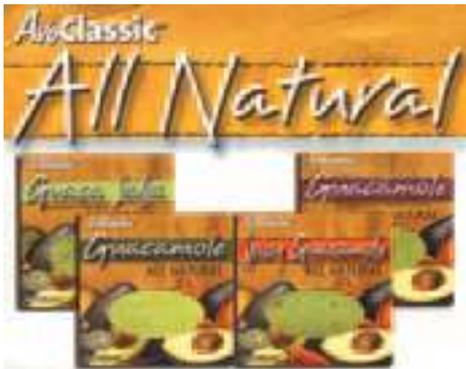
The prevalence of consumer ready packs of fruit and vegetable and the demand for semi-processed product, such as fresh cut vegetable and salads, is significant in the US. As a result, packaging issues were keenly discussed at the Summit. Prepackaged product promotes supply chain efficiency and assists in meeting consumer's demand for convenience. Indications are that this trend will continue. Paralleling this is a move to biodegradable and organic packaging to meet consumer concerns about the environment.

Marketing issues were highlighted throughout the Summit, including pulse marketing, microbranding strategies and use of internet technologies to reach the consumer. These techniques are being used successfully in the US produce sector and have the scope to be applied more broadly in the Australian market.

## Value Adding and New Technologies:

Many of the exhibitors at PMA Fresh Summit focused on promoting value added products for the US market: Guacamole in all its



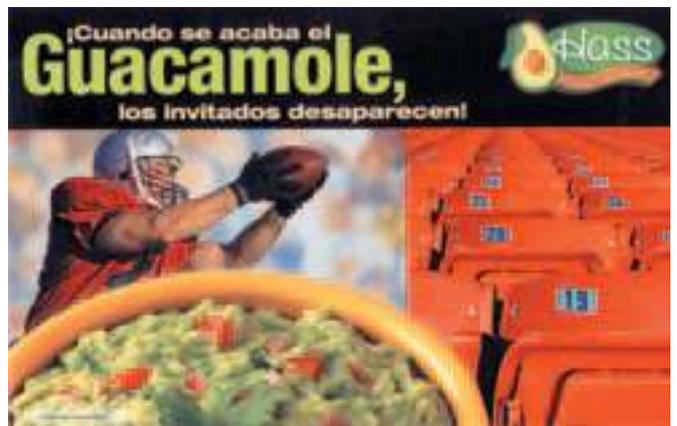


incantations (spicy, organic, pico and salsa style), Avo Dogs (hot dogs with a scoop of guacamole instead of tomato sauce) and avocado ice-cream were all available for testing.

The significance of the market for guacamole in the US, particularly in the California with its high Latino population, has been a driver for the development of this category. The number of companies, with trade displays, offering Guacamole to the food service and retail sectors was an obvious manifestation of the demand in the category.



New technologies, such as high pressure processing, is allowing the development of avocado pulp products that are of superior quality. This has allowed the expansion of the use of guacamole in the food service area. One new retail “fast-



casual” chain, Chipotle, which offers burritos and salads and has 530 stores in the US, is significant users of avocados for their guacamole requirements.

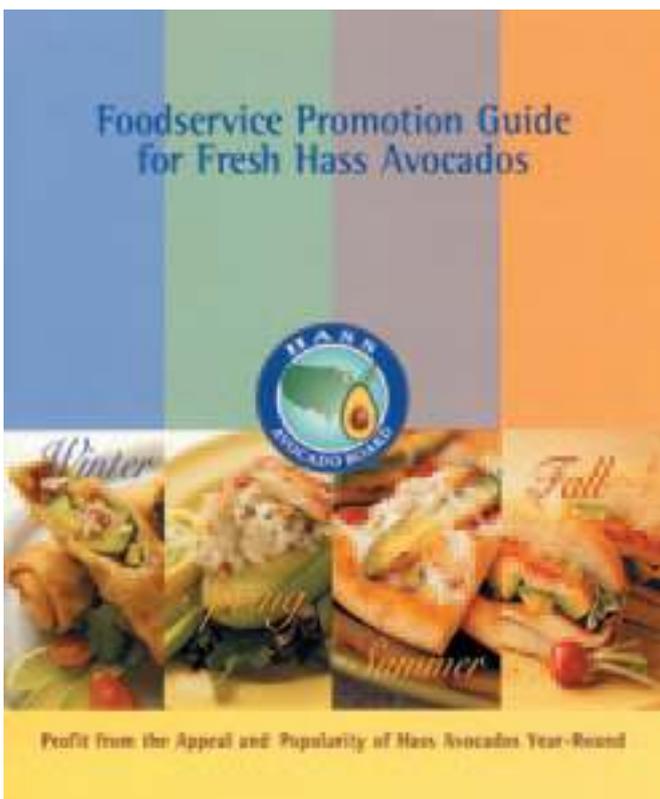
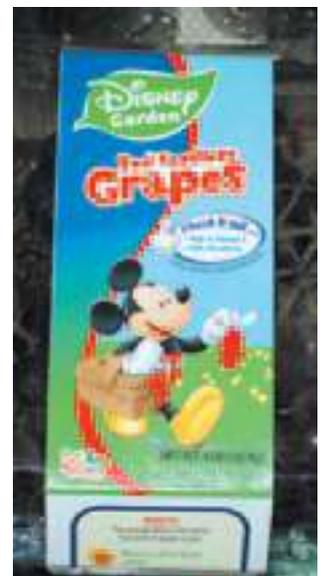
Other technologies such as Verified Internal Pressure Technology are being used by companies such as Calavo, a US based packer and shipper, to improve their offering of fresh fruit to the market. By using acoustic signals this technology provides a non-destructive mechanism for measuring firmness, water content, freshness and internal structure of the avocado. This allows Calavo to manage its shipments of fruit across the US to ensure fruit arrives at its destination in peak quality.

Although the US and Australian market are significantly different, PMA Fresh Summit offers the Australian industry to look at ideas, innovation and trends that may have application to our market.

**PMA Fresh Summit 2007**

**PMA Fresh Summit 2007 is being held in Houston, Texas from October 12-15, 2007.**

For further information on any of



# Marketing and Promotion Update

**By Yelli Kruger**

*Yelli is a member of the HAL professional services team*

## December Update on Domestic Marketing Program 06-07

In the previous issue of *Talking Avocados* we gave you a thorough picture of all the exciting elements of the 2006-07 marketing campaign for avocados; however, there is much more to tell you about the dynamic program we have for marketing avocados!!

## Magazine Advertising Continues

The second wave of advertising began in August 2006 and concluded at the beginning of October 2006. During this segment of the campaign feature articles and advertisements were placed in the magazines *Woman's Day*, *NW*, *Who weekly*, *New Woman*, *SuperFoods* and *Good Medicine*, as well as a feature on [www.deliciousmagazine.com.au](http://www.deliciousmagazine.com.au)

Magazines are the perfect medium to use to reach our target market of women aged 25-39 and the publications chosen were rigorously tested against their readership profile and circulation figures. In addition, this campaign was very focused on educating consumers on how to use avocados, the fruit's versatility and the nutritional benefits associated with avocados.

## Online Campaign Gaining Ground

Our online campaign has run its three month course and the feedback we received was very positive. It has been chosen by [www.ninemsn.com.au](http://www.ninemsn.com.au) as one of the most creative banner ads of the year.

This campaign delivered almost 2.4 million impressions with almost 22,000 people clicking through to the website. The most popular pages within the Australian Avocados website that were accessed during the campaign were the Recipe section, the Nutrition section, the Beauty section and the section About avocados.

The two best performing components of the online campaign were the recipe finder sponsorships and the ROS banner placed on the Health section. The recipe finder sponsorship was very successful, not only did it provide great cost effective clicks through to the website, but users also interacted with the recipes on the website.

## The "Cook-Off"

The three finalists for our avocado recipe "cook-off" prepared their avocado inspired dishes in the Women's Weekly Test Kitchen, Sydney in August 2006. These three dishes were selected from a huge number of responses to our competition. The lucky winner was Dana Craven from the Sunshine Coast, Queensland with her crab and avocado cakes and avocado salsa accompaniment.



*The "Cook Off" in action in the Woman's Weekly Test Kitchen*



*The winner of the "Cook Off" Dana Craven with her fantastic Cravocado Cakes with Avocado Salsa*

## Cravocado Cakes

A homemade avocado cream is used in the crab cake mixture. This recipe makes around 10 cakes and it is a great light meal when served with the avocado salsa.

### Ingredients:

- 1 avocado
- ½ small red onion
- 2 tablespoons fresh lime juice
- 1 kaffir lime leaf chopped
- 400g fresh cooked crab meat
- 1 tablespoon fresh chopped coriander leaves
- 1 cup fresh chopped fresh mint
- 1 egg, lightly beaten
- breadcrumbs
- Salt and white pepper

### Method:

- In a blender process avocado, red onion, lime juice and kaffir lime leaf until smooth to make an avocado cream.
- Place roughly broken up crab meat, coriander, mint, egg, breadcrumbs and avocado cream into bowl. Season with salt and pepper.
- Mix until well combined.
- Shape into patties and place onto a tray lined with baking paper.
- Refrigerate for at least 20 minutes.
- Heat olive oil in frying pan, medium heat.
- Cook crab cakes for about 2 minutes each side.

*Marketing and Promotion Update*  
continued

**Avo salsa**

Combine deseeded and finely chopped tomatoes, finely diced red onion, deseeded and finely chopped cucumber, finely diced avocado, roughly chopped coriander, finely sliced, deseeded red chilli and fresh lime juice. Season with white pepper.

**Spotlight on Food Service**

An exciting element of our campaign is our focus on the untapped opportunity that is broadly described as “food service”. Food service covers a wide variety of institutions like schools, canteens, restaurants, cafes and chefs. This focus is a huge opportunity for the avocado industry. A total of 11 avocado advertisements will appear in *foodservice*, *eat drink* and *Open House* magazines with coverage from June 2006 through to April 2007.

*eat drink* also held a food service competition. The competition featured in a two page spread in their August 2006 edition. Chefs were encouraged to send in the avocado recipe they had on their menu and win. The August 2006 issue also featured several avocado recipes developed by the in-house team of *eat drink*. September, October, November and December 2006 issues contained further promotion, reminding chefs to enter the competition. The competition closed in

December 2006 and all recipes entered will feature on [www.avocado.org.au](http://www.avocado.org.au) What a treat for avocado internet ‘surfers’!

We are really proud of the results of this campaign so far, and there is still much to look forward to. Future issues of *Talking Avocados* will keep you updated.



# EXPRESSIONS OF INTEREST

## On-farm Workshops for improved spraying and management of spotting bugs in avocados.

Now is the time to express your interest in attending one of these workshops.

The workshops will be held in the main avocado growing areas of New South Wales, Queensland and WA in 2007. Final venues will depend on demand ....

The workshops will involve identification of spotting bugs/damage (except WA), hotspot management, hands on calibration of an airblast sprayer, spray

assessment using water sensitive papers and calibration and chemical mixing calculations.

All attendees will get a desktop computer assessment of their own sprayer setup.

A \$30 fee will be payable to Avocados Australia once a venue/date for a workshop has been fixed.

Please contact Dr. Henry Drew to express

**Phone 07 5445 0032 Fax 07 5445 0940 Email [hjdrew@ozemail.com.au](mailto:hjdrew@ozemail.com.au)**

# FIRST COME - FIRST SERVED

# What is Avocado Blight (Avocado Scab)?

Avocado blight, *Sphaceloma perseae* (Myriangiales: Elsinoeaceae). It is found throughout Michoacán, Mexico and it is considered an endemic pest. Avocado blight or “roña” is also found in Florida, where it is the second most important pest, Puerto Rico, Brazil, Africa, Peru, Cuba, Haiti and California.

The *Sphaceloma perseae* fungus attacks the fruit (in all stages), leaves, and young branches. The affected fruits present brown lesions of corky aspect with round or irregular shapes at first (Figure 1: Fruits affected by avocado blight or “roña”). When these lesions grow and come together, they can cover a large part of the fruit or the whole fruit, and cause fissuring in leaves and branches. In leaves, the pest forms small individual stains of dark brown color of less than 3 mm in diameter when the attack is severe, the leaves and nervations are also distorted. In nervations or green branch barks, the lesions are elongated and slightly prominent. In the fruit, the damages are exclusive of the exocarp, while the fruit remains healthy. However, the lesions can be an entry point for other organisms (Gallegos, 1983).

The *S. perseae* conidia have a size of 2.3 to 2.5 mm, with a cylindrical to oblong shape. The color of the colonies is variable, from grayish white to dark gray and darker with age, as opposed to the Colletotrichum colonies, which have a salmon color (Marroquín-Pimentel, 1999).

The *S. perseae* fungus requires a high relative humidity and high temperatures for its proper development. The most susceptible stage of the fruit is when it reaches a third or a half its normal size, because when the fruit ripens, the exocarp hardens. The damages of the fruit

caused by insects, rodents or mechanically allow the entrance of the pest, which produces spores on the attacked tissue. The spores are carried away and disseminated by the wind, rain or insects.



Figure 1: Fruits affected by avocado blight

Source: Sanidad Vegetal de Salvador Escalante Michoacán, México

From all the cultivars grown in the Michoacán region, “Fuerte” is the most susceptible to the disease. “Hass” can also be severely affected if the pest is not prevented. Booth 1, Pollock, and Waldin are considered slightly susceptible. The local hybrids (“criollos”) are also likely to be affected by the fungus, although the incidence is lower because the fruit from these trees ripens in the spring (Gallegos, 1983).

Reference: [http://www.fao.org/inpho/content/compnd/text/ch30/ch30\\_03.htm](http://www.fao.org/inpho/content/compnd/text/ch30/ch30_03.htm)

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<p><b>Birdwood Nursery</b> Peter and Sandra Young 71-83 Blackall Range Rd <b>Nambour Qld</b> Ph: 07 5442 1611</p>	
<p><b>Rainforest Nursery</b> Ron and Joan Knowlton 25 Reynolds St <b>Mareeba Qld</b> Ph: 07 4092 1018</p>	

# Supply Chain Improvement Project

## “Measuring the Industry’s progress in addressing Eating Quality Issues”

By **Joanna Embry**  
Avocados Australia

In the spring edition of *Talking Avocados* we discussed the recently initiated Supply Chain Improvement Project.

The overall aim of this project is to bring about a measurable improvement in avocado eating quality and its linkage to grower rewards. To do this we need to target a couple of key quality areas which impact on consumer repeat purchases and hence overall demand.

Consumer research conducted in 2005 found that of the monthly consumption of avocados some level of wastage still takes place in 1/3 of instances. The two biggest issues indicated by consumers as the reasons for wastage were fruit being overripe/going off and fruit being too bruised. In parallel with these results, 17% of consumers surveyed indicated that they did not buy avocados more often because of poor quality and similarly, 17% indicated that they did not buy more often because of problems with ripeness. The group of respondents with the highest proportion indicating poor quality as the reason for not buying more avocados was the medium frequency buyer. The respondents with the highest proportion specifying problems with ripeness as the reason for not buying more avocados were the very occasional buyer. The research indicates that these groups could be moved up into higher frequency buying if we can address quality and ripeness issues.

Given the belief that maturity at harvest has a significant affect on avocado eating quality and the lack of research done in this area, a critical review of avocado maturity was recently completed. Information deemed important for moving forward and hence sought from this review included maturity standards in place around the world, technologies available for assessing maturity and the relationship between maturity and eating quality.

Following is the executive summary from the report, conducted by Hortresearch in October 2006. The report was written by: *Johnston J, Requejo-Jackman C, White A and Woolf.*

'The Australian avocado industry is aiming to improve fruit quality so that 90% of fruit meets or exceeds consumer expectations by 2010. Maturity is one factor that could influence the ability to meet this target. The Maturity report reviews the physiological changes in the fruit during maturation, the influence of maturity on fruit quality, maturity standards in the main avocado producing countries, and technologies for assessing maturity.

### Biological changes during maturation

Avocados undergo a number of changes in the flesh, skin and seed during maturation. Most harvest indices are based on the increase in flesh oil content that occurs during maturation and its close association with dry matter.

However, these indices are not related to the physiological changes required for the fruit to initiate ripening, and merely reflect the accumulation of a storage product that is more affected by environmental and cultural conditions during growth. Avocados currently lack a harvest index that relates to the physiological state of being competent to ripen, and could explain why sensory quality and ripening behaviour are difficult to predict. Sugars are one component of avocado that show potential for developing more physiologically-based harvest indices, as these sugars are suggested to prevent ripening on the tree, and to regulate the initiation of ripening after harvest. Further research is required to confirm the physiological roles of these sugars in the maturation and ripening process.

### Influence of maturity on fruit quality

Maturity has a strong influence on the sensory acceptability, ripening characteristics, and incidence of rots and disorders in avocados. Immature fruit are often described as rubbery, overly soft, green and watery. The sensory acceptability of the fruit improves during the harvest season until the fruit reach an over mature stage of maturity, at which stage acceptability declines from off-flavours and rancidity. Despite the link between harvest date and sensory acceptability, the current maturity indices of dry matter and oil content are only moderately associated with sensory quality. Thus the current maturity standards only estimate the minimum maturity for sensory acceptability, and are not reliable for excluding immature or over mature fruit from the marketplace. Maturity also influences the ripening characteristics of the fruit, with early season fruit often ripening at slower rates than later harvested fruit, making early season fruit susceptible to rots. Early harvest fruit are also susceptible to developing external chilling injury, shrivel, stringiness, vascular browning and mesocarp discolouration. Late harvest fruit also have quality problems associated with premature softening, vascular browning, mesocarp discolouration, body rots and stem end rots. Many of these maturity related disorders are exacerbated by long-term storage (>  $\cong$  4 weeks).

### Maturity standards around the world

The setting and enforcement of a minimum maturity standard is considered important in many countries to ensure that the reputation of the industry is not tarnished by selling grossly immature fruit to early season markets offering premium prices.

This standard is also recommended in Australia, although its effectiveness for removing fruit with poor sensory quality from the marketplace is questionable. Some countries have adopted higher minimum dry matter standards of 24 and 25% to improve sensory quality, to reduce the risk of

### Supply Chain Improvement Project continued

developing rots and disorders during long-term storage, or to account for fruit grown in areas of drought that typically have lower moisture content. Most countries base the maturity assessment on a mean value for a batch of fruit, while New Zealand has both a mean batch value and stipulate that 18/20 fruit exceed a specified lower limit. This approach is one step that the Australian industry could implement to reduce the risk of supplying batches of early season fruit that contain unacceptably high numbers of immature fruit. Florida, USA, is one of the few production areas that does not use dry matter; instead, maturity is managed through picking dates and fruit size, where fruit can only be harvested after a specified release date and only if they meet a certain size threshold. California also uses a specified release date, where fruit are only harvested before this date if the minimum dry matter standard is met.

#### Technologies for assessing maturity

Several technologies have been developed and implemented to assess avocado maturity. Dry matter is favoured over oil content as it is faster, safer (no chemical solvents), cheaper and more suited to growers/packhouses for measuring maturity. The recently developed Hofshi coring machine has simplified the process for sampling avocado tissue for dry matter assessment. Near infrared (NIR) spectroscopy and nuclear magnetic resonance are two nondestructive technologies that show potential for on-line sorting of fruit in packhouses to produce lines of fruit with a more uniform maturity. NIR technology has also advanced sufficiently to produce portable devices (NIRGUN) which potentially could be used by growers to monitor maturity non-destructively within orchards and orchard blocks to facilitate more targeted picking strategies.

#### Key recommendations

- Determine the main causes of poor quality in the marketplace. If these problems are related to maturity, then it needs to be established if this is because of non-compliance of current maturity standards or because the current standards are inadequate
- Determine the components of quality that are important to consumers and influence purchasing behaviour
- Review the minimum maturity standard (21%) in the light of the significantly higher standards in other countries, and in particular the suggested move in California from 20.8% to 23%
- In the medium term, develop new harvest indices that determine immaturity and overmaturity more accurately and reliably, so that growers and marketers can more confidently supply acceptable quality fruit to early and late season markets.

#### Conclusions

This report demonstrates that maturity affects the postharvest quality of avocados. However, it remains to be established if maturity is a key cause of poor quality in Australian markets, or if it is caused by other pre- and postharvest factors. This report also highlights that the current minimum dry matter standard has a number of limitations, especially in prediction of the sensory quality of avocados. Despite these limitations, the dry matter standard is better than no standard, and its utilisation within industry should continually be refined and evaluated until new maturity standards are developed.'

If you would like a full copy of this report you can contact Avocados Australia - [admin@avocado.org.au](mailto:admin@avocado.org.au) or phone 07 3391 2344

The report confirmed that there is still work to be done in the area of avocado maturity specifically with regard to the currently accepted dry matter level that the industry uses as a standard for maturity, how that influences current quality on the market and the process that industry uses to regulate this standard. It also raised questions as to the suitability of using DM as a measure of consumer acceptability and hence its success in providing the industry with the desired outcome: to provide consumers with a consistently good eating quality product.

Other work in the field of maturity assessment that is currently being undertaken in a collaborative project between James Cook University (JCU) and the Queensland Department of Primary Industries and Fisheries (QDPI&F) and Bret-Tech is aimed at assessing the potential of near infra-red spectroscopy (NIRS) to provide a non-invasive assessment of avocado maturity. The project will evaluate the potential of NIRS to predict external and internal quality of ripe avocado fruit based on measurement at harvest.

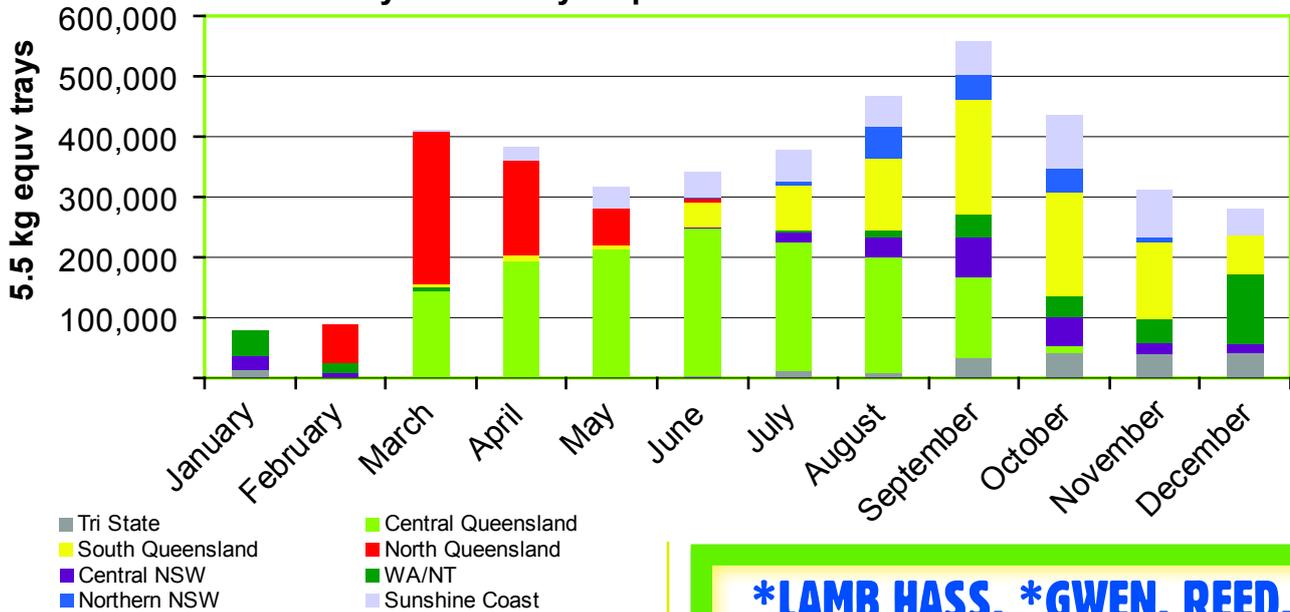
Mindful of the results from the consumer research conducted in 2005, the recommendations and conclusions included in the HortResearch report and other work currently being undertaken (including the work in NIR technology), Avocados Australia is now in the process of commissioning research to answer the following three questions

1. At what level of ripeness/firmness do consumers prefer to consume avocados
2. What is the minimum maturity that is required to provide a good eating experience and how is that best measured and
3. What is the maximum acceptable level of internal defects (specifically rots and bruising) above which future consumer purchasing behavior is negatively influenced

Once this section of work is completed the industry will be in a position to measure exactly how much fruit at the retail level is currently acceptable to consumers and then to identify where research is most effectively targeted to improve the proportion of fruit which reaches consumer expectations.

# Infocado Update

Summary of industry dispatches of Australian avocados 2006



**By Joanna Embry**  
Avocados Australia

The success of *Infocado* continues, now including the 3 fully functional modules – weekly dispatches, four weekly forecasts and long term 15 month seasonal forecast. Contributors continue to receive weekly summary reports by email which detail weekly dispatch data and a summarised comparison between short term forecasts and weekly dispatches.

Avocados Australia confidently estimates that 85% of overall production is now entered into the system for all three modules.

Plans for 2007 include the provision of more information to contributors regarding the proportion of fruit dispatched against seasonal forecast figures for a region as well as retail price reporting.

Above is a summary of the *Infocado* dispatch figures for 2006 by production region.

If you are a member of Avocados Australia and pack and/or market avocados but currently do not contribute to the *Infocado* system please contact Joanna Embry ph: 07 3391 2344 or email: [infocado@avocado.org.au](mailto:infocado@avocado.org.au)

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# Silicon and the control of *Phytophthora* root rot in avocado seedlings

By Dr Fiona Giblin

QDPI&F

fiona.giblin@dpi.qld.gov.au

The following work was undertaken as part of Project AV04001 by the Indooroopilly research team: Fiona Giblin, Sonia Willingham, Ken Pegg, Jay Anderson, Lindy Coates, Tony Cooke, Jan Dean and Luke Smith

## Silicon summary

Our experiments so far have found that the application of silicon to avocado trees is not a 'quick fix' disease solution. There are many silicon products available and application rates and timing appear to be critically important. Some recent field work has revealed that application of some forms of silicon may upset the balance of other nutrients in the tree. For the control of root rot, silicon cannot replace phosphorous acid. Silicon may be found to improve overall tree health and disease resistance and may eventually be incorporated into an effective disease management programme. This article presents our initial findings, but more careful experimentation is essential.

## Background

Root rot of avocado is caused by *Phytophthora cinnamomi*. This organism is a destructive soil pathogen and has major consequences on tree health. *Phytophthora* chlamydospores can survive for long periods in the soil. During wet periods, these chlamydospores can rapidly produce sporangia which liberate infective motile zoospores. These zoospores can swim towards the root zone where they penetrate and infect the roots. Avocado trees are particularly vulnerable as their feeder roots lack root hairs, making them relatively inefficient at absorbing water and nutrients.

Management of *Phytophthora* has been successful using potassium phosphonate (phosphorous acid) and metalaxyl, along with other management practices (avoiding high disease pressure sites, maintaining good drainage, use of disease free nursery trees, use of more tolerant rootstocks, mulching, use of animal manures, gypsum application) (Pegg *et al.* 2002). Reliance on a single chemical is not ideal, so we are keen for alternatives to be incorporated into disease management strategies. We are currently trialling the use of silicon (Si) products and assessing their mode of action in avocados.

Silicon is the second most abundant element after oxygen in soil (Ma and Yamaji 2006). Accumulation of Si varies considerably between plant species and this difference has been attributed to Si uptake ability of the roots. Following uptake by the roots, Si is translocated to the



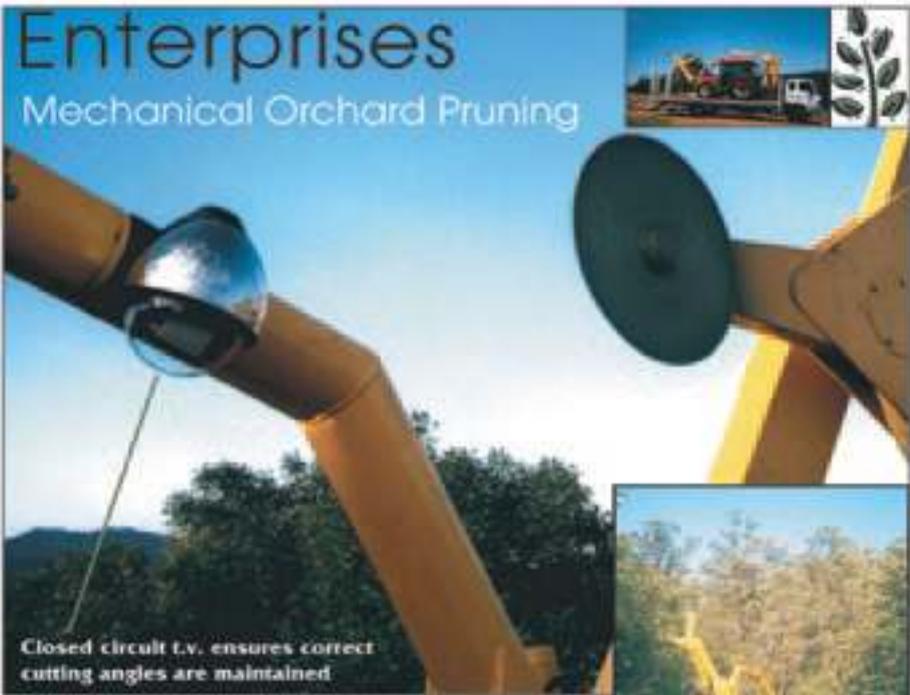
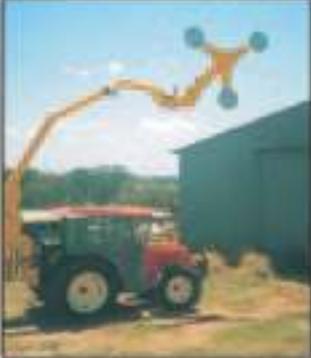
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Silicon and the control of Phytophthora root rot continued.

shoot via the xylem. Most plants, particularly dicots (which includes avocados), are unable to accumulate high concentrations of Si in their shoots and most that is taken up will be found in older tissue. Si is taken up as silicic acid [Si(OH)<sub>4</sub>], when the solution pH is below 9.0.

The nutritional role of Si in plant growth and development has been overlooked until recently, particularly because an excess or deficiency of Si is not apparent. With constant application of chemical fertilisers, such as nitrogen, phosphorous and potassium, through repeated cropping, available Si becomes depleted in the soil. The beneficial effects of Si on growth, development, yield, and disease resistance have now been recognised in a wide variety of crops.

Plants have evolved with passive or preformed defence mechanisms. Structural barriers, such as waxy cuticles or strategically positioned reservoirs of antimicrobial compounds, can prevent colonisation of the tissue (Hutcheson 1998). One of the mechanisms of Si is to act as a physical barrier as it is deposited beneath the cuticle. Further defences are induced upon exposure to compounds known as elicitors which may be released from either the pathogen or the plant (Montesano *et al.* 2003). These induced elicitors are of particular interest because of the possibility of exploiting them for defence against pathogens by enhancing a plant's natural resistance to disease. They do not act directly on the pathogen. These elicitors (or activators) may be natural, synthetic or even biological. Many recent studies suggest that Si can activate plant defence mechanisms, yet the exact nature of the interaction between Si and biochemical pathways leading to resistance remains unclear (Fauteux *et al.* 2005), although it has been shown to promote the production in plants of phenolics, phytoalexins, chitinases, peroxidases, glucanases in response to fungal infection. Most work has been carried out on rice, grain crops and tomatoes. Dann and Muir (2002) showed that potassium silicate can significantly increase the activity of plant resistance proteins in peas and reduce disease caused by the foliar pathogen *Mycosphaerella pinodes*. In 2003, initial work by the Indooroopilly research team found that injections of potassium silicate can reduce postharvest anthracnose in 'Hass' avocado fruit (Anderson *et al.* 2003).

Phytophthora control studies in South Africa (Bekker *et al.* 2005) found that Si treatments enhanced root regeneration capacity when applied prior to inoculation with *P. cinnamomi*. The Indooroopilly research team also found some improvement of tree health after injecting ageing trees in severe root rot decline with potassium silicate.

In an effort to improve the management of Phytophthora root rot in avocados, preliminary glasshouse experiments were carried out to evaluate soil applications of silicon products and to compare these treatments with potassium phosphonate.

### Experiment 1

An experiment was carried out to assess the efficacy of a single drench application of potassium silicate (Kasil®), potassium phosphonate (phosphorous acid), and a combination of both, in reducing root rot in 1-month-old avocado seedlings (inoculated with *P. cinnamomi*).

The trial was conducted on 40 'Reed' (Guatemalan) seedlings in small pots in the glasshouse. Seedlings were removed from their pots and their roots were trimmed to allow for root regeneration. Seedlings were repotted, inoculated with *P. cinnamomi* and the following treatments were applied to 6 replicates:

1. Control
2. Kasil® (200ppm)
3. Potassium phosphonate (20%)
4. Kasil® (200ppm) + potassium phosphonate (20%)

The following controls (4 tree replicates) were drenched but not inoculated with *P. cinnamomi*:

5. Control
6. Kasil® (200ppm)
7. Potassium phosphonate (20%)
8. Kasil® (200ppm) + potassium phosphonate (20%)

After 8 weeks, seedlings were removed from the soil and rated for overall seedling health. Root tips were also rated for disease. Table 1 shows data for seedlings treated with chemicals and inoculated with *P. cinnamomi*. Table 2 shows data for the control seedlings which were treated with chemicals but not inoculated with the pathogen.

Treatment	Healthy root tips (%)	Seedling health (1-5)*
Control	0.3 a	4.2 B
Kasil@drench	0.0 a	4.2 B
Potassium phosphonate drench	67.5 b	1.7 A
Potassium phosphonate + Kasil@drench	67.5 b	1.8 A
<b>P</b>	<0.001	<0.001
<b>lsd</b>	10.53	0.527

\*1 = healthy, 5 = dead

Table 1: Effect of Kasil® (potassium silicate) and potassium phosphonate (phosphorous acid) treatments on root tip health and seedling health of 'Reed' avocado seedlings inoculated with *P. cinnamomi* in the glasshouse (June 2005) (means with the same letter were not significantly different at  $p < 0.05$ )

Silicon and the control of Phytophthora root rot continued.

Treatment	Healthy root tips (%)	Seedling health (1-5)*
Control	100	1
Kasil@drench	100	1
Potassium phosphonate drench	100	1.5
Potassium phosphonate + Kasil@drench	100	1
<b>P</b>	0	0.07
<b>Isd</b>	0	0.44

\*1 = healthy, 5 = dead

Table 2: Effect of Kasil® (potassium silicate) and potassium phosphonate (phosphorous acid) treatments on root tip health and seedling health of 'Reed' avocado seedlings

All of the seedlings not inoculated with *P. cinnamomi* had 100% healthy root tips and seedlings were healthy (Table 2). Seedlings in *P. cinnamomi* infested soil and drenched with Kasil® were no healthier than the control plants (Table 1). Seedlings drenched with potassium phosphonate, however, were significantly healthier (Table 1) with healthier root tips. Kasil® mixed with potassium phosphonate did not

enhance the treatment (Table 1). Neither treatment had an adverse effect on plant growth or root tip health.

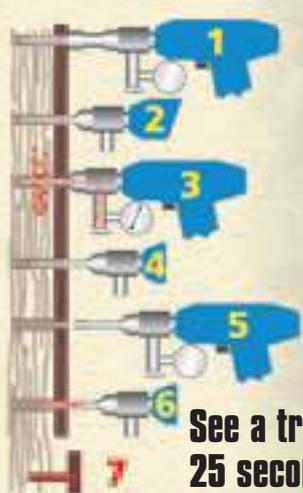
## Experiment 2

In a more extensive glasshouse experiment using 1-month-old 'Reed' seedlings, we examined a range of silicon formulations. Seedlings were replanted into 15mm diameter pots and 4 bamboo sticks were inserted into the soil around each plant. Prior to the roots being inoculated with *P. cinnamomi*, silicon treatments were applied to the soil at various intervals (4 weeks, 2 weeks, 1 week, 2 days prior to inoculation). One group of plants received silicon at each application time. After 4 weeks, the sticks were carefully removed to facilitate *P. cinnamomi* inoculation into the holes. All seedlings were inoculated with the pathogen.

1. Kasil® (SiO<sub>2</sub>/K<sub>2</sub>O) drench (200ppm) - 10mL per pot
2. Stand SKH™ (SiO<sub>2</sub>) drench (200ppm) - 10mL per pot
3. Silvine® (MgSi) powder - 1.5g per pot
4. Wollastonite (CaSiO<sub>3</sub>) powder - 1.5g per pot
5. Photo-Finish™ (SiO<sub>2</sub>) drench (200ppm) - 10mL per pot
6. Wollastonite powder + potassium phosphonate drench (20%) - 1.5g+10mL per pot
7. Potassium phosphonate drench (20%) - 10mL per pot
8. Control – *P. cinnamomi* only

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Silicon and the control of Phytophthora root rot continued

After 5 weeks, the roots were assessed for disease severity and were oven-dried to give a root mass value. Figures 1 to 5 show the results of treatments given at various time intervals and the subsequent health ratings (%) of the roots (columns) and dry weights (g) of the roots (diamonds). It was found that none of the silicon treatments were effective in the control of root rot and none were as effective as potassium phosphonate, which gave significant differences at each time interval. Some of the silicon treatments resulted in fewer healthy roots than the control alone. It was noted that there was some variability between inoculated control plants across the trial.

Root mass data was inconsistent as indicated by the control trees (particularly Figure 5). However, there appeared to be some benefit in adding wollastonite to the roots along with potassium phosphonate in some cases, although the differences were not significantly different in any of the graphs. When potassium phosphonate was added just 2 days prior to inoculation with *P. cinnamomi* it was sufficient to maintain root health but root mass appeared to be inhibited by the presence of the pathogen (Figure 1). When potassium phosphonate was added repeatedly (Figure 5) to seedlings prior to pathogen inoculation, it had a phytotoxic effect on root mass, however, the addition of wollastonite appeared to alleviate this effect. The reason for this is unknown.

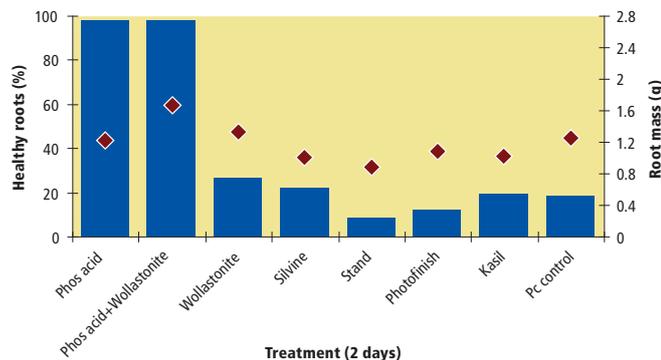


Figure 1: Root health (%) and root mass (g) of seedlings treated with silicon products 2 days prior to inoculation with *P. cinnamomi*.

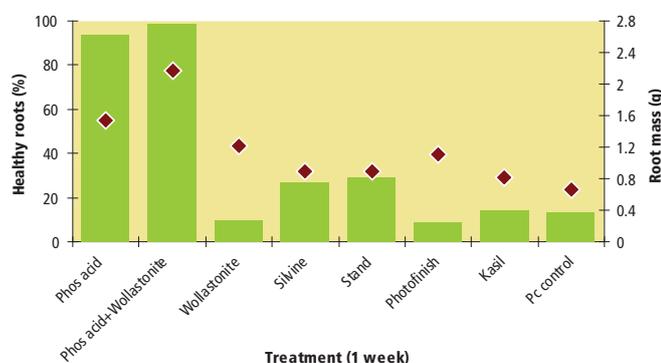


Figure 2: Root health (%) and root mass (g) of seedlings treated with silicon products 1 week prior to inoculation with *P. cinnamomi*.

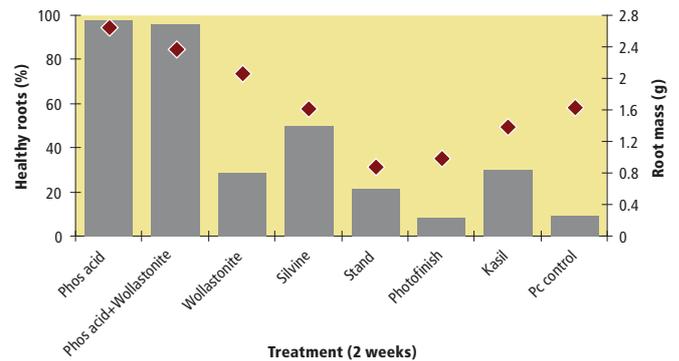


Figure 3: Root health (%) and root mass (g) of seedlings treated with silicon products 2 weeks prior to inoculation with *P. cinnamomi*.

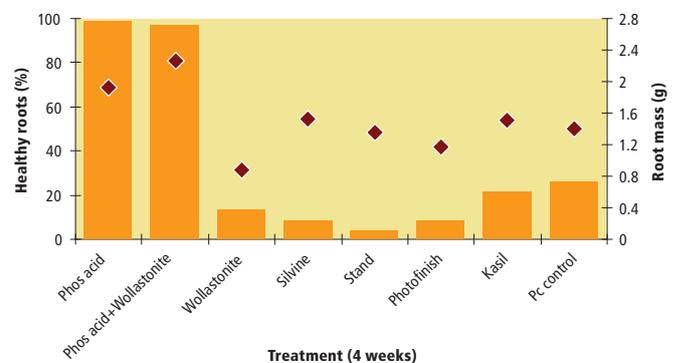


Figure 4: Root health (%) and root mass (g) of seedlings treated with silicon products 4 weeks prior to inoculation with *P. cinnamomi*.

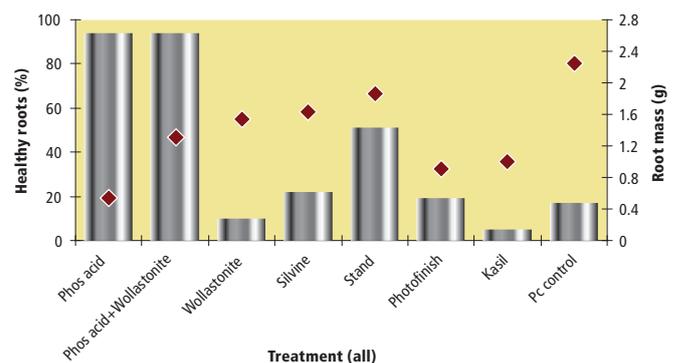


Figure 5: Root health (%) and root mass (g) of seedlings treated with silicon products 2 days, 1 week, 2 weeks and 4 weeks prior to inoculation with *P. cinnamomi*.

Conclusions

Silicon based products were not as effective as potassium phosphonate for suppression of *P.cinnamomi* in these glasshouse trials, however, the results indicated that there was some effect. Although potassium phosphonate is the superior product, it would be desirable to reduce reliance on a single chemical. More extensive Si experiments are being considered. These preliminary results showed variation in many of

### Silicon and the control of Phytophthora root rot continued

the treatments and rates and timing of applications are important. A combination of potassium phosphonate and a Si product could prove to be beneficial in reducing root infection and improving tree health.

We cannot offer practical advice on the use of silicon in avocados until current studies are completed.

### Acknowledgements

Many thanks Avocados Australia Ltd, Horticulture Australia Ltd and the Cooperative Research Centre for Tropical Plant Protection for funding contributions. Thanks also to Graham Anderson and Harold Taylor of Anderson's Nursery, Duranbah for supply of seedlings.

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# Update on Canopy Management Strategies

By John Leonardi

Avocados Australia

There are several canopy management strategies being implemented by growers throughout the different producing regions across Australia, including tree removal, stag-horning, selective limb removal, selective and mechanical pruning and plant growth regulators. The decision on what system of canopy management growers employ often depends on geographic location.

In North Queensland (Atherton Tablelands), Central Queensland (Childers/Bundaberg) and the warmer coastal areas of South-East Queensland and Northern NSW the crop can be harvested up to several months prior to flowering. In these growing areas mechanical pruning can be implemented after harvest to establish the tree size and shape. A light mechanical pruning to maintain tree shape and reduce regrowth length of the spring growth is often done during early summer. In addition, plant growth regulators (Sunny®) can be applied at flowering (in the absence of mature fruit) to increase fruit size and reduce the spring growth flush. At these sites selective limb/branch removal strategies to reduce tree height and to improve light

penetration are also used and in many cases a combination of both mechanical and selective pruning are being implemented.

In cooler, temperate climates of the hinterland areas of Southern Queensland and Northern NSW, Central NSW, the Tri-State region and South-West Western Australia it is normal for the tree to carry two crops for a period of time (mature fruit from the previous season as well as current season's fruit). In these growing areas strategies involving selective pruning of limbs/branches to reduce tree size and improve light penetration are more commonly used.

A summary of the growth cycle (timing of flowering, flushing and harvesting), canopy management history (timing of operations), canopy management costs (\$/ha) and yield (t/ha) for three sites from Central and Southern Queensland are outlined below. In the next edition of Talking Avocados details of canopy management strategies being used in north Qld, Central NSW, the Tri-State and Western Australia will be documented.

## Site 3:

*Selective/mechanical pruning and plant growth regulators (Shepard) – Central Queensland*

Growth cycle	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flowering							■	■				
Spring flush								■	■			
Summer flush	■											■
Harvest			■	■								

### Block details:

Variety: Shepard; Block size: 3.5ha; Planted: 1990; Spacing: 9 x 6m (185 trees/ha); Orientation: N-S

### Canopy Management History:

Year	Canopy Management Operations	Costs of Ops (\$/ha)	Yield (t/ha)
2000	One side of the tree removed after harvest in May/June. Tree height was reduced from 6.5 m to 5 m. Application of Sunny® (0.5% @ 2 litres/tree) at flowering in September.	3200 600	11.8
2001	Tips pruned mechanically on both sides in May/June. Application of Sunny® at flowering in September.	600 600	24.5
2002	Tips pruned mechanically on both sides & selective limb removal in May/June. Application of Sunny® at flowering in September.	1000 600	15.1
2003	Tips pruned mechanically, pruned tops and selective limb removal in May/June. Application of Sunny® at flowering in September.	1200 600	22.6
2004	Tips pruned mechanically in May/June. Application of Sunny® at flowering in September.	700 600	8.6
2005	Selective limb removal in May/June. Application of Sunny® at flowering in September.	1400 600	6.4
2006	Selective limb removal in May/June. Application of Sunny® at flowering in September.	1400 600	19.3

## Update on Canopy Management Strategies continued

### Site 4:

Mechanical/selective pruning and plant growth regulators (Hass) – Central Queensland

Growth cycle	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flowering												
Spring flush												
Summer flush												
Harvest												

#### Block details:

Variety: Hass; Block size: 2.5ha; Planted: 1993; Spacing: 10 x 5m (200 trees/ha); Orientation: N-S

#### Canopy Management History:

Year	Canopy Management Operations	Costs of Ops (\$/ha)	Yield (t/ha)
2002	Trees mechanically pruned after harvest in July. Application of Sunny® (0.7% @ 3 litres/tree) at flowering in September. Trees mechanically pruned (tip pruning) in December.	500 1200 300	17.0
2003	Trees mechanically pruned after harvest in July. Application of Sunny® at flowering in September. Trees mechanically pruned (tip pruning) in December.	500 1200 300	20.8
2004	Western side of the tree removed - 1½ m from the trunk (mechanical & hand pruning); cleaning up and mulching in July. Tree height was 9-10 m and width 8-8½ m prior to pruning. Tree width was reduced to 5 m. Application of Sunny® (0.7% @ 2 litres/tree) at flowering in September. Trees mechanically pruned (tip pruning) in December.	2600 850 300	14.8
2005	Tops of trees pruned (mechanical and hand pruning), cleaning up and mulching in July. Tree height was reduced to 6 m. Application of Sunny® at flowering in September. Trees mechanically pruned (tip pruning) in December.	2100 850 300	20.0
2006	Trees mechanically pruned after harvest in July. Application of Sunny® at flowering in September. Trees mechanically pruned (tip pruning) in December.	500 850 300	14.6



Update on Canopy Management Strategies continued

**Site 5:**

*Mechanical pruning and plant growth regulators (Hass) - Southern Queensland*

Growth cycle	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flowering												
Spring flush												
Summer flush												
Harvest												

**Block details:**

Variety: Hass; Size: 0.7 ha; Trees planted: Dec 1993; Spacing: 12.5 x 6m (133 trees/ha); Row orientation: N-S

**Canopy Management History:**

Year	Canopy Management Operations	Costs of Ops (\$/ha)	Yield (t/ha)
2001	Trees mechanically pruned for the first time after harvest in June. Height was reduced from 10m to 6m and width from 8m to 5m. Cutting back branches, cleaning up and mulching. Application of Sunny® (0.5%) at flowering in September. Mechanical pruning (tip pruning) in December to control regrowth and maintain tree shape.	1800 900 300	10.5
2002	Mechanical pruning of sides after harvest in June. Application of Sunny® at flowering in September. Mechanical pruning (tip pruning) in December.	300 900 300	6.7
2003	Mechanical pruning of sides after harvest in June. Application of Sunny® at flowering in September. Mechanical pruning (tip pruning) in December.	300 900 300	18.6
2004	Mechanical pruning of sides after harvest in June. Application of Sunny® at flowering in September. Mechanical pruning (tip pruning) in December.	300 900 300	10.5
2005	Mechanical pruning of tops after harvest in July to reduce tree height to 5 m. Cutting back branches, cleaning up and mulching. Painting of exposed branches/limbs for sunburn protection. Application of Sunny® at flowering in September. Mechanical pruning (topping) in December to control regrowth.	4500 900 400	12.4
2006	Mechanical pruning of tops and sides after harvest in June. Application of Sunny® at flowering in September. Mechanical pruning (tip pruning) in December.	300 900 300	10.0

**Future Plans**

Information on canopy management operations (timing and costs) and yields and pack-out figures for the 2006 harvest from sites in Central NSW, Tri-State and Western Australia will be collected over the next few weeks.

Canopy Management field days will be conducted in all of the major growing regions during 2007. Growers will be notified of the timing and location of these field days in future Talking Avocado editions.

Anticipated dates: North Queensland (April); Central Queensland (June/July); Southern Queensland (July); Northern NSW (August);

Central NSW (September); Sunraysia (October); Western Australia (October/November).

**Acknowledgements**

Thanks to all growers who provided information on their canopy management operations and pack-out and yield figures for the 2006 season.

This project (AVO4008) is funded by using avocado grower R&D levies which are matched by the Australian Government through Horticulture Australia.

## News from around the world

### Are you ready for the VI World Avocado Congress – Chile, November 2007

By Tony Whiley

The VI World Avocado Congress will be held in Chile from the 12-16th of November 2007. The congress will be preceded by a field tour from the 8-10th of November which takes in the most important avocado producing regions of the country. World Avocado Congresses are held every 4 years being hosted in different countries around the world. They are great venues to update current technology, become informed on national and international marketing trends and to network with people with common interests from different parts of the world. Over the last 8-10 years the Chilean avocado industry has been one of the fastest growing in the world. If you have an interest in the production of avocados then this congress will be well worth your time to visit.

#### Important Dates:

15th March 2007 - Abstracts for papers to be submitted

30th June 2007 – Early-bird registrations

Further information on the congress can be found at [www.worldavocadocongress.com](http://www.worldavocadocongress.com)

### Chile shifts avocado export focus from the US to Europe

Chilean avocado growers and exporters are planning an ambitious export programme aimed at increasing avocado shipments to the European Union (EU) by 40 percent (25,000 tonnes) in the 2007 season. The export initiative will focus on London, Madrid and Barcelona, and emphasise point-of-sales promotions that stress the health benefits associated with avocado consumption. It will also include elegant avocado gift packages sent to 60 leading personalities, and invitations to the EU press to visit Chile's avocado growing regions.

If successful, Chile will have leap frogged South Africa, Israel, Mexico and Peru to become the EU's second most important avocado supplier, outstripped only by Spain. This effort to play a bigger role in the EU market was outlined in a mid-July meeting in the city of Quillota, organised to celebrate "Avocado Day". The event brought together some of the most important players in the avocado deal, nationally and internationally, and industry leaders unveiled their strategy.

Chile's looming presence in the EU avocado deal is relatively recent. In 2002 Chile supplied a mere 1,600 tonnes of avocados to the EU because Chile had its attention fixed mostly on the insatiable US market.

But it is US demand for Chilean avocados that helped prime Chile's avocado industry which has grown remarkably during the past 20 years.

In 1991, Chile had 8,000ha planted in avocados. Today there are 27,000 ha, and experts predict as many as 35,000ha will be planted by the end of the decade. The increased plantings mean Chile's productions will be increasing throughout the coming decade. This, of

course is pressuring the industry to actively seek out new markets and to grow existing ones.

Industry leaders say the formula for continued success is very clear: consolidate Chile's position in the North American market, widen its beach-head in the EU market, while also focusing on new emerging markets in Argentina, Japan and China.

In the 2005/06 season Chile exported 85,455 tonnes of avocados to the US market, compared to just 17,966 tonnes exported to Europe. Mexico is the leading avocado supplier to the US market, providing about 150,000 tonnes this year.

Juan Ruiz Tagle president of Chile's Avocado Committee sketched a brief outline of how he expects the industry to proceed in coming years: "The Avocado Committee is going to invest publicity, contracting companies to develop generic campaigns promoting Hass avocado consumption".

"We are going to work in Europe, where there is tremendous potential for growth. In fact, we began there with a five percent market presence and now we are up to 20 percent. Argentina also provides an interesting market which ought to be growing soon. And for us, it is just a question of time before we will be in other markets, like Japan and China".

The industry's strategy is based on global avocado consumption figures that show plenty of room for growth in the US market, and even wider horizons in the EU market, where consumption is way below that of other markets.

In Mexico avocado consumption averages 8-10 kg per person; in Chile 4-5kg; in the US 1.3kg. But in Europe, with the exception of France, average per capital consumption is below half a kilo.

The ever important US market was also analysed in detail during the Quillota Avocado Day meeting in mid-July. With the increased influence of the Latino population in the US market, avocado sales are expected to continue growing.

The meeting paid special attention to the marketplace consolidation of traditional US retailers like Safeway, Kroger and Albertsons and the growing importance of discounter and clubstores such as Wal-Mart.

The avocado market share of traditional retailers has diminished from 90 per cent in 1990 to 52 per cent in 2004 while the market share for discounters such as Wal-Mart has grown from 2 per cent in 1990 to 31 per cent in 2004.

With more and more centralised buying in the US, costs are likely to decrease, the group in Quillota was told. But the industry runs the risk of relying too much on one buying source.

Still, Chile's avocado industry is upbeat about its future. The 26,731ha now under production are mostly in Region V, just north of Santiago where there are 14,930ha in production.

The greater Santiago Metropolitan Region is the next most important producing area with 5,577ha, followed by Region IV with 3,932ha and Region VI with 2,007ha.

News from around the world  
continued

The consumer friendly Hass variety is the most favoured avocado, planted on 21,209ha. It is followed by Negra de la Cruz variety on 1,640ha and the Fuerte Variety on 1,057ha.

Chile's avocado production occurs primarily in free zone Region V. But with most available lands now taken up, industry leaders predict new avocado plantations will be located farther to the north, where the only issue will be sufficient water supplies.

The nation's top six avocado export firms are Agricom, Propal, Santa Cruz, Cabilfrut, Safex and Subsole.

Source: America Fruit September 06 page 38

**US Marketers gear up for bumper volumes**

Someone once said that the only thing constant in life is change. When it comes to the rapidly-evolving US avocado market Chilean growers and marketers would certainly have to agree with this adage.

During most of the 1990's, Chile rode the tide of exploding avocado consumption in the US to record profits. With their production running counter-seasonally to California's, Chilean fruit would arrive late in the Northern Hemisphere summer just as domestic supplies were dwindling. Even though Chilean Hass avocados were relatively immature compared to California fruit, it wasn't uncommon to for sales to average over US \$40 per (25lb) carton for most of the importing season.

As recently as the 1997 season, US growers accounted for 86 percent of the avocados consumed in the country. Imports amounted to just over 27,000 tonnes with Chile accounting for lion's share of the production. That same year, however, Mexico received USDA approval to re-enter the US market after being banned more than 80 years due to pest concerns. It was a watershed event.

Fast forward to 2005, it is startling to see how much the US avocado market has changed in less than a decade. The US has now become a net importer of avocados, with Mexico supplanting Chile as the leading supplier.

The lofty returns Chilean growers were once seeing for their fruit have all but evaporated. According to USDA/FAS the value of Chilean avocado exports fell from US \$1.22/kg to US \$.85/kg during the first 10 months of 2005 a decline of 30 percent.

The prospects for the coming season are not necessarily any brighter for Chile.

On 1 February 2007, Mexico will gain unrestricted access to all 50 states for its fruit – all of it duty free. Conversely, Chilean avocados will not gain 100 percent duty free status until 2015. When the first Chilean fruit of the 2006/07 season arrives late in the summer, it will find a crowded market, as California will still be working through one of the largest crops in its history.

All is not doom and gloom for Chile's avocados industry, however. As total annual supply approaches the 500,000 tonne level in the US, avocado consumption (thankfully) continues to rise. Much of this can be attributed to the many years' trade promotion conducted by the international avocado industry to help US consumers become more familiar with their product. The investment appears to be paying off.

"The California industry moved 19.7m lb of avocados during the third week of July" says Dave Culpeper of West Pack Avocado. "That's an all-time record"

Jim Donovan of Mission Avocado sees the US avocado market as a being vastly different than it was 13 years ago when California had its last bumper crop.

"The US is on course to become a billion-pound avocado market in 2006". Says Mr Donovan. "And we're selling it at double the value compared the 1992/93 season. Back then, FOB prices averaged in single digits for most of the year".

European demand for Chilean avocados has also been on the rise in recent seasons. According to the FAS, a little over 11 percent of Chile's total exports made their way to European markets, with Spain and the UK the leading destinations. With the euro expected to remain strong for the foreseeable future, expect Chile to continue to pursue this market in effort to become less dependent on the US. With the current Californian crop estimated at around 858m lb, US importers are in no hurry to begin the Chilean importing season.

"There probably will be a few containers arriving August from Chile" Says Rob Wedin of Calavo Growers. "But the California season will be running longer by as much as month and a half compared to last year, so I don't expect to see any charter vessel arriving from Chile until late September. Last year, we had our first bulk shipments arrive before the end of August".

"We should see California's production begin to wind down by the second week in September" agrees Dave Culpeper of West Pak Avocado. "I don't expect to see first major shipments from Chile before the end of the month, therefore. Anything earlier than that would just muddy



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News from around the world  
continued

the waters in the marketplace.”

Once the Chilean season does begin in earnest, projections are for a substantial increase in tonnage over the last year. General expectations are for exports to range between 11 and 12m (25lb) cartons – a 50 percent increase over the 2005 season.

“Were advising our Chilean partners to be patient to start the season”, says Mr Donovan. “Even though Mexico will be here in full by next February, the 2007 California’s crop will not be anything like the ones were going through now and under no pressure to get an early start to the season. There should be plenty of room for imported fruit next year”. Source: America Fruit September 06 page 40

### Westfalia reflects on successful 2006 Campaign.

As the 2006 export season drew to a close, Westfalia Marketing remained South Africa’s leading of sub-tropical products. “It was another good season based on successful marketing strategies which realized competitive returns,” comments Claus Lippert, executive manager at Westfalia Agribusiness, a member company of Hans Merensky Holdings.

Smaller avocado crops from Spain and Israel at the beginning of South African season resulted in a short market, which was successfully managed with volumes from South Africa. According to Mr Lippert, Westfalia’s recipe for success is based on the development of the

company’s own marketing channels, establishing good relationships with its partners, and a committed management team.

“We actively seek out markets for fresh fruit and value-added products that will complement our existing ranges” he says. “Our portfolio includes avocado oils, avocado puree and dried mango, and we have built on our inherently strong production base of avocado and mango orchards”.

Westfalia has recently developed a high quality culinary avocado oil by using a unique process developed by Westfalia technologists, which has been well received by the market. “Our avocado puree is arguably the best quality on the market”, says Mr Lippert. “It is hand-made from selected fruit and is not subject to irradiation or intensive mechanical treatment. These are good examples of how we build our business”.

With reference to Westfalia’s international partnerships in Kenya and South America, Mr Lippert says that a number of strategic partnerships have been developed in order to remain competitive in a marketing climate characterized by globalization and rationalization of retailers and suppliers. And further boosting Westfalia’s marketing remains a priority. “While market opportunities are continually being developed and evaluated elsewhere, we have invested marketing and infrastructure in the traditional established markets as these remain a priority”, he explains.

According to Louis Vorster, senior executive at Westfalia, the company’s cultivar development programme is aimed at producing varieties that

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News from around the world  
continued

will extend the early and late seasons. It is specifically aimed at taking advantage of opportunities in the South African Market. "In South Africa we have established our own packing facility in the Western Cape which will enable us to expand our service to consumers in this region", says Mr Lippert.

The firm is also expanding its ripe-and-ready programme on the continent, where the concept has still to win the approval of consumers and certain sectors of the trade. Source: Eurofruit October page 63

### Mexican grower/shippers poised for US market expansion

The year 1997 will go down as a watershed for the Mexican avocado industry. That was when Mexico-the world's largest producer of Hass avocados-was finally granted access to US markets for the first time in more than eighty years.

Limited at first to distributing in 19 north eastern states and the District of Columbia during the fall and winter months, Mexico quickly carved out a market share for its fruit through the reasonable pricing and solid quality. As the USDA/APHIS gradually expanded Mexico's market access and reduced tariffs over the years, avocado exports to the US grew commensurately – exceeding 100m tones for the first time in 2004- and became the leading supplier of fresh avocados the US a year later, supplanting Chile. Mexico is a poised to build on its dominant market position next February when it begins shipments to California, Florida and Hawaii.

"We're expecting Mexico to increase its US exports by 25 percent to approximately 320m/lb"says Jose Luis Obregon of the Californian –based Hass Avocado Board (HAB). "With California expecting a much lighter crop, somebody has to step up and fill in the gap as the US has become a million dollar pound market".

By its estimate, total US avocado volume from all sources is expected to come in at just over 1.046bn lb for the market year ending 31 October, helped in no small way by a record Hass crop from California. While the US appears to be awash with avocados these days, demand more than continues to keep pace with supply.

That wasn't always the case, however. California avocado marketers still remember the painful 1992/93 season when a crop of similar proportions to this year's resulted in FOB prices averaging in the single digits for several months running. However, per capita consumption for avocados in the US has risen from less than 1lb in the 1970's to 2.5lbs in 2003. The growing popularity of the avocado category in North America can be attributed to a combination of changing demographics that include more Hispanic consumers, as well as years of generic promotion beginning to pay off.

Thanks to the Hass Avocado Promotion and Research Order, a USDA-sanctioned marketing programme launched in 2002 to specifically increase consumption of Hass avocados in the US, record funds are currently available for generic promotion. Generated by a US\$0.025-per-pound assessment on all avocados sold in the US market, the HAP

# Grower Member Application Form

## Avocados Australia Limited

ACN 105 853 807

For Associate and Affiliate membership application forms please go to [www.avocado.org.au](http://www.avocado.org.au) or call **07 3391 2344**

### Member Details

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

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

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

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

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

### Contact Details

Business phone no: \_\_\_\_\_

Home phone no: \_\_\_\_\_

Fax no: \_\_\_\_\_

Mobile no: \_\_\_\_\_

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

### Corporate Structure

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

Individual	Partnership	Company	Trust
Lessee	Cooperative	Other (please specify)	

Please indicate the area of property that you crop for avocado production (please circle)

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

### Special Interests

Please tick your main areas of interest from any of the following:

- |   |  |
|---|--|
| <input type="checkbox"/> Consumer information                     | <input type="checkbox"/> Production management   |
| <input type="checkbox"/> Environmental management/ sustainability | <input type="checkbox"/> Quality Assurance       |
| <input type="checkbox"/> Organic farming systems                  | <input type="checkbox"/> Technology/innovations  |
| <input type="checkbox"/> Water management                         | <input type="checkbox"/> Marketing               |
| <input type="checkbox"/> Field days                               | <input type="checkbox"/> Supply chain management |
| <input type="checkbox"/> Pest management                          | <input type="checkbox"/> Key political issues    |
| <input type="checkbox"/> Food safety                              | <input type="checkbox"/> Other (please specify)  |

## Payment Options

Grower Membership of Avocados Australia is \$110 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 \$110.00 made payable to Avocados Australia Ltd.

Please charge \$110.00 to my credit card. Details are listed below.

Credit card (please circle):

Bankcard      MasterCard      Visa

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Name on credit card:

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## Privacy Options

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ONCE YOU HAVE COMPLETED THIS FORM  
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**Reply Paid 663**  
**Stones Corner Qld 4120**

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**www.avocado.org.au** or call on **07 3391 2344**



## News from Around the World continued

is estimating that more than US \$32m will be made available for Hass avocados promotion in the coming year.

Part of the HAB's charter is to improve communication among the major avocado-producing regions supplying the US market to best assure an orderly flow of product into the marketplace. With prospects of California fruit remaining in the marketplace well into autumn, the HAB began talking to its Chilean members, urging them to delay the start of their season.

"We've seen an average of 45-50m lb of Chilean avocados imported into the US by the middle of September each of the last two years", says Mr Obregon. "We coordinated with Chile last April about holding off on the start of their season due to the size of California's crop".

According to Mr Obregon, Chile heeded the HAB's advice, as only 9m lb had been imported as of 15 September this year. "It's worked out extremely well, as the quality of Chilean fruit is looking very good, especially with respect to maturity", says Mr Obregon. "But more than anything, it was a sound business decision by Chilean exporters".

Mexico enjoys several advantages over other international producing regions supplying the North American market. Already blessed with strong domestic demand, producers from the state of Michoacán elect to keep their fruit at home if US prices are not to their liking. If market conditions are favourable, Mexican packinghouses are basically on the same footing as those in California.

"Driving time to New York City from Uruapan (Michoacán) is the same as it is from California", says Jim Donovan of Mission Produce. "Due to its geography, Mexico has the ability to open the supply valve very quickly and respond to market opportunities", says Mr Obregon.

According to the USDA, Mexican Hass avocado production exceeded 1 m tonnes in 2005. Because of its southern latitude and a wide array of micro-climates, Mexico is effectively a year-round producer of avocados. "There are basically four avocado crops each year in Mexico", says Dave Culpeper of West Pak Avocado. "You have the flor loca ("crazy bloom") and the aventajada crops that come off between August and October. Next is the major production for the year that runs between October and to March. The last crop of the season is known as the marcenia, which starts in March and usually runs through July. Mexico really never stops producing fruit".

Mr Culpeper says that production is expected to be somewhat lighter than usual for the first two crops of the year, with strong production expected during the second half of the season. "I expect that Mexico will wait for California supplies to clear out of the market before they start shipping in earnest", says Mr Culpeper. "It also costs more to pack fruit for the US market because fruit has to come from the USDA-certified groves. You can probably expect to see the first major volume of the season from Mexico by the beginning of December".

A significant event in the long and often contentious history between the Mexican and US avocado industries will occur next February. That is the date when Mexican avocados will be legally permitted to be exported to California and Florida. Both states – particularly

News from Around the World  
continued

California- vigorously fought the USDA's decision to allow Mexican fruit into the continental US market in 1997. There was no looking back, however, once the first Mexican fruit crossed into Texas on its way to eastern US markets. US handlers immediately took the "if you can't beat 'em, join 'em" approach and began packing Mexican fruit under their own labels rather than sit in the sidelines.

Some, like Calavo and Mission Produce, already had their own Mexican packinghouses up and running to supply markets in Asia, Europe and Canada, and quickly assumed market leadership positions similar to what they enjoyed with Californian production.

In retrospect, most Californian handlers would probably admit that the introduction of Mexican Hass avocados in the majority of the US market has benefited their growers, as consumption continues to escalate due to the year-round availability at more attractive prices. Nevertheless 1 February 2007 will mark the official end to a protracted struggle between two industries when the first load of Mexican Hass crosses the California border.

Don't expect a flood of Mexican fruit to suddenly appear on California supermarket shelves early that month, however. "In spite of the political significance on lifting the ban, Mexico's decision to ship to California will still be market driven", says Mr Culpeper.

Source: American Fruit November 06 page 52

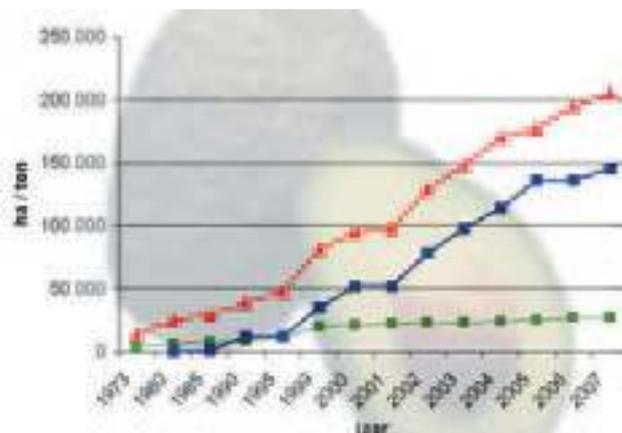
**Argentina expands acreage of Torres Avocados**

The Argentine region of Tucumán exported around 2000 MT of avocados this year. These were mostly destined for the European market. The production acreage amounted approximately 1250 hectare. Of the total volume, 1600 MT concerned the Hass variety and the remainder concerned the variety Torres. This is a new crop for this production region, but it is a variety that is much sought after by the French market. According to Julio Figueroa, president of the avocado grower association of Tucumán, the acreage of Torres will be further expanded in the future, to be able to provide more European customers. Source: Fresh Plaza

**Growth in Chilean Avocado Industry will slow down**

Chilean avocado production will continue to increase in the coming years, as there are still a large number of orchards entering their most productive stage.

Although the total area planted to avocados has increased significantly during the last few years, industry sources indicate that the rate of increase in planted area is expected to level off. Excellent gains made in export markets in the past are the main reason for the significant increase in dedicated land use to avocados. But as prices are falling together with an expected increase in competition from Mexico in key export markets like the US, a slowdown in the planting expansion will occur.



Production (red), export (blue) and acreage (green) of the Chilean Avocado industry

**Production**

For MY2005 (Jan-Dec 2006) a larger than both, last year and previously estimated avocado production is expected as a large number of newly planted orchards are coming into production. Although it is early to predict MY2006 (Jan-Dec 2007), further expansion in production is expected as the planted area, which has grown significantly over the last few years as a result of excellent returns, comes into production. Weather also has been favorable during flowering in most producing areas. Future increases in planted area will be mainly in Hass varieties for the export market. Avocado production is sensitive to climactic conditions, particularly to low temperatures during flowering and temperature changes. Weather largely accounted for production variations in the past.

Most Chilean avocados are produced in arid regions with little rain, except during the winter months, consequently most orchards are frequently free of pests and spraying is not necessary. Production area has expanded during the last few years. Increases in planted land have been almost exclusively devoted to the Hass variety, which represents over 75 percent of total production.

As prices of avocados have been falling during the last few years, total area planted to avocados is not expected to keep expanding as in the past. Additionally, the strong demand observed in the past in Chile's most important market, the United States, is expected to fall significantly once Mexican avocados gain access to all 50 States. Mexican avocados enter the US duty free.

A little over 98% of all Chilean commercial avocado trees are planted in the central area of the country - from Region IV through Region VI. The predominant areas are Region V (Quillota, Aconcagua Valley and La Ligua, Petorca) with 61 percent of the total and the Metropolitan Region with 21 percent of the total. The largest expansion in planting during the last few years has been in Region V, followed by the Metropolitan Region and Region IV. Although almost all of the expansion has been dedicated to the Hass variety, there are over 20 other varieties planted. Source: USDA

# International Avocado Conference

# President's Invitation



Dear colleagues and friends,

We are proud and honored that the INTERNATIONAL AVOCADO SOCIETY has designated Chile, one of the leading countries in the avocado industry, as the host for the VI World Avocado Congress that will be held in Viña del Mar city, from November 12 until 16, 2007.

On behalf of the Local Organizing Committee we would like to invite you to visit the VI World Avocado Congress 2007 Website, where you could find further information about the Congress activities and general information about Chile.

[www.worldavocadocongress.com](http://www.worldavocadocongress.com)

The scientific program of the VI World Avocado Congress will include the latest information on avocado production and management issues, with special emphasis on the future of the Industry. The program also includes avocado marketing presentations and panel discussions about promotional and trade topics from all over the world.

Chile is a very long and narrow country, it represents the exotic and charming Latin America, and offers many climates and landscapes, from the Atacama desert up to the eternal frozen Antarctica; thousands of miles of mountains with countless volcanoes and unexplored coast as a wide window to the Pacific Ocean. Enjoy with our traditional hospitality, mountains, fishing or visiting the wine route.

**We hope your participation will be an unforgettable experience!**

Adolfo Ochagavía  
President, Chile Organizing Committee



The Congress's Program includes General Sessions and a Pre-Congress Field Trip. The Congress's official languages are English and Spanish, simultaneous translation will be available in these languages.

**Congress Sessions include:** 1. Genetic resources (Propagation, Rootstocks, Varieties, Biotechnology); 2. Pests and diseases; 3. Culture management (Mineral Nutrition, Irrigation, Ecophysiology, Flowering and fruit development and Management; 4. Post-harvest and processing and 5. Marketing

## Chile the People and Geography

Over 4,500 kilometers of mountains and seashore make Chile the longest and narrowest country in the world with startling contrasts and extreme beauty. Attractions range from the towering volcanic peaks of the Andes (with the highest volcano in South America), the most arid desert worldwide, ancient forests in the Lake District and hosting the coldest yet most beautiful icy scenery of the southern Glacial Fields.

Chile is a land of contrasts with its lakes, snow, millennial forests, and sand and Andean summits.

Its people are friendly and a mixture of Native Indian, Spanish, German, Italian, English, Croatian, Arabian, and other backgrounds; its inhabitants are people who once traveled to this exotic land, fell in love with it and stayed.

To the North, we border with Peru, to the Northeast with Bolivia. In the northern part of Chile, our lands have broad, white sandy beaches, desert and the Andes. There, you will find the largest copper mines in the world, salt flats, archaeological sites, lagoons and volcanoes over six thousand meters high.

The central area of the country is greener than the North due to increased rains and therefore, allowing for a much more developed agricultural sector. Chile's best known wines are grown in this area, which is also known for its luscious fruits and vegetables, rodeos, mountain-climbing, colonial buildings and the opportunity to ski in the morning and sunbathe in the beach in the afternoon.

The South is host to rivers running wild, snow-capped volcanoes, thermal hot springs, fly-fishing, ancient forests, beautiful fjords, small picturesque towns founded by German immigrants and the biodiversity unique of Patagonia., allows a closer contact with nature.

The pathway across Cape Horn leads to Chile's greatest treasure: its Antarctic territory, surrounded by penguins, whales and walrus swimming wild and inhabited by some Chilean families and more than a few bold and daring scientist.

Avocados Australia is organizing with a tour company to attend the World Congress and visit a number of Chilean avocado orchards and packhouses, along with an optional side tour to Peru. To register your interest in participating in the tour and to be provided with more information please contact Eva in the Avocados Australia office on [admin@avocado.org.au](mailto:admin@avocado.org.au) or 07 3391 2344 and provide your contact details.