



AUSTRALIAN AVOCADO  
GROWERS' FEDERATION

- The Australian Newline  
Second Edition  
May/June 1990

# Talking Avocados

## An opportunity not to be missed

I take this opportunity for a final reminder on the Federal Conference, Gold Coast 11-13 July. The main highlights will be:

### 1. Federal Research Programme

This is your chance to let us know of your individual orchard problems and to get them recognised, funded and on to the research priority list.

### 2. Research Results

The final papers on two key research programmes will be presented. First, the Cold Disinfection Project which if successful could open up overseas markets. Second, the marketing project of the major eastern markets which hopefully will show us how to greatly increase our

market penetration.

### 3. Keynote Speaker

Mr Mark Affleck the President of the California Growers Association and an acknowledged world expert will give a most informative talk and cover recent innovations in America. The emphasis will tend to be on quality control - don't miss this one.

### 4. Finance

The renowned Australian expert, Mr Noel Whittaker will speak for an hour on finance. With our current economic problems and a looming recession this is another presentation you can't afford to miss.

### 5. Grade Standards

The new large posters for your sheds, agents' stands etc. will be on sale; price depends on sponsorship. These are a must for all growers showing the definitive grade standards with excellent photographs.

### 6. Grower Input

This is your opportunity to tell the Federation what your problems are, where you believe we should be going, and what you want done. Don't miss out.

This is going to be a most interesting and informative conference. Attend and be involved for your own and the industry's future.

David Rankine,  
AAGF President

## The 'people business' in fruit production

Fruit producers are confronted with the realization they are now in a business and not just a way of life. Their business has a long chain of management concerns, extending from selecting a variety, to consumers returning to buy their product. Each industry is challenged from within, and from outside, by increasing amounts of fruit in the domestic market place. The question arises, what are the keys to success in this fruit business?

My contention is that the characteristics of people have as great a role as technology in the fruit business. The people factors are not getting the attention they deserve.

The person who said there is no sentiment in business could not be more correct. After thirty years working in, and for primary industries, I see a few winners, many survivors and the others have moved on. One should be able to write a recipe for success, but as yet no one has been so smart.

The reason there is no recipe is that the whole production and marketing components of these industries are so diverse. They are also dynamic, changing yearly due to such factors as climate and market throughput. The winners are those who are astute enough, or lucky enough, to make the right decisions at the right time. My experience has shown that all producers have access to the technology of production and marketing. It is the management skill of the astute ones, which makes the difference.

Working in a profession that aims to bring the survivors into the winners ring, one attempts to analyze what is happening and should happen with management. My analysis has not given the ideal recipe but you may find it of value to consider the following points.

Government departments and co-operative involvement with industry has generated and promulgated some very good

technology. The good managers have grasped an understanding of this and applied it well. There is a great difference between having technology available, and applying it well. In applying it well, there is the indepth understanding and the art of controlling it to advantage. The word I would like to dwell on is control. In this instance it is the control of the technical input, and the control of the resultant response. Some people call this management.

In developing this story I want to briefly sidetrack and look at why producers are in this fruit game. We can look at way of life, making a living, security and leaving something for the kids and posterity. If you examine all of these they can't be done without that holy dollar. Management decisions are based on a producers judgement about the balance between production and marketing costs, and expected returns.

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## The people business in fruit production

In essence management decisions are based on the expected benefit the producer can see in advance. Benefit is the controlling force in most of our decisions. Success is often measured by the benefits accrued. We should be aware that people in business are fairly selfish and they have little room for sentiment until they have achieved a certain level of financial security.

The individual successful producer is one who consistently has control over management. This control is expressed on their farms and strongly extends into the market place. Their fruit is often quoted as being of high class and they often capture certain niche markets, some large, some small. Some of these producers remain successful while others decline.

An examination of this latter group shows that their basic management does not change, it is their control which is lost. A common factor, is that other people come into their management system. The producer either gets larger or hands over his field management to others. Circumstances can also change in the market place such as his association with his agent or the traditional outlets alter. Another term comes into play and this is power. Control is diminished because his direct power is diminished. With the loss of power the ability to react quickly to change is impaired and so is management. This is particularly so if power is not delegated fully with responsibility.

This tells us a few important lessons. We often hear about how Australians like to be individuals and do their own thing. Experience shows they are wary of joining together in farmer groups. If they do, they hold hands very loosely and history shows they leave as quickly as they come. I suggest the underlying reason is that while they are alone they can more easily see where the 'benefit' is. Also, in any decisions they have absolute power and control of their management and destiny. For this reason we may always see small and successful producers.

Looking at changes in industries, markets, economics and the governments thinking, one has to be concerned as to what the future holds. One sees tariff and quarantine barriers coming down. Transport systems and facilities are improving. Opportunity and competition are building together. The nature of marketing and the traditional people linkages are changing. People who are concerned by this, feel they must do something. They believe they must have more control of their destiny. To have control they must have power. So what is power in the market place?

To have real control and power in the market place, is to have control over peoples attitudes in the chain, commencing at supply, and ending at consumption. This attitude is chiefly related to

confidence that each player will benefit from their involvement.

A new term - confidence - arises. Those who have attempted to hold together a marketing endeavour for fruit will be aware of their difficulty in controlling confidence. Confidence problems exist with producers believing a marketing group will give them added benefit; marketing groups believing producers will stay committed; wholesalers being confident that supply levels and quality assurance will be what is promised; retailers accepting that their outlay in this produce line will be a better investment than in another, consumers consistently getting what they are expecting for their money. Confidence is not the result of a one off event, but is built through performance and time.

A person wanting to maintain power through confidence in the marketing chain must have control of each link. Where this control is weak or does not exist, the chance of failure rises. Failure at any link has repercussions right through the chain.

For the marketing chain to hold, the person in control must make sure each player is getting his required benefit. For this reason he must have some control in each link of the chain from the producer to the consumer. To have this they must have their representative in each place to make marketing work. For this reason a sole producer or marketing group must have a certain quantity of throughput before real marketing can be financially supported. Up to this supply level, only certain aspects of marketing can be employed from the available funds. In my terms this is only better class selling. It is not marketing because it can be subject to uncontrolled exploitation by others. As control becomes more difficult and cost greater the further you move from the farm then this is the point where marketing fails.

In a move to collective marketing, emphasis is often and rightly placed on quality assurance. In practice to make the system work there is a requirement to get a threshold level of quantity and quality lines. Quantity has implications in such aspects as packing shed efficiency, return on capital, freight negotiations and rates, large buyer interest, promotion costs and continuity of supply in the market place.

This quantity threshold must be achieved immediately for any marketing group to be viable. This must be achieved by a marketing group without any history or performance, and hence a low level of confidence by producers. As the benefits in the market place will only build, as confidence in the end of the chain rises with performance, immediate gains are not large and apparent. Leakage of commitment must be expected. The whole exercise has the chicken and egg problem. Which comes first, performance or commitment? There is no easy answer. As some realists say, only hard times and

gluts will force growers together. Many people are asking, will this be too late, and why put up with the suffering which glut will bring.

The answers are surely not in better technology, the common drug we turn to. I have given you a heap of words including benefit, control, power, confidence and commitment. Each of these have a people implication. The future of industries are in growers hands. All I have to offer is, that leaders, entrepreneurs and growers themselves should invest as much in understanding the role of people, interpersonal relations and group dynamics as they do in technology, in the development of their industries. Business is about management. Management is an integration of technological and people orientated factors. It is the people factors which are more likely to go astray in industry development.

## Editorial

Since the last edition of *Talking Avocados* I have been involved in some exciting activities. In early April I was part of a delegation to Asia to investigate the market for and marketing of Australian custard apples. An amazing array of facts arose from that trip. It proved to me the value of market research. It has also meant that positive action regarding export of custard apples has been taken. While I was there I also took the opportunity to investigate the 'avocado situation'. Avocados from Australia and New Zealand were in market places all over Singapore and Kuala Lumpur. In a nutshell, there are endless possibilities to improve on the average job being done currently. In the same breathe, I despair because I wonder if the avocado industry can rise to the occasion and grasp a good opportunity and build on it.

Simon Wathen (Davey Quality Management Services) and I took a group of growers (from four states and growing a variety of products), wholesalers, packhouse operators and QDPI extension officers to New Zealand early in May to see first hand 'Quality Assurance in Action'. The concepts, commitment, action and success we saw was both inspiring and mind-boggling. Before you even think it, it was also relevant to a large extent! We believe that the tour has 'sown a seed' to start further discussion on the concept of quality assurance and the value of organised marketing. Once again, I wondered if the industry in Australia has the need or the drive to change.

The third significant event I was involved in was a Small Business Seminar. I attended to check out how I was doing, to be stimulated by new ideas and I hoped something 'positive' might come out of the session. After a while sitting there I realised the relevance of many of the concepts - to me running my own business and to many of you who are also





essentially running a small business. Many of the topics of the seminar focussed on Networking. The speakers were also very keen on quotations. Three stood out for me:-

"If I had 8 hours to chop down a tree I would spend 6 sharpening the axe."  
George Washington

"If you don't know where you're going, any road will take you there!"  
(said by someone wise and famous whose name escaped me)

"All glory comes from daring to begin."  
Eugene Efgin

An article by Brian Cull on the 'people business in growing fruit' has been positioned on the front page. It is prominent because the 'people side' of growing and marketing avocados is your biggest asset but is your big impediment in ever getting to where you want to go. Do you agree??

Cheers for now.  
See you at the Conference.  
Marie Piccone Editor

Any enquires regarding articles or advertisements in *Talking Avocados* should be directed to:  
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## Letters to the Editor

Dear Marie,

Many thanks for sending me copies of the first edition of *Talking Avocados*. It is indeed gratifying to see that the Australian avocado industry is now effectively communicating with its widespread growers via a quarterly newsletter. I remember the absence of such a newsletter, similar to our *Avokad* (bimonthly), was one of the things that surprised me during my Queensland sabbatical in 1986/87.

May I also congratulate you on the quality of the first issue. The acid test will be to maintain and even improve the quality and quantity of useful information. Knowing many of your growers as I do, I believe that you will always have a lively 'Letters to the Editor' section.

Finally, I would also hope that your *Talking Avocados* helps to promote international co-operation. We really have very little (if anything) to hide from one another, even if we are competitors on some markets.

Best Wishes  
Nigel Wolstenholme  
Professor & Head of Department  
Horticultural Science  
University of Natal, South Africa

Dear Madam,  
Congratulations on the first edition of *Talking Avocados*. Communication is always hard in the horticultural industry and a newsletter such as *Talking Avocados* will go a long way to solving some of the communication problems.

Yours faithfully  
Margaret Thursby  
Advertising & Communications Executive  
COD.

Dear Marie,  
**Extra Class: Do we need it?**

The new export grade standards are based on OECD requirements. Therefore our revised standards had to specify three grades for avocados, EXTRA CLASS, CLASS 1 and CLASS 2.

Extra class and Class 1 are approved for export to all countries, Class 2 can only be exported under special permit.

Queensland, NSW and Victoria have agreed to adopt the export standards for domestic use. The other States have no domestic grade standards whatsoever.

Concerns have been expressed from many quarters that Extra class is unnecessary and undesirable as the standard is far too high and therefore impractical. There is concern that in the domestic marketplace Extra class will take the place of what was our Grade 1, and that Class 1 will be

discounted to a lower price as currently occurs with Grade 2.

The AAGF investigated the possibility of excluding Extra class from domestic market legislation but for various reasons, (mostly bureaucratic) this was shown to be impractical. Our view is that only a minority of growers will ever bother addressing the fastidious requirements of Extra class. It is extremely doubtful if their efforts will be rewarded by higher overall returns for their crop.

Currently, many growers and major packhouses pack two Grade 1 lines. They are identifiable in the market place by the fact that they use different cartons, and different stickers on the fruit. The agents and retailers know which is the top brand and they do pay a premium for it. Many of their top brands would not actually qualify as Extra class. Extra class is an overkill. As the packhouse is already receiving a premium for its top brand, why would it risk putting Extra class on the end of the carton, thereby attracting the interest of market inspectors and risking a possible down-grading to Class 1? (And a \$1 per tray fine in Sydney market!) Our advice to growers is that unless a market demands Extra class and is prepared to pay a significant premium for it, ... ignore it!

Yours faithfully,  
Brian Capamagian, Grower,  
Mapleton, Qld.

*Subscribe Now!!*

### THE FEDERATION

#### SECRETARY:

Ross Boyle, P.O. Box 19,  
Brisbane Markets Q 4106  
Phone (07) 379 0228 Fax (07) 379 9283

Delegates who represent the member states on the parent body, the Australian Avocado Growers Federation (AAGF) are as follows:

#### PRESIDENT:

David Rankine Ph (075) 45 1046

#### VICE PRESIDENT:

Ross Richards Ph (085) 85 3178

#### CHAIRMAN, VARIETIES COMMITTEE:

Don Lavers Ph (070) 93 3773

#### QUEENSLAND:

Dick Armstrong, David Rankine,  
Don Lavers, Brian Capamagian,  
Charles Dimes

#### NEW SOUTH WALES:

Warren Meredith, Ashton Gough,  
Peter Molenaar, Graham Anderson

#### VICTORIA (Sunraysia):

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#### SOUTH AUSTRALIA:

Ross Richards Ph (085) 85 3178

#### WEST AUSTRALIA:

John Galatis Ph (09) 525 2066

*This is the growers paper and reflects their views and opinions; it does not necessarily represent the policies or views of the President, Committee or the members of the AAGF.*

In order to continue receiving *Talking Avocados* you must subscribe. The first two editions were free, but from now subscription will be \$12 per year (4 Editions - August 1990 to May 1991) for Australian subscribers and \$18 per year for overseas subscribers.

#### POST YOUR SUBSCRIPTION FORM TO:

The Secretary, AAGF,  
P.O. Box 19  
BRISBANE MARKETS 4106

Name .....

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- ☐ Cheque for \$12.00\*
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\* Covers Subscription - 4 editions  
(August 1990-May 1991)

Cheques should be made payable to  
AAGF National Newsletter.





## Did you know?

Consumers will be encouraged to use avocados in their winter meals in a new advertising campaign which will be based on May 6.

The COD's Avocado Sub-Committee recently approved a budget of \$175,000 for the campaign which will be based on the 'Add an Avocado' theme.

The aim of the advertising is to encourage people to extend their use of avocados to hot dishes in winter when the avocado season is at its peak.

Radio advertisements on 4KQ in Brisbane, 2WS in Sydney and 3TT in Melbourne will be the main element of the campaign.

There will be three separate radio commercials featuring television cooking personality Gabriel Gate advising consumers of different ways to use avocados in hot dishes.

The campaign will also include in-store demonstrations and mobiles, leaflets and posters.

*COD Media Release May 2, 1990*

A market survey carried out by Kevin Smith and Scott Turner (QDPI) during 1988-89 has shown that, while occasional users buy more avocados in summer, medium and heavy users tend to buy all year round. Most users like the taste very much, have a few basic methods of serving and prefer to buy their avocados either hard or as a combination of hard and ripe. A small number of users were concerned that avocados are fattening and a very small number (less than 5%) reduced their intake because they believed avocados contain cholesterol. A substantial number of users had been dissatisfied at some time with the quality of avocados they had purchased.

Non-users, who formed 30-40% of the shoppers interviewed were mainly older

people or from the lower income, working areas. When asked the reason for not buying, they said either they didn't like the taste, didn't know how to use them, thought they were fattening, they contained cholesterol, or were too expensive.

Most retailers offered fruit of mixed ripeness, allowing consumers to sort and select, acknowledging that this practice leads to shop damage, wastage and customer dissatisfaction.

This important survey will continue during the 1990 season and the final report will be delivered at Conference 90 in July but the work so far clearly highlights some industry priorities for the future:-

1. To educate consumers on how to select and store, how to recognise varieties, how to prepare and serve particularly as a fresh, uncooked, accompaniment to hot foods e.g. soups, stews, casseroles and pastas.
2. To educate retailers on buying, ripening, storing, displaying and generally giving customers what they want.
3. To educate growers and packers on an industry wide quality assurance program.

*Mr Michael Quinn has been appointed as honorary solicitor to the Australian Avocado Growers Association.*

## Program now for better trees this year.

Trees that yield their maximum potential mean you're being properly rewarded for your time, effort and costs of production.

Our easy-to-follow 12 month program using three ICI products can help you eliminate one of the biggest reasons trees never reach their optimum production capacity... weeds. Weeds that rob your trees of moisture and nutrients.

Without weeds to compete with, yields improve, harvesting is easier and there are fewer insect pests because you're wiping out their breeding grounds.

The ICI Treeline Weed Control Program is economical and extremely effective.

Year round control. From just three completely compatible herbicides.

Plus all the advantages of spraying versus cultivation, like protection of soil structure and plant root systems.

Ask your ICI dealer for a free Treeline 12 month spray chart today, and plan to enjoy the fruits of a better harvest next season.

### SAFETY TIP

ICI recommends the use of gloves and eye protection and suggests the use of filling devices to transfer liquid concentrate from container to your tank.



# SPRAY-SEED. FUSILADE. GOAL.

Plan to enjoy the fruits of a better harvest.

The ICI Roundel is the Registered Trade Mark of Imperial Chemical Industries PLC, London, England.

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## Keeping in touch...

What's happening in South Queensland?

Harvesting of Fuerte is well under way. Recent heavy rain delayed harvesting of some fruit by dropping dry matter levels by up to 2%. This is an important point to remember when picking early season varieties during or just after rain. Volumes of fruit appear to be average to below average with good fruit size probably due to the low crop load being carried by trees.

The red spider started to appear in the Kandanga/Anamoor area (Gympie region) but the wet weather seems to have slowed them down. Ivy leaf roller has started to become active and growers are urged to monitor Wurtz and Hass in particular to prevent damage to fruit. Spray before populations reach damaging levels.

Growers around Nambour were advised on best techniques for top working of trees at a recent field day organised by Alex Banks. Alex brought together 3 experts in grafting: Peter Young of Birdwood Nursery, Merv Batson of Batson's Nursery and Jack Saranah from QDPI. Growers were shown how to prepare stumps prior to grafting, when the best times of the year were, how to select budwood, and how to perform four grafting techniques.

The field day was videotaped by officers from Maroochy research station. This tape is at present being edited but will be available in future as a guide to field grafting of avocados.

Leaf and soil analysis will be due in south Queensland area in late April early May.

*Please send me news from your region regularly so we can 'Keep in touch'. Ed*



# Federation News Update

THE LIST OF DECISIONS for the Australian Avocado Growers' Federation Meeting held at COD, Rocklea on 3 and 4 April, 1990 are outlined.

## APPRECIATION OF THE LATE MR J WILSON

IT WAS AGREED, that the appreciation of the Australian avocado industry for the contributions of the late Mr Jim Wilson be recorded in the minutes.

## PRESS RELEASE - HIP AND THIGH DIET

That the executive officer seek the views of the advertising and communications executive of COD regarding the issuing of a press release to the news media and food writers on the response received from Mrs Rosemary Conley-Rimmington regarding avocados and her publication titled *The hip and thigh diet*. Carried

## MANAGEMENT COMMITTEE MEMBERSHIP

That in view of the changes to the New South Wales branch the appointment of Mr A Gough as an extra management committee member be rescinded. Carried

## GRADE STANDARDS - DOMESTIC APPLICATION

That the AAGF accepts the export grade standards (Schedule 19) for domestic application in all markets within Australia. Carried

## GRADE STANDARDS - WALL CHART

That the secretary investigate the costings associated with and the possibility of sponsorship for the production of an official avocado grade standards wall chart endorsed by the AAGF and stating that the standards are approved for all states in Australia. Carried

IT WAS AGREED, that the final decision on the suitability of the grade standard wall chart rest with the AAGF Management Committee.

## RIPENING RESEARCH

IT WAS AGREED that the Secretary forward Mr S Ledger's (QDPI) findings on avocado ripening to each state branch and that the branches ensure that all wholesalers receive this document.

Delegates noted that the New South Wales Avocado Association's Committee consisted of: Robert Mosse (President), Peter Molenaar (Vice-President), Orf Bartop (Secretary), Warren Meredith, Keith Johnson, Steve Mills.

The New South Wales Avocado Association has a product buying group headed by Steve Mills (ph. 066 283 484).

## PRODUCTION DETAILS

IT WAS AGREED, that at future meetings, delegates ensure that they are in a position to give a broad outline of their particular area's production details.

## FORMATTED STATE REPORTS

IT WAS AGREED, that the Secretary send

an outline of how a state report to the Federation should be completed by each State Chairman one month before Federation meetings to enable circulation.

## AVOCADO RESEARCH WORKSHOP

That the research sub-committee continue its investigations into conducting a research workshop with a view to holding this event on 30 and 31 October, 1990 at a venue in or close to Brisbane. Carried

## HRDC MEMBERSHIP

IT WAS AGREED, that the President contact the Horticultural Research and Development Corporation to clarify the situation with regard to the Federation taking up membership of that Corporation.

## CHOLESTEROL RESEARCH - VERIFICATION

That the secretary request that the advertising and communications executive of COD liaise with Dr Colquhoun to ensure that all outcomes of the cholesterol research project have credible peer support and that maximum publicity be arranged for the release of the findings at Conference 90. Carried

## BABY FOOD PROMOTION

IT WAS AGREED that Mr Richards contact the California Avocado Commission regarding the costs and availability of its brochure titled *Baby's Garden* and also ascertain the cost of production of such a pamphlet in Australia and further that other horticultural industries be approached to assist in costs of production and distribution of this brochure.

## GRADE STANDARDS PHOTOGRAPHS

That the grade standards photographs be accepted with the proviso that the skin netting photograph on page 26 was amended at the bottom of the fruit and that Messrs Tree and Ledger (QDPI) be thanked for their efforts in producing the photographs and the document. Carried

## AHC LEGISLATION - ALTERATION

That a draft letter to the horticultural policy council be prepared by Mr Molenaar and the secretary seeking alteration to the AHC legislation that would make that corporation more attractive to horticultural industries seeking to take up membership and that this draft letter be circulated to AAGF members for consideration and comment with the final draft being presented to a special general meeting of federation at Conference 90. Carried

## SPECIAL GENERAL MEETING

That a special general meeting of the AAGF be held on Friday, 13 July, 1990 following the close of Conference 90 at Conrad Hotel, Broadbeach. Carried

## CONFERENCE 90 - MAJOR SPONSORSHIP

IT WAS AGREED, that in view of the fact that a major sponsor for Conference 90

had yet to be found, all State branches and local associations make a special effort in order to secure a major sponsor.

## RECOMMENDED VARIETIES

That the varieties committee prepare a draft list of varieties that are recommended - for and against - by the federation. Carried

## VARIETIES COMMITTEE - TECHNICAL ADVISOR

That a letter be forwarded to Mr G Anderson, formerly an AAGF delegate from New South Wales, inviting him to take up a position as a technical advisor to the varieties committee. Carried

## ANVAS - BUSINESS NAME

That the name 'ANVAS' be registered as a business name in New South Wales. Carried

## 1990 PRODUCTION FIGURES

That each state branch ascertain from reliable sources its 1990 production figures for presentation to the April 1991 AAGF Meeting. Carried

## FINANCIAL STATEMENT - NEWSLETTER

That the financial statement on the AAGF Newsletter account as at 31 March 1990 be received and that the federation's appreciation of the loans from state bodies and local associations be noted in the minutes. Carried

## WORLD CONGRESS - GROWERS TOUR

IT WAS AGREED, that the Secretary endeavour to obtain more reasonable costings for a growers tour to the World Avocado Congress to be held in California in April 1990 and that this information be placed in *Talking Avocado* and sent to delegates.

## STICKER COMPETITION

That the AAGF supports the New South Wales Avocado Association in its proposal to produce a new fruit sticker along the lines of '6 vitamins and minerals' and the use of this sticker by all avocado growers in Australia be encouraged. Carried

## ANVAS NURSERIES - 1990

That as the following nurseries subscribed to all the conditions set out in the rules, they be given ANVAS accreditation for 1990: Rainforest Nursery, Birdwood Nursery, Batson's Nursery, Yanagin Nursery, Anderson's Nursery. Carried

## AVOCADO QUALITY ASSURANCE

That the AAGF duly supports the overall thrust of the unofficial working groups proposal of avocado quality assurance and endorses its application for the export market with the proviso that at least three packing sheds participate and that the working group be requested to look at a more cost effective plan that could be implemented for the domestic market and further that the federation and major packhouses supply representatives to all future discussions.





## Vale Jim Wilson

An excerpt from a speech made by Jim Wilson gives an insight into his special place in the industry.

"For some 20 to 30 years the Wilson name was synonymous with avocado but not anymore. In conclusion, an exercise in hindsight would reveal a track 50 years long, strewn with a multitude of obstacles and dry gullies. Much of my experience has been bought - especially in those far off early days - with blood, tears, toil and sweat. With my eyes open and ear to the ground I have learnt much.

With enthusiasm and dedication it has been an interesting 50 years with the avocado industry. The curtain has now been drawn on my avocado career, I'm sad to have to admit. Thanks very much."

Mr James Cockburn Wilson (1906-1990) was born at Gympie.

He started growing avocados in 1928 at Hunchy in the Blackall Ranges, where together with his father he planted a block of one hundred seedling trees. It is believed to have been the first commercial avocado orchard in Australia.

The first consignment of avocados was sent to the Sydney Market during the mid-thirties. Of the three cases, two cleared and the third one remained unsold.

Mr Wilson arrived on Tamborine Mountain in 1949 where he became involved, on a share-farm basis, with Mr. (Later Sir Frank) Sharpe on the Long Road, Eagle Heights property now known as 'Beechwood'.

The two men subsequently developed the avocado variety Sharwil (from Sharpe and Wilson).

Mr. Wilson then purchased the property where he continued to produce avocados and he developed the variety Willard (Wilson and Hazzard). He was also instrumental in the importation of the Reed variety.

Mr. Wilson then turned his attention to the development of the Shepard variety which unfortunately did not bear particularly well on Tamborine Mountain. However, on his advice it was taken to the Atherton Tablelands where it appears to be performing better than the Fuerte variety.

In 1969 Mr. Wilson sold his property to his daughter and son-in-law Mr and Mrs Wal Flesser and retired to Buderim.

During his lifetime he served, with distinction, on the Avocado Subcommittee of the C.O.D. and received the Australian Avocado Growers Award of Honour from that organization. Mr. Wilson was an active member and past Chairman of the Tamborine Mountain Local Producers Association.

## Research - Read all about it!!

### Phytophthora resistant root stock trials

In search of an answer to Phytophthora root rot in avocados, the North Coast Agricultural Institute at Wollongbar imported root rot tolerant stock in 1986. Research scientist Rob Allen summarizes results to date.

Control of phytophthora root rot in avocados in recent years has depended on minimizing risks from poor drainage and nutrition, and restoring health when needed by the use of systemic fungicides.

Resistance to root rot has been generally low and this has not been a particularly useful control measure to date.

The University of California has sought a root rot tolerant stock for many years and, although some stocks have shown some tolerance it has not been sufficient to warrant large scale commercial use.

However, a recent selection known as G755 (*Persea americana* x *P. schiedana* hybrid) has multiple resistance factors related both to its vigour and to certain characteristics which inhibit Phytophthora development.

In 1984 I obtained a licence from the University of California to import G755 for evaluation. After stringent screening for possible virus infections, the material was released from quarantine in 1986.

Some 60 Hass avocado trees were then propagated on G755 rootstocks and planted on three farms in the Alstonville area for comparison with Hass trees on standard Mexican seedling stocks.

The growers have observed the performance of G755 stocks alongside standard stocks, and horticultural observations have been made over the last three years by Daryl Firth of Alstonville Tropical Fruit Research Station.

Preliminary results are that all trees on G755 stock have survived the first two or three years, while four of the standard trees died during establishment.

The Hass on G755 stocks were slower growing in the first year, but since then have grown as well as the standard stocks. In the second year of production, trees on G755 stock had from 0-10 fruit per tree, while those on Mexican seedling stocks had 20-50.

However, the real test of fruit production will occur over the next three years as the trees settle into full bearing.

(reprinted from the NSW Avocado Newsletter, March 1990)

## Effective airblast spray application in avocados

Alex Banks, Extension Horticulturist DPI,  
Nambour

For most of you by the time you get this issue of *Talking Avocados* you will have finished spraying trees regularly with copper and endosulfan. What level of control did you achieve? What was your packout and return from your agents? How much did it cost you to protect your crop?

It never ceases to amaze me that with spray application as important as it is in avocado production, how little attention growers pay to the selection, setting up, management and maintenance of spray equipment. Winter is a good time to have a long hard think about how effective your spray application is and what you can do to improve this part of your management for next season.

This article looks mainly at airblast spraying because most growers have this type of equipment. Many of the factors mentioned in this article are applicable to other types of sprayers.

Let's look firstly at the dollars and cents of spray application. If we assume an average mature tree production of 15t/ha we can tolerate about 5% damage to fruit or about 125 trays per hectare that will be unmarketable. If pest pressure is high there is little we can do about this level of loss with our present spray technology and registered chemicals.

However if our wastage is say 10% or higher as it is with some growers then this is cause for concern. 10% unmarketable fruit on the above tree production is 250 trays per hectare. This wastage is equivalent to over \$1000 per hectare not going into your pocket assuming an average price of \$10/tray. All growers should be aiming to reduce amounts of unmarketable fruit to no more than 5% of gross tree production.

Turning attention to the equipment itself there are major savings to be made by ensuring your equipment is properly set up and calibrated. Say your application rate is supposed to be 600L/ha but because your nozzles are worn you actually apply 10% more. Over a season of 15 sprays you will waste \$45 per hectare in copper and endosulfan alone not to mention the ineffectiveness of your control because your sprayer is not working at peak efficiency.

I hope I've convinced you that there are dollar savings to be made by checking how effective your spray operation is and regularly calibrating control levels. Let's run through a quick checklist.

1. Select equipment with sufficient performance for your tree size (or reduce tree size). The larger and denser your trees, the larger the air volume needed to





effectively penetrate the canopy. Airblast sprayers on the market are unable to effectively spray tops of trees greater than about 8m tall. You are expecting too much of your sprayer if your trees are taller than this.

2. Don't go too fast when spraying. You must drive slowly to allow the airblast to displace air volume inside tree canopies. If you drive too fast the airblast deflects off the outside foliage especially in the tops of trees. A ground speed of 2 to 3 km/hr is recommended for trees up to 8m tall.

3. If you want to reduce the overall time spent in the spray operation look at how efficient the refilling component is. Better results are obtained when you spend most of the time applying sprays and as little time as possible refilling and mixing.

4. Check the setup of your sprayer. Use hollow cone nozzles or airshear nozzles to produce a fine, uniform spray cloud. Operating pressures should be in the range 1000-2500pa. Don't use very high pressures. You only create more very fine droplets which are prone to drift and wear out your nozzles and pump faster.

5. Select nozzle sizes so that at least 60% of the sprayer output is directed from the top of the sprayer towards the top third of the tree canopy. (See figure 1)

6. Airblast sprayers are used most efficiently to apply low volumes of spray. However don't reduce volume of application too drastically. Best results are obtained at an application rate of 500 to 750L/ha. Do not use stickers with low volume sprays.

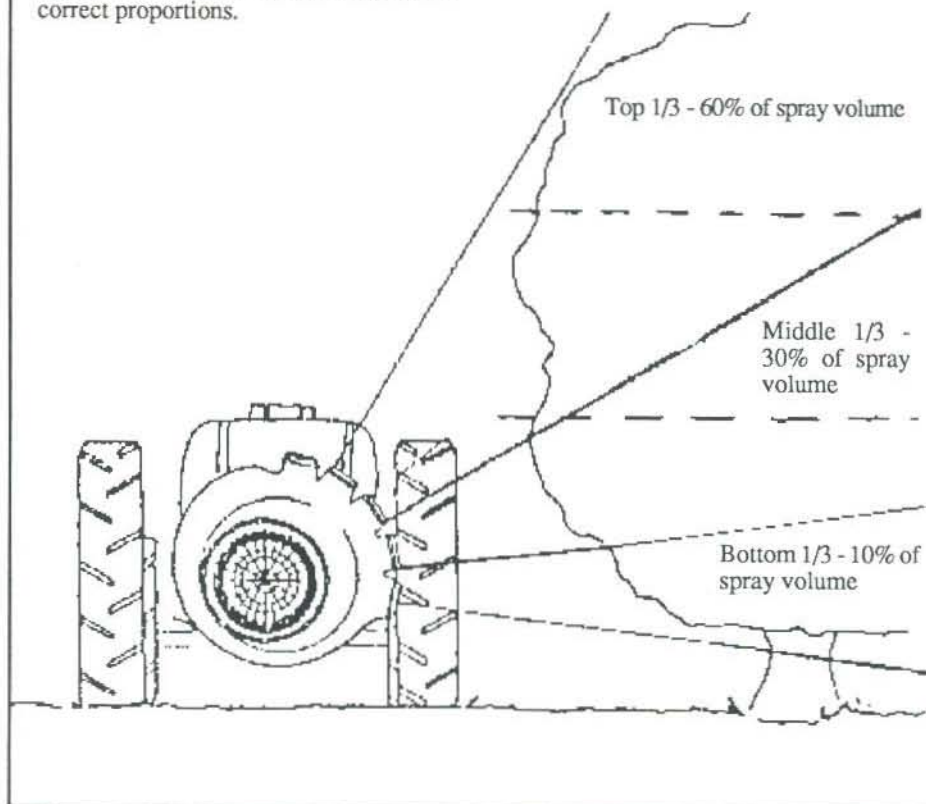
7. During prolonged wet weather, when it is difficult to get a spray on, increase the volume of application to 1500L/ha (i.e. high volume) and use a sticker. This approach, although not as efficient as low volume spraying, makes sure that fruit are covered by spray and that these deposits resist being washed off by rainfall.

8. Under hot, humid conditions which favour anthracnose and spotting bug problems apply sprays on a regular 14 day schedule. Less frequent spraying can occur at the beginning or end of spraying if conditions are cool and/or dry.

You probably realise that this checklist is incomplete because I've not told you how much chemical to mix in the tank. Unfortunately I'm legally unable to do this because there are no low volume mixing rates registered for avocados. However the spray residue trial referred to in the last issue is designed to address this deficiency. So hopefully in the future I'll be able to complete the checklist.

I trust each one of you will take the time to think carefully about whether your spray operation can be improved by following the checklist.

Figure 1. Division of sprayer output into correct proportions.



## Quality Assurance in Action

Simon Wathen, Davey Quality Management Services Brisbane Qld

New Zealand is famous for a lot of things, including 80 million sheep, the All Blacks and top quality horticultural exports.

How do they do it? Why have New Zealand apples replaced Victorian apples as number one in Europe?

In late April the Quality Assurance in Action group toured major growing regions of New Zealand, to study the systems the Kiwis use to maintain a healthy reputation for consistent products and keep their market share.

The group consisted of 14 horticulturists from all parts of Australia and all sectors of the industry - for example, an avocado grower/packer from North Queensland, a South Australian citrus packer, a Melbourne market agent.

Apart from visiting packers and growers the group met key industry players to discuss the issues of Quality Assurance with the people who get the benefit of it. The group studied the well established

kiwifruit and apples programmes and the developing programmes of avocados and persimmons. We also visited the new Omniport facility at the Port of Napier, where they load 26,000 cartons of apples in 8 hours on to charter ships.

In the Bay of Plenty, the late maturing Kiwifruit crop was delaying the start to the harvest and export season. Pickers, packing sheds, coolstores, trucks and charter ships were all waiting patiently for the brix levels to rise. I wonder if it was an Australian industry would someone be selling immature fruit to catch the early high prices? The Kiwis hadn't even considered it.

The tour was organised and escorted by Simon Wathen from Davey Quality Management Services and Marie Piccone from Piccone Horticultural Consultancy and will become an annual event. The Quality Assurance in Action Group will also be making a video and preparing a detailed report.







# Anthracnose Infection...The Plot thickens!!

Lindy Coates, Plant Pathologist, DPI, Brisbane

High levels of pre-harvest and post-harvest anthracnose were reported from many growers during the 1989 Fuerte season. A wet autumn contributed largely to the problem, since high moisture levels favour infection of fruit by the anthracnose fungus, *Colletotrichum gloeosporioides*. Until alternative non-chemical methods of controlling this disease are developed, it is essential to spray with copper-based fungicides regularly from flowering to harvest in order to protect developing fruit from infection. During times of wet weather, copper fungicides should be applied at 14 day intervals.

Many of the wounds which allow the anthracnose fungus to develop in unripe fruit are caused by insects, particularly the fruit spotting bug and the Queensland fruit fly. Control of these insects by spraying with the appropriate insecticides will help to reduce the number of wounds, and in turn, will reduce the incidence of pre-harvest anthracnose.

Reducing levels of anthracnose infection in the orchard can be partly achieved by removing dead leaves entangled in the fruit canopy and infected fruit still hanging on the tree, as these are the major sources of inoculum.

Post-harvest treatment with prochloraz applied as a non-recirculated spray over fruit is also recommended for the control of post-harvest anthracnose.

Temperature during the post-harvest handling of avocados is an important factor affecting the severity of anthracnose in ripe fruit. Less disease will develop if fruit are ripened at 16-20°C under ethylene than if fruit are ripened at 24°C in air.



Figure 2. A section cut through avocado peel showing infection

The infection of avocado fruit by *Colletotrichum gloeosporioides* is currently the subject of a 3 year research project. Infection begins when a spore on the fruit surface germinates to form a short germ tube. At the end of this germ tube, a spherical infection structure (appressorium) is produced (Figure 1).

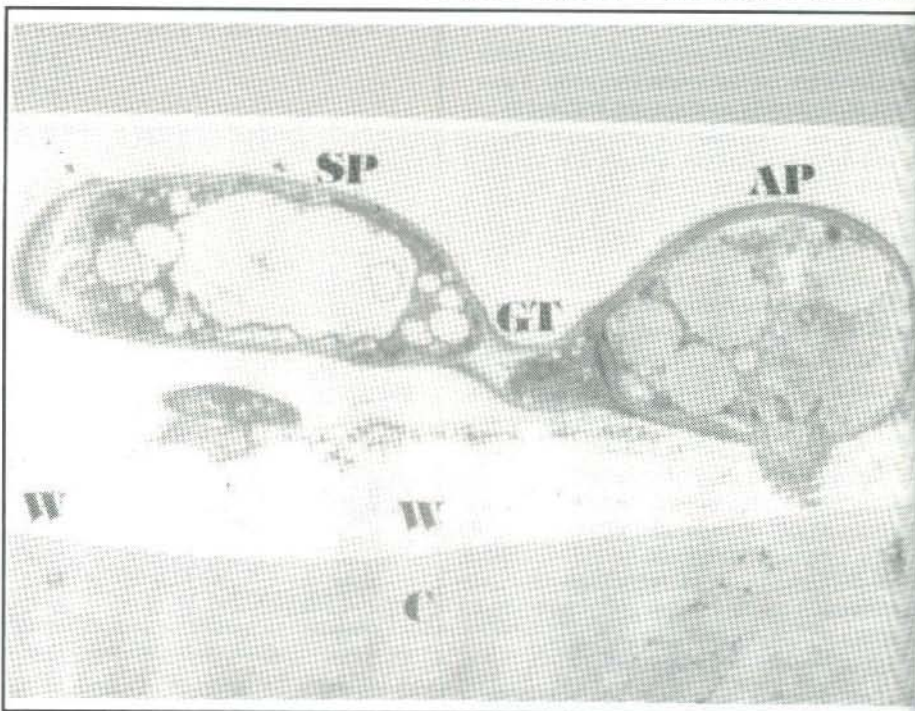


Figure 1. Electron micrograph of the anthracnose fungus on the surface of avocado fruit

Code. (Figures 1 & 2)

ap- appressorium; g.t. = germ tube;

sp. = spore; ip = infection peg;

w = wax layer; c - cuticle; e.c. = epidermal cell

Previous studies on avocado anthracnose suggested that the fungus remained dormant as an appressorium until the fruit ripened, at which time a narrow infection peg emerged from the base of the appressorium to penetrate the wax layer and cuticle of the fruit peel (Figure 2). Our studies have shown however, that the appressorium produces a short infection peg in the cuticle of unripe fruit while it is still hanging on the tree. It appears that this structure is the one that remains dormant until fruit ripening. This finding may have implications for control of the disease.

During the course of this study, it was found that inoculating Fuerte avocado fruit with spores of the anthracnose fungus sometimes led to the formation of small, limited anthracnose lesions in the peel of fruit while they were still hanging on the tree. This response was not associated with insect or mechanical wounds in the peel of fruit and in most cases did not lead to fruit drop. Out of fruit which were inoculated between November 1987 and April 1988, the greatest number of affected fruit were observed amongst those inoculated between February and April 1988, that is, 4-6 months after fruit set. The trial was repeated in the following year, but the results were more variable. It was found, however, that the formation of these lesions was dependent on the

concentration of spores applied to fruit. Fruit inoculated with one million spores/ml developed the symptoms whereas those inoculated with 10 000 spores/ml did not. This means that limited lesions are more likely to occur on fruit from wetter districts or following rainy periods when inoculum build-up and conditions for infection have been more favourable.

Figure 3 shows the losses of Fuerte avocado fruit in two orchards. A sample of fruit from trees in each orchard was tagged at monthly intervals starting at one month after fruit set (November) and ending one month before harvest (April). Fruit losses were recorded between the time of tagging (November-April) and harvest (May). The trees in one orchard received regular copper sprays while the trees in the other remained unsprayed during the season. Losses of fruit early in the season were due mainly to the formation of pre-harvest anthracnose lesions around wounds in the fruit peel. The benefits of copper fungicide applications in reducing anthracnose-induced fruit drop, particularly in the latter part of the season, are clear from this graph.

Research is continuing into this disease, and it is hoped that we can soon investigate the potential of biological control for anthracnose in avocado.





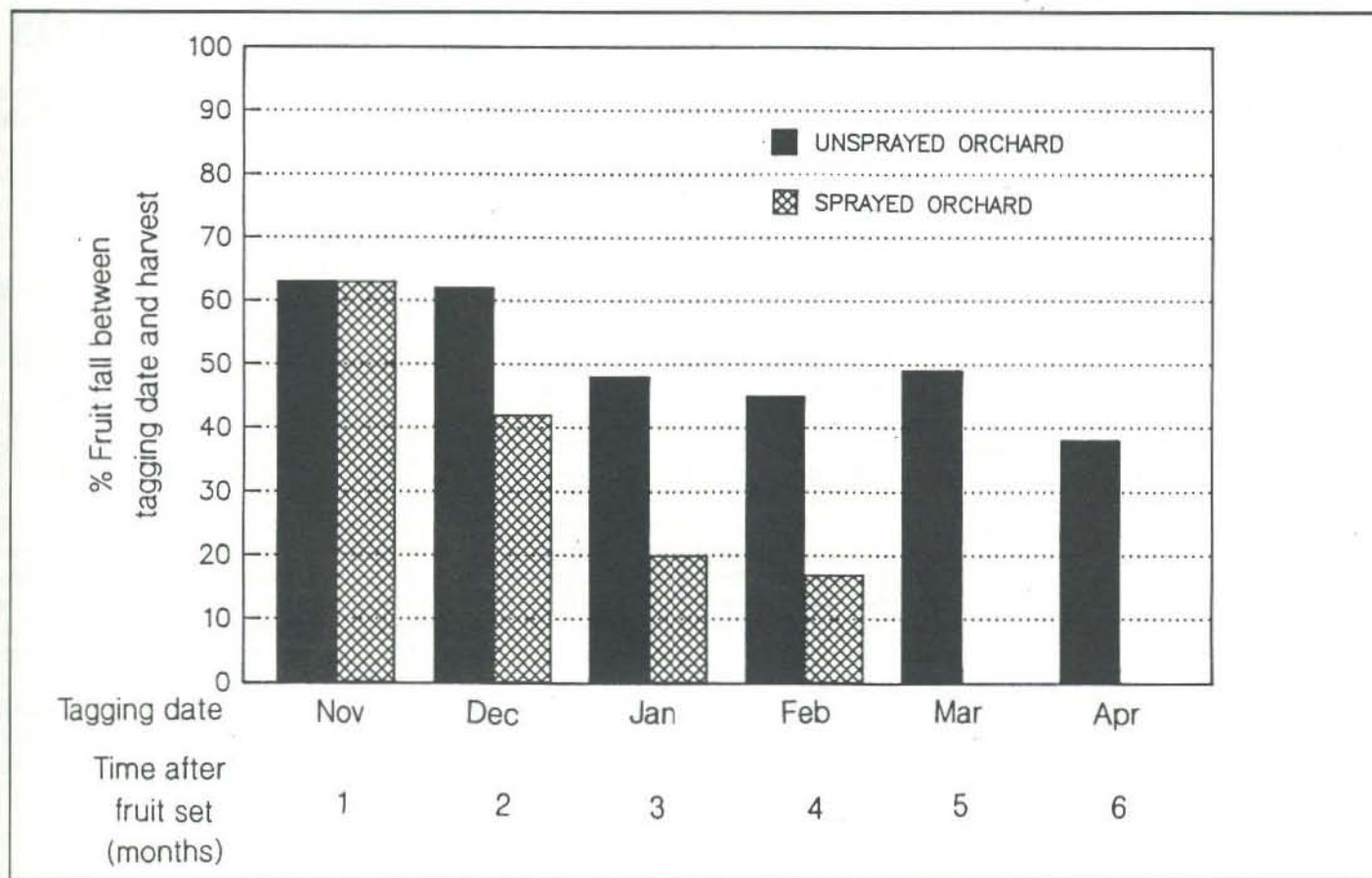


Figure 3. Shows the percentage of fruit dropped from trees between various times after fruit set and harvest.

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# Effects of Soil Management on Avocados in a Krasnozem Soil

P Broadbent, T Trochoulis, D Baigent, T Abbot & E Dettmann  
Dept of Agriculture, Northern NSW.

Avocado trees, cultivar Fuerte, were grown from 1973 to 1986 under soil management regimes on krasnozem soil at the Tropical Fruit Research Station, Alstonville. The regimes consisted of combinations of dolomite, gypsum and nitrogenous amendments with cover cropping or a kikuyu sward, and a bare ground treatment as control. The effects of these treatments on physical and chemical characteristics of the soil, in nutrient levels in the avocado leaves and on the occurrence and spread of *Phytophthora cinnamomi* in the trial size and on tree health, growth and yield of the avocado trees were observed.

Treatments receiving dolomite or phosphogypsum achieved the desired high cation-exchange levels but did not influence the behaviour of *P. cinnamomi* in soil leachates or incidence of *Phytophthora* root rot.

Trees receiving phosphogypsum produced more fruit than trees receiving dolomite, although trees given dolomite grew faster. Inputs of fowl manure and cover cropping were the same in both treatments. Soil phosphate levels were significantly higher in treatments receiving fowl manure and higher in the treatment receiving phosphogypsum than in dolomite

treatments, owing to the phosphate content of the gypsum. However, higher soil P levels were not reflected in higher P leaf levels.

Soil pH in the top 15 cm was raised and exchangeable Aluminium lowered by applying dolomite, and pH decreased with increasing soil depth.

Trees developed *Phytophthora* root rot first where there was bedrock in the top 80 cm of the soil profile, but later root rot developed in trees growing mainly in the lowest part of the trial area. The principal factor affecting the incidence and severity of root rot in this trial was internal drainage, as determined by the presence of bedrock, weathering rock or high bulk density in the top 80 cm and by topography. Management treatments did not influence the incidence of root rot in this trial, or the production and size of fruit on affected trees.

A comparison of leaf analyses for healthy and root rot-affected trees over all treatments showed a dramatic reduction in some leaf nutrient levels in the diseased trees. Broadbent and Baker (1974, 1975) considered that high cation exchange capacity, contributed to the suppression of root rot. This trial achieved high cation

exchange levels, but fell short of the desired levels of organic matter and microbial activity.

## Further Investigations

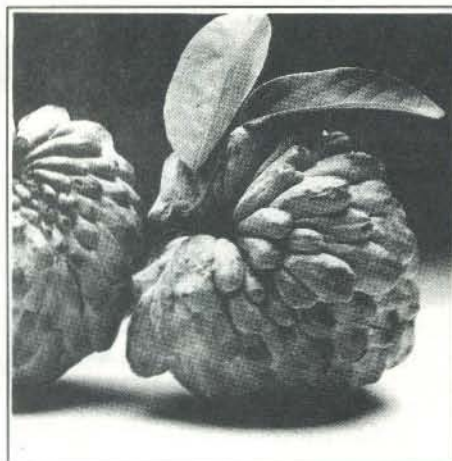
A trial using Hass avocados was planted at the Tropical Fruit Research Station (Northern NSW) in late 1985 to compare a series of calcium applications in the form of phosphogypsum with and without subsurface application of superphosphate. The annual rates of gypsum are 0, 2.5, 5.0, 7.5 and 10 t/ha. The gypsum is applied 4 times a year. The previous experiment described in the paper showed that trees receiving gypsum, fowl manure and cover cropping showed a 40% increase in yield over trees receiving dolomite, fowl manure and cover crop from years 4 to 7 inclusive. We wish to establish the optimum level of gypsum to apply. Phosphorus is incorporated with a subsurface applicator at a depth of 10-12 cm at a rate of 300 g per lineal m. All tree sites have been soil sampled to a depth of 90 cm at 15 cm intervals. The soil tests showed considerable uniformity. Treatments were first applied in 1989 and leaf samples taken in 1990 - as you would expect - have not shown any differences so far. In the old trial it took about 4 years for the soil treatments to impact on leaf analyses.



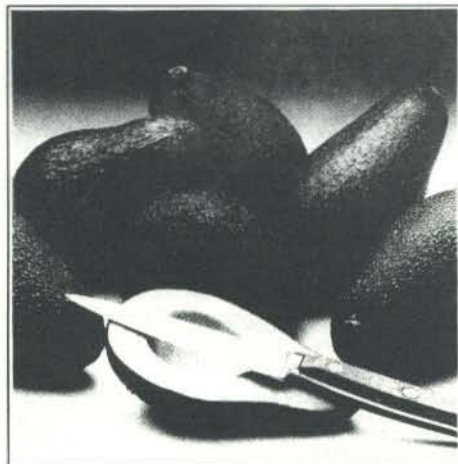
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# Correction of micro-nutrient deficiencies and control of *Phytophthora* root rot in avocado

A W Whitley, Senior Horticulturist, Nambour,  
K G Pegg, Senior Plant Pathologist, Brisbane

*Phytophthora cinnamomi* attacks the unsuberised feeder roots of avocado disrupting water and mineral nutrient uptake. Leaf concentrations of nitrogen, phosphorous, sulphur, zinc and boron are reduced below critical levels for optimum growth, and leaf chloride is increased to phytotoxic levels when chloride based fertilizers are used. Nutrient concentrations, excluding zinc and boron, recover rapidly when affected trees are injected with a 20 percent formulation of potassium phosphonate (potassium phosphite) and side-dressed with fertilisers according to seasonal requirements.

Zinc is an essential micronutrient for normal tree growth and fruit production and is deficient in most soils growing avocados in Queensland. Boron deficiency in avocado reduces pollination and causes growth deformities in fruit and lesions in shoots. It is readily leached from soils and deficiencies of this nutrient should be corrected annually.

In earlier experiments it was found that

spring and summer trunk injection with zinc nitrate (10% formulation) increased leaf zinc concentrations above the critical level of 30 mg per kg. However, in the same experiment an injectable formulation of boric acid (2%) failed to raise boron leaf concentrations above the critical level (50 mg per kg).

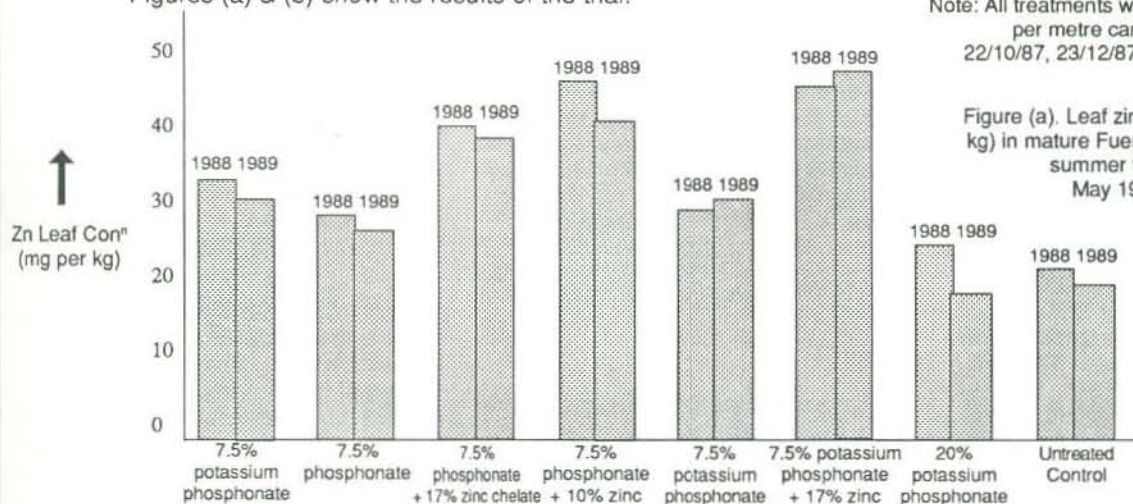
In an experiment at Maleny, where root rot is under a degree of ecological and biological control it was found that reduced rates of phosphorus (phosphonic) acid or potassium phosphite (potassium phosphonate) at all concentrations used (7.5% to 20%) gave equivalent rates of recovery for trees affected by root rot. These reduced rates of phosphorous acid or potassium phosphite permitted the formulation of chemically compatible mixtures containing zinc and boron.

Injection mixtures containing zinc successfully raised leaf concentrations of this element to the required optimum level. This is a viable alternative method to using soil applied zinc sulphate heptahydrate

which is effective in sandy soils but somewhat inconsistent in clay loams with high organic matter. Foliar applications of zinc have been found to be highly ineffective in Queensland orchards.

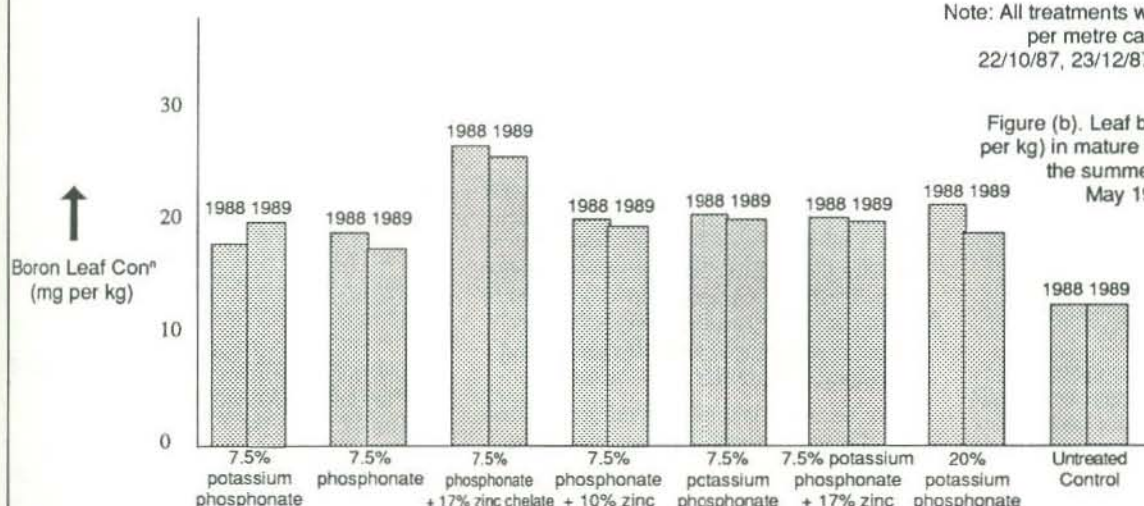
Boron concentrations increased where phosphonates were used and further improved where boron plus phosphonate was injected into trees. Although these differences showed significant improvement in the leaf boron concentrations they still fall short of the critical level of 50 mg per kg. The increased concentrations obtained where phosphonate was injected alone undoubtedly reflects the restoration of a healthier root system with greater foraging ability for boron in an expanded root zone. We were unable to formulate compatible mixtures with higher concentrations of boron. In view of these results it is likely that boron deficiencies are best corrected by soil and foliar applications of Borax or Solubor<sup>®</sup>.

Figures (a) & (b) show the results of the trial.



Note: All treatments were trunk injected at 15 ml per metre canopy diameter on 22/10/87, 23/12/87, 1/11/88 and 12/1/89.

Figure (a). Leaf zinc concentrations (mg per kg) in mature Fuerte avocado leaves of the summer flush sampled in May 1988 and 1989.



Note: All treatments were trunk injected at 15 ml per metre canopy diameter on 22/10/87, 23/12/87, 1/11/88 and 12/1/89.

Figure (b). Leaf boron concentrations (mg per kg) in mature Fuerte avocado leaves of the summer flush sampled in May 1988 and 1989.





# The relationship between carbohydrate levels and productivity in the avocado and impact of management practices, particularly time of harvest.

A. W. Whiley, J. B. Saranah and T. S. Rasmussen, Queensland Dept of Primary Industries

This avocado research project funded by C.O.D. and H.R.D.C. is due to start in July 1990.

The avocado, an oil bearing fruit, has a high energy cost in comparison to sugar producing fruit (for example, apples and citrus). This results in a lower potential yield of fruit per hectare. However, average avocado production in Australia is only about 33% of the estimated potential yield of 32 t ha<sup>-1</sup>.

Improvement in production efficiency is necessary for the avocado grower to remain competitive and to service the fledgling export markets that are developing. A mature avocado fruit does not ripen when on the tree. Growers commonly use this feature as a 'storage' procedure in the management of marketing their crop. Results from this practice are

often reflected in chronic biennial bearing or complete crop failure in the following year.

Successful marketing (both domestic and export) depends on stability of production so markets can be reliably supplied. Establishing criteria relating to the length of on-tree storage and yield loss in the following year would help in stabilizing production.

A direct relationship exists between the starch concentration in woody tissues of avocado trees before flowering and the fruit yield the following year. With citrus and mangoes, gibberellic acid concentrations in shoot tips are implicated in floral initiation. This research plans to study the effect of harvest date (fruit maturity) on the changing gibberellic acid and starch concentrations in avocado trees and their relationship to the following

years cropping performance. This will lead to the development of strategies that will help in stabilizing and maximising fruit yield.

## Objectives

1. To study the impact of time of harvest on current and future yield of early (e.g. 'Fuerte') and late (e.g. 'Hass') maturing cultivars of avocados.
2. To relate the time of crop removal to its impact on reserve starch concentrations in the tree; to examine the feasibility of developing a 'predictive' threshold for future yield.
3. To investigate the role of plant growth regulators on flower initiation, particularly in the presence of late held fruit where flowering often fails.

To gain reliable data it will be necessary for this project to run for a minimum of 3 years.

# Market Feedback: Asian Supermarkets? Why not?

Ewan Colquhoun Australian International Business Centre, Brisbane, Qld

Ross Garnaut (Ambassador to China 1985-88) tells us that never before in human history have living standards improved as fast and for so long as in parts of Asia over the past four decades. So, are there any implications for avocado growers in Australia? Does this rapid growth in Asian living standards offer us threats or opportunities? Why should we worry?

Take a casual walk among some of these now affluent urban customers. This will destroy any doubt in your mind. Supermarket names like Daimaru, Sogo, Tokyu, Cold Storage and Park & Shop are fast becoming the mass retailers of premium quality fresh produce from Hokkaido to Jakarta. At home, our own Coles Myer and DJs will feel the heat of Asian retail competition from later next year when the big Japanese retailer Daimura opens in central Melbourne. Others have plans for Sydney and Brisbane.

In the premium Asian supermarket chains you'll see discerning middle and upper income consumers buying Californian oranges, Japanese apples, dairy products from Europe, Australia and New Zealand, chilled chicken from Denmark, a kiwi fruit from Chile or Italy, and live, air-flown mudcrabs grown by a Japanese joint venture company in Thailand.

The first message is simple: global competition at the Asian daily-fresh retail outlets is well advanced. Our competition is not with Australian producers. It comes primarily from multinational overseas outfits who have sorted out their product distribution network and built culturally

sensitive marketing systems to deliver bulk fresh products across the globe. Cashed up Asian consumers are loving it, but can Australia's horticultural industries get together and grasp this supermarket opportunity before our southern hemisphere competitors lock up these growing markets? Chile and South Africa both have lower production costs than Australia, with quality control that is fast improving.

Sceptics may suggest "So what, only a fraction of Asia's 1600 million-odd shoppers buy from these western style supermarkets, the vast bulk (including those billion mainland Chinese) still buy daily from their 'wet' or street market. True enough, but their mountain of foreign cash reserves brings with it education, electricity, TV and refrigerators. Wet markets are being bulldozed all over urban Asia as consumers see how others in the West live. You don't need to make that daily trip to the street market to buy fresh produce when you have a refrigerator.

Consumer buying habits are changing and shopping preferences are being realigned. The well-to-do represent only a small rapidly growing percentage of some Asian populations, but quite massive numbers of sophisticated consumers in other more westernized centres, such as Hong Kong, Singapore, Seoul and all of Japan.

Price becomes less of a barrier to purchase as relative disposable income increases. Last week, single rock melons were selling for A\$25 in Daimaru, Singapore; apples for A\$6 each. Both products were grown

in Japan, where quality is king. As in the US and Western Europe, higher living standards are driving consumers to prefer produce that is fresh, of high quality and nutritious. Australian avocados have the potential to appeal to Asian consumers on all three grounds. Supermarket buyers and agents in Singapore are right now seeking our air shipments of quality avocados.

The second implication: the existing Australian avocado appears to meet the needs of new affluent Asian consumers, with scope for price movement upwards. But to ensure the needs of consumers are met and to keep out the low-priced Chilean competition, we need to add genuine value to our export avocados, through quality assurance and point-of-sale promotion.

"But why not concentrate on servicing the domestic market? There are significant markets for Australian grown avocados right here." Again that's partly true, but without the national grower/packer commitment to quality, the industry may well be faced with intense overseas competition from low cost, high quality products. The pineapple industry is already facing this prospect from the Philippines, with the mango industry currently being challenged in the off-season by the world's biggest producer, India.

So what's the result? Well, we don't need to worry if we are constantly aware of changing consumer preferences and market opportunities in Asia. Building solid business relationships with the Asian supermarket chains is our best approach to long-term market success.