



Talking Avocados



The Australian Newsline

Vol 5 Number 1

February 1994



Bob Brinsmead with Col Bridges testing the Bridges Picker

- Is Our Marketing System Sound
- Anthracnose - It Is A Problem

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Cover

Front Cover: Col Bridges (right) with Bob Brinsmead with the Bridges picker.

Back Cover: The Bridges picker being used by Daphne Falconer.

Calendar of Events

February

- 9 **Richmond Branch of the NSW Avocado Association** - meeting Alstonville Tropical Research Station commencing 3.30 p.m.
- 10 **Coffs Harbour Branch of the NSW Avocado Association** - meeting Coffs Harbour Catholic Club commencing 7.30 p.m.
- 10 **Tweed Branch of the NSW Avocado Association** - meeting Murrumbidgee Services Memorial Club commencing 6.00 p.m.
- 21 **Brunswick Branch of the NSW Avocado Association** - meeting Mullumbimby Ex Servicemen's Club commencing 8.00 p.m.

March

- 1 **Avocado Growers Association of WA** - meeting Conference Room, Market City commencing 5.30 p.m.
- 9 **NSW Avocado Association** - Committee meeting Ballina RSL, Ballina, commencing 9.00 a.m.
- 16-18 **Australian Avocado Growers' Federation** - Directors meeting, Queensland Fruit & Vegetable Growers Brisbane.

April

- 5 **Avocado Growers Association of WA** - meeting Conference Room, Market City commencing 5.30 p.m.

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Talking Avocados is the official magazine of the Australian Avocado Growers' Federation and in conjunction with the Australian Horticultural Corporation is published four times a year (February, May, August and November).

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From Your Federation

By Sandy Teagle, Executive Officer, AAGF Inc

The last meeting of your Federation was held on 6-8 December 1993 and included an AHC Marketing Forum, a DPI Industry Consultative Session and the Annual General Meeting as well as General Meeting business. A warm welcome was extended to the most recent member of the AAGF, Mrs Mary Ravanello who replaced Mr Don Lavers. Quite a hectic schedule, however, I am pleased to say that all survived the 3 day epic!

Once again, a major issue at the meeting was membership of the AHC. The need for a national levy collection system was a crucial factor in this debate. The Federation decided to continue membership with the AHC for a further twelve months based on several conditions:

- The AHC to provide quarterly reports.
- QFVG to be allocated \$150,000 as the advertising sub-contractor.
- Establishment of strategic targets for 1994/95.

Your Federation will be closely monitoring the AHC's performance during the next 12 months and will revise membership based on productivity at the end of this period.

A special meeting was held after the Marketing Forum with John McKay and Bart Gannon of the AHC to discuss the AAGF's dissatisfaction with the AHC. Many differences were resolved with poor communication being identified as the root cause of most problems. With agreement to improve efforts in this area, we look forward to a more harmonious and fruitful relationship with the AHC in 1994.

Along with all other budgets, promotion is now based on a financial year. Funds of \$150,000 have once again been allocated to QFVG for avocado promotions for the coming year. The promotional program for 1994/95 will be presented at the next meeting of the Federation in March.

The current promotion program concludes at the end of June 1994. Part of this program included development of leaflets to encourage use of avocados as a baby food. The leaflet is part of a long term aim to target a broader range of consumers including younger age groups. Initially the leaflets will be distributed through antenatal clinics and baby health centres. A specimen of the leaflet titled "Your baby deserves all the goodness of avocados" has been provided as an insert in this issue.

There is still a lot of promotional material and dietary information around which depicts avocados as high in fat

and recommends or implies that they be eaten sparingly. The AAGF has been actively standing up to recent adverse publicity, although consumer misconceptions will take time to change. One way to redress this is by use of the Heart Foundation's pick the tick logo. The AAGF holds a sub-license for this logo which may be used by its members. Persons interested in utilising the logo should contact myself in the first instance.

Fruit quality surveys in retail stores as part of the Avoman project have highlighted quality problems. These have been attributed to damage during handling and increased occurrence of disease at high levels of maturity. Research has shown that Hass fruit is often ripe before the skin is fully black, however, consumers are selecting (and have been educated to select) black skinned fruit. The black skin makes detection of poor quality difficult and consumers quickly become wary of avocados as a result. Clearly there is a need for education of consumers, retailers and producers. (See Avoman Section page 16)

The annual election for Federation executives resulted in a number of changes. David Rankine was elected President and will assume this position in May. John Bolton is the new Vice-President while the Varieties Committee consists of Mary Ravanello, Rod Dalton and Ross Richards. The Newsletter Committee consists of Warren Meredith and Marie Karanicolos. Warren Meredith is the Research contact officer and Ross Richards will be the representative for the proposed horticultural peak body. Due to financial constraints the Federation will no longer be a member of the Australian Horticultural Growers' Council, but will retain membership with the Horticultural Policy Council.

The AAGF conference for 1994 has been postponed due to reasons outlined in the article on page 17. Please consider the option proposed and proffer a suggestion.

I will be preparing regular articles for "Talking Avocados" to keep industry up to date with Federation activities and issues. Comments on any issues affecting the avocado industry are most welcome, or if you have any queries, criticisms or advice please contact myself or any of the Federation Directors listed in the inside cover of this magazine. The Federation is your industry's voice—make the most of it!

A happy and prosperous New Year to all.



New Executive Officer

Sandy Teagle has been appointed as AAGF Executive Officer following the resignation of Bryson Dyke last year.

Ms Teagle has a degree in Agricultural Science, majoring in horticulture. She has worked for the SA Dept of Agriculture and the NT Fishing Industry Training Committee. She has experience in horticulture and in the operation of meetings and committee procedures.

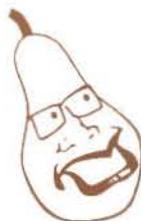
Talking Avocados would like to take this opportunity to welcome Sandy to the avocado industry and looks forward to her contribution to this magazine.

Sandy can be contacted on the Growers' Access line 008 654222 or (07) 2132476.

AVOCADO QUALITY STANDARDS POSTERS

If you need copies of the quality standards poster, then now is the time to speak up! The poster is currently out of stock and will be reprinted provided that there is sufficient demand. Keeping in mind that they don't last forever, place your order now, as it may be the last chance to obtain posters for the next couple of years. The posters will be available at a small cost (to be calculated pending printing).

Orders can be placed with Sandy Teagle, Executive Officer, Ph: (07) 213 2476.



TALKING AVOCADOS - HAVE YOUR SAY

Avocado Imports - A Short History

The warning in your article "Avocado Imports - Real or Imaginary" in the November issue of "Talking Avocados" was timely. I have been wondering, ever since Chiquita came on the scene in Australia in bananas, just what interest Chiquita would eventually show in avocados and other fruits in Australia.

If Chiquita makes a move I imagine it will first establish a base within Australia, in the same way they have done in bananas, namely, acquire merchant outlets, orchards and arrangements with individual growers. I won't deal with this domestic aspect because I don't suppose, in our allegedly "free market" and "freedom of the individual" atmosphere, there is much the industry can do to prevent such a move.

I do want to deal with the import threat, however, in a scenario that Chiquita, or some other multinational company, establishes itself on the domestic market with Australian grown fruit and then use its power and influence to attempt to bring foreign avocados into Australia.

I thus offer the following comments based on my experiences with Quarantine officials in the years 1976 to 1984 and which finally lead to the embargo on the import of Californian fruit into Australia as well as the continuation of the embargo on fruit from all other countries, except New Zealand and Norfolk Island.

Prior to and at the hearings in 1980, Quarantine had accused the Federation of having "seized" on disease as a means of stopping economic competition and of using quarantine as a weapon of trade. At the hearings we destroyed Quarantine's position by being able to establish that increase in Australian production, exchange rates, shipping costs etc. meant that US producers could not profitably bring US fruit into Australia at that time. By the 1984 hearing Quarantine had dropped such accusation and nothing more was said on that issue.

The above is not to say that Quarantine might not again raise the accusation in the future. Since my retirement from the scene I am no longer in touch with comparable avocado prices in the US and the other factors involved in the export of fruit from California to other parts of the world.

Another problem the US exporters faced in those years was shipping delays resulting in some shipments being condemned and destroyed. With the major developments in post-harvest treatment and storage and the fact that some multinationals

have their own shipping arrangements, it would have to be assumed that if the multinationals attempted to use their influence to bring Californian fruit into Australia there would be "a quid in it".

In those years, we were aware of the trips to Canberra by representatives of the Californian packing houses seeking to export avocados into our country—indeed they had access to the Canberra mandarins which the Federation did not have. At hearings, Quarantine officials did not appreciate the writer's attempts to ascertain the reasons for such visits. In retrospect, those Californian interests would be "small time" when compared with the multinational organisations and the power and influence they now exert in the "banana republics", a term once used to describe Australia's potential.

The July 1984 embargo was based on the danger of introduction of the black streak disease in California into Australia and also the danger of the transmission of the sunblotch disease through seed infected by that disease. A number of conditions and requirements were imposed and communicated to the US Plant Quarantine Service before any future consideration should be given to imports of avocados from the US

I have ceased my subscriptions to US publications and therefore am not up to date on the current scientific status of these diseases or any other exotic diseases now apparent. No doubt our senior pathologists will be up to date on these matters.

I note that in a letter to the Federation Secretary of 8 July 1984, I suggested that the Federation request Quarantine, Canberra to make available to the Federation copies of all correspondence passing between Canberra and the US Plant Quarantine service on the matters arising from the minutes of the hearing of 17 April 1984 so that the Federation could be kept fully apprised of any developments. In a reply of 16 July 1984, the Federation Secretary advised me that he had done this. I hope the Federation has been kept up to date if there have been any developments.

It is also worth remembering that as at 1979, applications to import avocados into Australia had been made to Quarantine by Mexico, Israel, Indonesia, Philippines, Cocos Islands, Mauritius, Fiji, Papua New Guinea, Sri Lanka, Swaziland, Tonga and South Africa but all were refused. Up to 1984, Quarantine had never consulted with local industry on any application to import into Australia. It is also

worth remembering that when Quarantine initially allowed Californian avocados into Australia in 1976 it did so in total ignorance of the black streak disease in California and only became aware of its existence when so informed by a Federation.

It was not in those days safe to rely on protection from Canberra bureaucrats and the lesson is that the industry must be ever vigilant in matters of quarantine. There was also ample evidence of suspect phytosanitary certificates being issued by officers of the US Plant Quarantine Service which were never questioned by our own officials.

Although argued that the tests should be "no risk", in 1980 the policy on quarantine was based on a test of "proper assessment of risk" and that may still be the case? (*Current implementation is "acceptable risk", although common sense would seem to dictate "no risk" Ed.*)

For practical purposes however, our Quarantine officials initially took an attitude that required the Federation to establish that a real risk arose if Californian avocados were allowed into Australia. We did meet that challenge by the mass of scientific evidence produced.

However by the 1984 hearing, there had been changes in top Quarantine officers involved and there was an acceptance of the situation that the onus of proving real risk was not upon the Federation but rather it was for the US interests to accept the onus of proving that no risk, or no acceptably significant risk, arose from allowing Californian avocados into Australia. Hence there was a shifting of the onus (and rightly so) which established a precedent which I think from my reading seems to have been accepted by Quarantine when it was dealing with attempts in the last few years by a couple of foreign countries to bring bananas into Australia.

Finally, it should always be kept in mind that in quarantine matters recourse can always be made to the Courts (Federal Court of Australia) by an aggrieved person on a number of grounds if there is evidence of breach of natural justice or any improper exercise of power, abuse of power etc. etc. by bureaucrats.

The Act is the Administrative Decisions (Judicial Review) Act of the Commonwealth. Public servants hate it! We were in a position to use the Act against Quarantine in March 1984 and I was within one day of commencing proceedings on behalf of the Federation but the threat caused Quarantine to cave in and brought about the final hearing on 17 April 1984 and the eventual embargo of July 1984.

John Dexter

Coffs Harbour NSW



Dear Sir,

The avocado industry is starved for funding to carry out effective research. There may be nothing new in being short of funds—the larder has been low for many years. However, many of us believed that when the industry joined HRDC, things would greatly improve.

There was indeed an improvement—a development plan was put in place and the industry was able to take on new projects. Unfortunately it can only finance about one sixth of the really worthwhile research that is submitted every year. We watch in embarrassment as researchers, who have heard year after year “Sorry we have no money”, drift away to other industries where the cupboard is not so bare.

We are now in a time of greatest need. Market and retailer surveys have revealed a major internal quality problem in fruit which is hurting our marketing programs and reducing returns to growers. The task of identifying and correcting this will take money which we do not have. Avoman, surely one of the most ambitious information gathering and disseminating research projects, potentially rewarding to all sectors of our industry has had to pruned to 50% of its planned budget.

How then can we increase funding? I believe there are three ways

- Increase grower levies to the full 0.5% of gross value which will be subsidised by HRDC. This will mean raising from the 3 cents a tray which we pay at present to about 6 cents.
- Since quality problems have such a profound effect on the marketing of our product we should ask the AHC to deduct 25% from the present promotion budget and direct it towards market related quality problems for three years.
- Seek funding from other sectors of the industry—packers, wholesalers and retailers—who are similarly financially affected by the present quality problems and who would benefit from an industry wide quality management program.

I have attended a number of meetings where proposals to increase levies have been deferred because of possible objections from growers. I do not believe we have this vast army of growers who object to paying a few cents a tray to improve the quality of the product and to increase their efficiency and their profitability. I think we are allowing our industry to languish because of a few people who resent all levies at all times.

The Queensland DPI spends around eight times the amount on avocado research as does the Australian avocado industry and, if you know the way cut-backs are affecting government agencies, you

Talking Avocados - A New Policy

1994 sees a new policy on subscriptions to Talking Avocados. Australian avocado growers will not be affected and will continue to receive their free copy.

In the past, subscribers have paid for four issues at a time, being the number published in a twelve month period. The new policy will convert those subscriptions to a calendar year and from then on subscribers will pay on an annual basis.

This year, subscribers will be able to subscribe to the end of 1994 or if their subscription falls due after March, then they will have the option of extending it to the end of 1995. Each subscriber will be notified of the options available and the cost of those options.

By aligning subscriptions with a calendar year, costs are reduced because all renewal notices go out together and subscribers will know when their subscription runs out. Right now, do you know when your subscription runs out?

New readers who subscribe before the end of June in any year will receive back copies to make up their subscription. Those who commence after June will be given the option of subscribing for one full year and receiving back copies or subscribing to the end of the following year on a pro rata basis.

Although every effort has been made to contain production costs, subscription rates for 1994 will increase. This would have happened even if the subscription policy had not changed.

As a result, the new annual subscription rates for one year will be:

Australian subscribers	\$15
New Zealand	\$21
Other overseas	\$25

will not expect this to continue if the industry does not show a desire to help itself.

Jan Toorien, Managing Director of Westfalia Orchards, South Africa told growers, when he was in Australia recently, that his company channels \$1.4 million a year into research.

The avocado industry has a set of research priorities and a reputation of being organised and progressive. Growers have the opportunity of showing their leaders how directional they want their industry to be by demanding more funds for essential and well directed research.

Don Lavers

Walkamin QLD

Fellowship Award For Dr Chris Rigney

Horticultural Research and Development Corporation Executive Director, Dr Chris Rigney has been awarded the Fellowship of the Australian Institute of Agricultural Science for his outstanding contribution to agriculture.

The award highlights Dr Rigney's achievements for the horticultural industry over the past twenty years. Before taking up his present position, Dr Rigney was responsible for the co-ordination and direction of research operations for the Joint Division of the Food and Agricultural Organisation of the United Nations and the International Atomic Energy Agency.

As a research horticulturalist with NSW Agriculture he conducted research on post-harvest disinfestation to allow the export of Australian fresh fruit to NZ, Japan and USA and later undertook a Ph.D. program of research into the biochemistry of fruit ripening, its initiation and control.

In his present position he has overseen a substantial increase in industry involvement in horticultural research and development, with funding under the joint industry/government financial arrangements having increased from \$185,000 in 1988/89 to almost \$12 million in 1992/93.

HRDC Award To Ken Pegg

The Horticultural Research and Development Corporation (HRDC) has awarded an inaugural Graham Gregory medal for excellence in research to Ken Pegg.

Ken is senior principal plant pathologist with Queensland Department of Primary Industries. He has worked for 40 years to identify and solve a variety of plant disease problems in the avocado, banana, citrus, ginger and pineapple industries. His work has led to gains in productivity said to be worth tens of millions of dollars.

The award consists of a bronze medal and a sum of \$1000.

The award, together with an award for development, was established in recognition to horticultural science over many years by the late Graham Gregory AM, culminating in his term as the first chairman of the HRDC.

World News



Avocados Doing Well With Consumers

From California Grower, October 1993

California avocados have never before achieved supermarket and consumer household penetrations as high as they enjoyed in the May-July period, according to produce researcher Edd Buckley.

Buckley presented his findings to a recent California Avocado Commission board meeting, saying CAC's programs must be working because there were significant improvements found by his research.

According to his findings, retail distribution set three records during the three month period studied: 94.6% of U.S. supermarkets stocked avocados; of those stores, 17% had some kind of promotional deal going when the study was made; and only 6.3% of the fruit displayed was below acceptable quality levels.

By way of comparison, the retail distribution level in 1990 was 83%.

Progress was also reported in the industry's ability to put ripe fruit before consumers. 35.5% of the stores have ripe fruit on display and another 47.5% had both ripe and unripe avocados available for

shoppers. Only 17% of the stores had no ripe fruit available.

Buckley confirmed what growers and handlers have known for some time—the bulk of avocado sales come from the western U.S. In fact, 61% of the buyers, 69% of avocado volume and 60% of the industry's dollars come from the West Coast, South-west and Mountain regions of the country. This area, where virtually two thirds of the avocado business is done is home to just one third of the population.

Every fourth store west of the Mississippi River had an avocado display during the period. Buckley's data showed strong gains for avocados in the remainder of the country, too, accounting for the record retail distribution levels achieved.

In June, 14.3 million households purchased avocados and that compares very favourably to the 11.5 million households that purchased in June the year before.

Sales during the Feb-April quarter also reflects improvement over the year before in most areas. The least well performing

category was dollars, reflecting the large volume of fruit the industry has marketed at very low prices this year. Buckley's research showed that the industry had sold 37% more avocados during the quarter for 10% fewer dollars.

Relatively low supermarket prices encouraged shoppers to stock up, though. The average shopper purchased 4.3 avocados per month during the period, taking home an average of 3 avocados per trip to the supermarket. The average price of this fruit fell from 70¢ the year before to 45¢ this season. The number of avocados purchased showed an increase in every region of the country over the year before.

In 1990, the average price for an avocado was \$1.37, compared to 45¢ this season.

According to the Buckley's data, the best prospects for avocado purchases are shoppers 45-64 years old, households with incomes of \$60,000 or more, in the western U.S. Households with children are also continuing their trend to becoming good users of avocados.

Chile Exports to the US

By James McCormac, California Grower, September 1993

If you want to raise a California avocado grower's blood pressure a notch, ask him about the imports of Hass avocados. He will tell you why they're bad for his business. Like the weather, everyone has an opinion but no one feels they can do much about it. Chile, as part of an aggressive expansion of agricultural commodities exports, has sent increasing amounts of Hass and Fuerte avocados into the U.S. market.

The response of the avocado industry has been mixed. Handlers who have participated in the marketing of Chilean avocados have been vilified by some growers and grudgingly praised by others for at least giving some efficiency and stability to the avocado market while Chile is here.

Most growers resent Chilean avocados getting a free ride in the U.S. market that California growers have developed at great cost. Many feel Chile should pay its fair

share to promote avocados. How? With this question, general agreement ceases.

Some growers who are not opposed to using the federal government have been exploring the use of Federal Marketing Order provisions of the USDA. Under these provisions it is possible to tax imported avocados for use in generic avocado promotions. (Speaking of taxes, Chile does pay a 6% tariff into the US government's general fund. Chile is currently fighting to have this tariff lifted).

Sometimes called an International Marketing Order (IMO) or, more recently, a Federal Promotion Order (FPO), both refer to a federal creation that could generate money for avocado promotional work. Such a market order would require federal legislation to set up and would have importers of Chilean avocados in decision making positions.

Neither provision is likely to engender unanimous support. In past years support for a federal program has not been there. Yet, each year that Chile enters our market in a big way without contributing to our promotional work, the likelihood of this kind of response increases.

In this year of low prices it is unlikely that significant amounts of Chilean avocados will be shipped to the U.S. Consequently pressure to do something about imports will be less. Couple this with lower CAC budgets and a general consensus to restrain all programs, it is unlikely that anything will be done this year.

However, as sure as the passing of the seasons, next year we will have good prices and Chile will be back with a mass of avocados. And, like the phoenix, the Federal Promotion Order (FPO) will rise anew to be considered.

Mission Introduces New Packs

From California Grower, September 1993

Mission Produce Inc., the largest independent handler of California avocados, has introduced a line of new packages to help retailers increase their avocado sales volume. With an abundant crop of avocados this summer and consumer usage at an all time high due to California Avocado Commission (CAC) advertising and promotion programs, multiple packages should create opportunities for high profit sales.

Value Added

Utilising a value added approach designed to benefit consumers and retailers alike, Mission is packing a full range of sizes and counts in its new plastic overwrap bags, trays and club cartons and will ship them pre-conditioned if retailers so request.

"Value added packaging is definitely the future for the California avocado industry and Mission has decided to take a leadership position. We want to create multiple sales and encourage retailers to use multiple displays, giving consumers

more options," Mission President Steve Barnard, said. "Our new packages offer consumers a range of convenient purchasing options and retailers the opportunity to increase avocado sales through multiple sizes and counts."

Overwrap Bags

Mission's colourful overwrapped bags are already achieving strong trade and consumer acceptance in the chains. In addition to carrying UPC scannable codes and Mission's bright red and blue logo, the overwrap gives consumers new avocado recipe ideas and suggestions for proper handling of the fruit at home.

Mission added new bagging machinery to its Oxnard packinghouse at the beginning of the new season and got it fine tuned in time for the peak avocado crop volume this spring. According to Ross Wileman, Mission's domestic sales manager, Mission can adjust the fruit size and count in its bags to meet the custom needs of most retailers. Then it can pre condition the avocados if requested.

Overwrap Trays

The firm has also added poly overwrapped tray packs that it also can custom pack and ripened to the individual retailer's needs. Like the bags, the trays carry UPC scannable codes and Mission's eye-catching logo.

Club Cartons

Club cartons are another Mission new package this season designed to sell California's big crop in multiple units that return strong profits to retailers.

This season, Mission has also begun shipping avocados with Product Look Up (PLU) code stickers. The stickers help accurate pricing of the fruit at check-outs and allow retailers to merchandise more than one size or variety of California avocado without concern about price confusion at the check-out register. For retailers not set up to handle universal PLU codes on their computers, the stickers have been colour coded, providing a benefit for them, too.

NZ In-Store Tastings Gain New Fans

Edited version from the New Zealand magazine Avocado Scene, December 1993

Avocado promotion this season is concentrating on increasing the number of avocado consumers.

Research carried out in the North American market has found the only realistic and proven way to increase the avocado consumer base is by in-store tastings, Avocado Growers Association promotion officer Robyn McDonald reports. The main thrust of Robyn's promotions this year will target the 50% of consumers who do not eat avocados.

"With increased crops and increased export volumes the local market has the job of absorbing the export surplus" Robyn said. "Though much of this fruit is not deemed suitable for export, increasing volumes of first quality fruit are making their way on to the New Zealand market. Fruit from Northland is having the effect of priming the market at the beginning of the season, setting good prices and good quality standards.

"The most effective time to carry out in-store tastings is in the peak production time when fruit is plentiful and reasonably priced.

"This year's promotion has been developed after consideration of the factors of population, market share and present avocado consumers in the New Zealand market.

"We will again use Fieldforce demonstrators and promote jointly with Hidden Valley Ranch dressing to maximise nation-wide coverage. This dressing is a quality product available for many years in the US and now imported into NZ.

"The joint promotion enables us to afford more than 300 demonstrations rather than the 180 which would be the stand-alone costing."

Other advantages of joint tastings are that the customer has a ready-to-prepare meal using the two products and the spin-off advertising through the other company involved.

The Hidden Valley Ranch packet product can be mixed with avocado to make a delicious dip and the dressing is ideal simply served in a half avocado. Avocado is also served in slices or wedges to dip in the prepared dressing. It provides exactly the no-thought type of meal that appeals to busy consumers.

The demonstrations carried out by Fieldforce under Robyn's direction began in late October 1993 at a time when there were good supplies of avocados in that area.

Woolworths, Big Fresh and Foodtown supermarkets are the main venues for the promotions, having the greatest throughput of customers and therefore the greatest possible exposure for avocados.

The other main area of growth in population terms are the future potential consumers in schools around the country. The healthy attributes of avocados will be the main thrust of the schools' campaign, especially balanced nutrition and cholesterol and weight control.

Australian Round-up



Marketing - Is The Australian Marketing System The Best?

In this issue of *Talking Avocados*, the marketing system in each State is examined from the point of view, "what problems are currently being investigated". All growers should take an interest in their market system because it is their money that sustains such a system and it is their money that ultimately pays for any rorts or dishonest behaviour.



Melbourne Market

By Rod Suggett, *Market Place News*, October 1993

Commercial

Melbourne Fresh Centre Market Trust is to be abolished and replaced by a three member Melbourne Market Authority (MMA).

In addition, new legislation now being drafted by the Victorian Government will amalgamate the Melbourne Wholesale Fruit and Vegetable Market Trust Act, and the Farm Produce Wholesale Act.

Agriculture Minister Bill McGrath announced these moves following release on September 22 of the report of the Review of the Melbourne Wholesale Fruit and Vegetable Market by a Parliamentary Committee headed by Craig Bildstien MP for Mildura.

It recommended that all executive management positions at the market be declared vacant, so that the new Authority could establish a new management structure.

Those currently holding management positions will be eligible to apply.

Mr McGrath said Cabinet had given approval for draft legislation to be prepared immediately in response to the recommendations. He has asked current Market Trust chairman Maurice Pitard to continue "in a caretaker capacity" until new legislation is introduced.

The committee, which also included MPs Don Kilgour, Peter Ryan and Stephen McArthur, commissioned the Canberra-based Centre for International Economics (CIE) to prepare a report on the commercial future of the Melbourne Fresh Centre.

It strongly favoured the CIE option of moving towards better commercial use of the market, but stopped short of a privatisation option suggested by the CIE.

The CIE report says the market site, with \$800 million annual turnover, is under-utilised, and could be earning up to \$24 million more for the Victorian economy.

The tenor of the committee's recommendations throughout, however, is for less regulatory interference.

In recommending creation of the MMA, it is critical of the existing Trust and management structure which it says does not meet the needs of market users.

"Maintenance of the status quo would ensure the eventual demise of the market and is, therefore, not an option," the report says.

"The challenge is therefore put to the Melbourne Market Authority—ensure the relevance of the market, or preside over its eventual demise."

The report says membership of the MMA should be selected by the Minister from people with backgrounds in law, real estate, accounting, finance, the retail or wholesale business sector, or any other area the Minister considers appropriate.

Responsibilities

"A clear distinction would need to be drawn between the responsibilities of the Authority and the responsibilities of the management it appoints to take care of the day-to-day running of the Market", the report says.

"This would ensure the Authority is able to focus on major issues of Market planning and direction, and would not become immersed in detail, as is currently the situation."

The report says the current system of advisory committees is not working, and suggests a new one giving committees legislative support requiring the Authority to meet regularly with them, and the support of management and staff, "so that effective change of information is accomplished."

It suggests four five-member advisory committees, all appointed by the Authority, with three members of each being selected from a panel of names provided by industry.

The four committees suggested are: fruit and vegetable wholesalers, growers, retailers, and the flower industry.

Grower Stands

The report acknowledges that the complex arrangements for the allocation of grower-seller stands at the Fresh Centre are open to abuse, particularly in relation to growers "topping up" supplies from other sources, noting that it is sometimes not clear where topping up ends and wholesaling commences.

"The committee is of the view that it should be of no concern to the Trust whether the produce sold from the grower-sellers section of the market is grown on the sellers property," it says.

It recommends that current first right standholders be immediately placed on a lease, providing that they sub-lease to second right standholders. Leases could be

traded, with the Authority receiving some compensation.

The value of the lease would be initially gifted by the Authority to existing stand-holders.

Dividend

The review recommends that the new Authority negotiate an agreed set of dividend payments with the Victorian Government and review its revenue raising. This would lead to commercial pricing of market space, eliminating any cross subsidies.

Other recommendations in the 64-page report include:

- Retention of the wholesale licence system at the present level of indemnity cover, but changing the licence year to 1 October to 30 September, with the Registrar responsible to the MMA for its administration;
- Clarifying market by-laws to ensure that price information can be displayed;

- Removing restrictions on the use of the market site; and
- Allowing the MMA to contract out the Market Reporting Service by tender to a number of organisations, while maintaining the responsibility for financing it. The Authority should be responsible for ensuring the service's independence.

Consultants to the review conclude that the Melbourne Market is weaker than Sydney's Flemington Market and will need to compete vigorously if it is to survive.

"It is estimated that the value of the Market may have halved since the late 1980s," the report says.

Market Officers Charged

The National Crime Authority has charged three Melbourne Fresh Centre wholesale market officers over alleged corrupt practices.

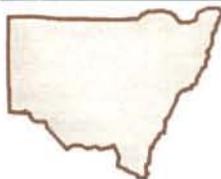
A senior supervising market officer appeared in the Melbourne magistrates court charged with four counts of receiving secret commissions and one of being an accessory to blackmail.

His deputy also appeared on two charges of receiving secret commissions and one of blackmail.

It was alleged that the two officers had used intimidatory tactics to receive payments of more than \$200,000 over 12 years to allow early arrival or departures and preferential allocation of growers' casual stands.

A market cashier also has been charged with receiving a secret commission, with blackmail, and giving false receipts.

A Report in *The Sunday Age* indicated that four more people are expected to be charged over allegedly accepting bribes at the market.



Sydney Markets

By Helen Moody, Market Place News, October 1993

The appointment of Jan Lee Martin to the Board of the Sydney Market Authority (SMA) brings some public relations expertise to the Board. Ms Martin works for Hutchison Public Relations.

She is appointed to represent the Minister for Consumer Affairs.

Other Board members have had their one-year appointments reaffirmed for a further two years. A new chairman is still to be appointed, and Paul Byron remains acting chairman.

The Authority's managing director, Ian Webb, says that the announcement of a new Chairman is expected shortly.

Missing from the list of Board members is a representative of Paddy's Markets. Some months back the Minister for Agriculture and Fisheries, Ian Causley, announced that Flemington Paddy's stallholders would have a representative on the Board. Apparently the Minister has changed his mind on this, at least for this round of appointments.

Hancock Resigns

Meanwhile a number of changes to Market Authority staff have taken place. Authority secretary Mark Hancock is

departing after five years to take up a senior post in Legal Aid. His position has already been advertised.

Promotions consultant Sue Dodd is shortly to take maternity leave. She is planning to return in the new year, but will continue working from home in the meantime.

The Promotions Unit will be somewhat depleted following the resignation of advertising and promotions manager Lyn Selfe, the second person appointed to that position who resigned after only a short stint.

Lyn, who was responsible for Paddy's Market advertising, said that she found "the politics" of the position impossible to cope with, and "the management very difficult to work with."

Uncertainty

Continued uncertainty surrounds the future management of Paddy's Markets. Ian Webb reports that Ms Selfe's position will not be filled until "we see what happens after the trial period with Paddy's".

It is apparently not just in the Promotions Unit that SMA staff turnover is particularly high. The author has been

hearing for some time about resignations of key personnel and speculation around the market remains abundant following the recent resignations of the stores officer and stores assistant.

Certainly staff morale is very low and there is concern over the number of vacancies remaining or being filled by temporary appointments.

Longer Term

Mr Webb, however, disputes this assertion, saying that the SMA has a high number of longer term employees.

"At the middle and senior levels of the authority, we've probably only had two vacancies over the last 12 months," he said.

At the operations level he admits the number of staff has been reducing over the last two years, and as a budget measure not all vacancies had been refilled.

Seven had been dismissed for stealing and several others had left because they did not agree to signing a code of conduct produced by the Authority.

"I make no apologies for people not prepared to sign codes of conduct," he said.

Three Freshmark Directors Quit



Queensland's grower owned produce marketer, Freshmark, is again the subject of widespread rumour and speculation following the resignation of its three "commercial" directors.

The three were former chairman, company lawyer David Grace, former Queensland Under-Treasurer Sir Leo Hielscher and James McColl, former Director General of the South Australian Department of Agriculture.

The three became directors in October 1991 when the old COD split into the trading arm "Freshmark" and "Queensland Fruit and Vegetable Growers" (QFVG) as the agri-political wing.

Their resignation leaves Freshmark with a board of three growers—acting chairman John Williams, Central Queensland pineapple industry leader Michael Cranny and QFVG chairman Richard Armstrong. (QFVG retains a 40% shareholding in Freshmark, and is a long term creditor to the tune of around \$1.2 million).

Messrs Grace, Williams and Armstrong all admit Freshmark will show a loss again for 1992/93, similar to that of the previous financial year, when \$1.9 million spent on restructuring, \$2 million in asset devaluation and \$2.7 million in market space rentals combined to make a total loss of \$5.9 million.

By Bernie Reppel, *Market Place News*, September 1993

They also point out that the chairman's 1992/93 report predicted a 1993/94 loss.

In a statement on the three directors' retirement, Mr Grace said the post-privatisation strategy of turning around loss making activities had been achieved, with the company refined to "one focused predominantly on transport, and with a plan to assist growers in their national marketing produce". He said asset sales had allowed the company to clear bank debt.

Nevertheless Brisbane Market is full of talk about Freshmark's reported financial troubles, rumours fired by the company's massive sell-down of market assets.

From being Brisbane Market's biggest tenant, with more than 20 sections, Freshmark has sold down to the point where it holds only three, and Mr Williams said even these could be available for sale, "depending on price".

Wholesaling premises in Sydney and Melbourne have also been sold.

In August last year, in a second major restructuring, Freshmark announced it was cutting produce lines handled from 100 to the most profitable 30; market opinion is that the number of lines handled has fallen considerably since. There is also talk of slow payments to growers and major debt for produce transport.

Mr Williams, a businessman before becoming an avocado and exotic fruit

producer, said a letter detailing Freshmark's current situation would go out to growers. He backed Mr Grace's assertion that Freshmark had been transformed into a profitable company, saying it was financially sounder than it had been for years.

Terms of payments to growers and other creditors were on commercial terms and no different to any other trader in the market.

Mr Williams said expense was a significant factor in the resignation of the three commercial directors. While directors' fees for the three were very reasonable considering their expertise and experience, men of such calibre did not "come cheaply".

Editorial Note

Since this article was first published in September, Freshmark announced a loss of \$8.087 million for the financial year 1992/93. This loss consisted of \$5.7 lost on property write-downs and associated disposal costs and \$2.4 million on unprofitable market trading activities.

Freshmark is expected to make a further loss in 1993/94 due to market trading losses already experienced in the first half of the financial year. However, Mr Williams expects Freshmark to show a profit for the 1994/95 financial year.

With the disposal of Freshmark's marketing assets, the company intends to concentrate on its profitable transport and pallet exchange operations.



Perth Markets

By Ted Wilson, *Market Place News*, October 1993

A new board has been appointed for the Perth Marketing Authority (PMA), which has been placed under the microscope by the WA Parliament.

The standing committee on government agencies in the Legislative Council has been investigating how effective and appropriate the PMA had been, and possible management and operational improvements to provide a more commercial focus.

Primary Industry Minister Monty House said the seven members of the new board had been selected for their wide ranging skills in management, marketing, banking, economics, communication—and because they represented produce growers,

buyers and agents.

"The PMA will be going through a period of transition as the issues of market hours, rental charges and ownership are addressed with growers, agents and buyers."

The new chairman of the PMA is Graham Anderson. He has held several management positions with Bunning subsidiaries, the Housing Industry Association, and has wide experience in retailing, land and property development and shopping centres.

Other members of the board include:

Brian Mews - a buyers' representative with a long association with the horticultural industry and the WA Fruit and Vegetable Buyers' Association.

Geoffrey Moore - an agents' representative who has been heavily involved in the export of high quality produce for the domestic and international markets.

Harvey Giblett - a grower member, who is also an industry leader.

Ian Longson - a consumers' representative with expertise in the development of business plans and marketing strategies, especially for agricultural and food processing industries.

Michael Thompson - who has been involved in the commercial property aspect of the real estate industry and is currently managing director of Colliers Jardine.

David Thomas - senior manager of the banking division of Challenge Bank Ltd.



As a finale to this series of articles presented in Australian Round-Up, the following article is published to show that the overall strategy for marketing fruit and vegetables bears serious consideration. Although the article is about Sydney's Flemington Markets, it expresses doubts, hopes and concerns that apply equally to most Australian markets.

As most readers are aware, the Flemington Markets have been under government review for some years and a satisfactory outcome has yet to be reached. Also, the debate over the effect on commodity prices of bypassing a central market system has raged for some time. Who is right?

With another Flemington agent going bankrupt and other prosecutions for illegal market activities not mentioned in the foregoing articles in the Australian Round-Up section, the indication is that all is not well with marketing fruit and vegetables. Perhaps it is time to look at different ways of marketing growers' produce? Some would say—there has to be a better way!

New Challenge For Marketing Fruit and Vegetables

By Peter Comensoli, NSW Farmers' Association Acting Executive Officer, Intensive Industries, NSW Farmers News, October 1993

We have all been getting a little edgy of late, particularly our agents, about the future of the Central Marketing System for fresh fruit and vegetables.

Agents are worried that the current trend by major retailers to buy direct from growers will destroy the wholesaling industry and thereby destroy them. On the other hand, growers share some of the agents concerns but in many cases are not confident of dealing effectively with the big retail chains and getting a decent return.

For their part the big retail chains claim to have learnt a lesson from bad experiences in the past where they have screwed down the growers after securing their supply and removing their name from the Central Market floor. This practice has left a bad taste in many growers' mouths.

It has been said that there is a danger in relying on a 19th century marketing system in a 21st century socio-economic environment.

Indeed, our marketing system is very old and modern trends show up its age.

However, the notion of centralised marketing of fresh produce is very important for three reasons. Firstly, as growers we are many and we grow a wide range of produce with wide variety in quality and quantity. This has to find its way to a large number of retailers though a contracting group and a Central Market provides the

best opportunity for both ends of the system to get sufficient exposure to one another.

Secondly, for big retailers there are few growers capable of supplying a sufficient quantity of produce reliably. There are some remote examples such as the Batlow Fruit Co-operative, Citrus Industry Pack Houses and the like but the possibilities for other products such as stonefruit and most vegetables are very slim. The Central Market provides the big retailers with sufficient quantity to meet their needs.

And thirdly, we should not underestimate the price setting ability of the Central Market as opposed to direct negotiations. By knowing the extent and range of produce available the astute agent will quickly obtain a fair return for the grower and good buy for the retailer.

But do we need to centralise produce? The three advantages above need not rely on fruit and vegetables arriving at one central location and then trickling away into the cities and country centres. Modern communication techniques, transportation, marketing intelligence and storage combined with old fashion trading systems and industry knowledge could be readily combined to produce an efficiently operating brokerage system for fresh fruit and vegetables.

Indeed many agents are running such a system now though not formally. Clearly,

I am advocating the retention and development of the Central Marketing System but I do not believe that we need to centralise produce in order to have a central market.

While sending everything to Flemington may be traditional and comfortable, it is obviously not the way for the large retail chains which dominate with 75 per cent of the market. For this reason we must attempt to accommodate trends in retailing but also, and most importantly, safeguard our own interests.

I have no doubt that there will only be winners and losers, and you can guess who they'll be, as a result of current trends towards direct dealing. Similarly, I am certain that Flemington will continue to be a clearing house for what's left after direct dealing has picked the eyes out of some product lines.

For the good of growers and agents we must look at improving what we have now to meet market needs instead of defending it as a theory and watching it collapse in practice.

With all its faults, Flemington presents as a great opportunity to continue centralisation of fresh fruit and vegetable sales but the operations of its occupants should now be expanded to accept the challenge of a contracting retail sector and a more professional producing industry.

Assistance Is Available For Farmers

From BGF Bulletin December 1993

During these difficult times many growers are looking for ways to meet commitments from dwindling incomes. One possibility is assistance from the Farm Household Support Scheme. Another is the Job Search Allowance. A further avenue may be the Rural Adjustment Scheme Re-establishment Grant.

The DSS is sometimes regarded as a sort of ogre. But the department and its officers are working hard to dispel that image. They are genuinely concerned that some people may not be seeking assistance, and that families may be suffering unnecessarily, just because they are afraid of a bad old image that has no basis in reality.

One of the main problems in getting assistance out to farming families was a reluctance by farmers to approach the department. The DSS has revised procedures specifically to minimise potential inconvenience and to make the process more 'people friendly'.

The DSS is there for everyone who needs assistance. All it takes is a telephone call.

The Farm Household Support Scheme

The Farm Household Support Scheme commenced on 20 March 1993 and replaced Part C of the old Rural Assistance Scheme (RAS). It aims to provide assistance in meeting the day to day living expenses of farming families while they consider their future in farming.

Farm Household Support is a loan available for up to two years at commercial rates. It provides a safety net for farm families who are unable to obtain commercial finance.

The DSS operates the Farm Household Support Scheme on behalf of the Department of Primary Industries and Energy. Payment is made fortnightly up to the equivalent of Job Search Allowance and is income and off-farm assets tested.

Eligibility

Farm Household Support is available to farmers who are unable to obtain commercial finance and are having difficulty meeting daily living expenses out of their current income.

If you were on Part C of RAS at 19 March 1993 you are automatically eligible for Farm Household Support.

Do I have to sell my farm?

You are not required to sell the farm, or offer it for sale, in order to obtain Farm Household Support. However, if you do sell and leave farming within two years of commencing Farm Household Support, the first nine months of payments you have received will be converted to a grant.

If you leave in less than nine months you will still receive payments for the period between your departure and nine months as a lump sum at the maximum rate of Farm Household Support.

Amounts payable

The maximum Farm Household Support available is the amount of Job Search Allowance you could be paid taking into account your present income and the value of your off-farm assets.

As the scheme is a loan, you can choose to be paid any amount up to the maximum to be your fortnightly payment. You can change this rate at any time.

Applying for Farm Household Support

You can get a claim form from your local Social Security Office or by calling Countrylink on 008 026222.

You will need to show DSS several documents before you can be paid. You will also need to talk to your bank about a certificate confirming that you are unable to borrow.

Try to take all the documents with you to DSS when you claim. If you can't, lodge your claim anyway and provide the documents later. Payment cannot start earlier than the day you lodge your claim form with DSS.

Once DSS has your claim form and all the necessary documents, you should receive your first payment within 2 weeks. You will be sent a statement every six months telling you how much Farm Household Support you have been paid. You will also have to complete a form and post it to the department every six months if you want payments to continue. You will not usually have to visit DSS in person once Farm Household Support payments have started.

Job Search Allowance

Farmers have not been able to claim for Job Search Allowance since March 1993.

But if your partner is willing and able to look for work, and is taking reasonable steps to find work, she or he could qualify for Job Search Allowance.

Anyone wanting to receive Job Search Allowance is required to first register with the Commonwealth Employment Service (CES). On registration, the applicant is given a form which must be taken to DSS within 14 days to maximise payments.

If you or your spouse are receiving or become eligible for Job Search Allowance you have a choice between this and Farm Household Support.

Since 20 March 1993 no new applicants have been taken for Job Search Allowance under the special RAS-linked provisions. However, you do have the option of applying for Farm Household Support as a new applicant.

The relationship between Job Search Allowance and Farm Household Support is explained in a special pamphlet produced by DSS. For further information you can contact the Social Security TeleService on 13 2468 for the cost of a local call.

Re-establishment Grant

A re-establishment grant of up to \$45,000 is available through the Rural Adjustment Scheme to eligible farmers who leave farming. This grant is available from your State Rural Adjustment Authority and must be applied for prior to leaving the farm enterprise.

If you are receiving Farm Household Support and you decide to leave farming, you can apply to the Rural Adjustment Authority in your State for a re-establishment grant.

You will be entitled to receive a grant of \$45,000 if, after you have sold your farm, paid your debts and your assets are worth less than \$45,000.

If the value of your assets is between \$45,000 and \$90,000 you will be entitled to a smaller grant. When your assets are added up, your household and personal effects are not counted.

If you have received nine months of Job Search Allowance in the previous twelve months you will not be eligible for the Rural Adjustment Scheme re-establishment grant. Time spent on Job Search Allowance before 20 March 1993 will not count.

Applying for the re-establishment grant

If you have decided to leave farming and believe you may be eligible for a re-establishment grant, contact your State Rural Adjustment Authority before you leave the farm enterprise. You will be required to sign a statutory declaration that neither you nor your spouse have been in receipt of Job Search Allowance for more than nine months in the past twelve, discounting any time on Job Search Allowance prior to 20 March 1993.

If you are unsure how long you were paid Job Search Allowance, you should check with Social Security. In some cases, the Rural Adjustment Authority may ask you to get a statement from Social Security confirming the length of time you were paid Job Search Allowance.

Proving Who You Are

If you decide to apply for assistance with the Department of Social Security you will be asked to produce at least three documents which show the name you use for daily living, your address and whether you are married. These should be the original documents, not photocopies.

The following is a list of some documents you can use to prove your identity:

- an Australian Passport or Certificate of Citizenship;
- a current overseas Passport stamped for entry to Australia;

- an Australian birth certificate or extract issued at least 12 months ago;
- a real estate title, deed or mortgage papers;
- school reports or examination certificates;
- a driver's licence showing the same address as on your claim;
- paid motor vehicle registration papers with the same address as on your claim;
- hire purchase agreements;
- an employers reference;
- a gas, electricity or Telecom account in your name showing it was paid for your current address;
- a tax assessment notice;
- rates notice with your current address;
- divorce papers; or
- bank, credit union or building society books more than 12 months old.

A complete list is available from the Department of Social Security. Call 13 2468 for more information.

Your partner will also have to show three documents.

Many documents are not acceptable. These include:

- birth certificate issued less than 12 months ago;
- learner's permit/provisional licence;
- employer or student ID card;
- bank, credit union or building society accounts less than 12 months old; or
- baptismal certificate.

Countrylink

Countrylink is a service provided by the Federal Government to people living away from major cities. It is a way of overcoming some of the isolation from sources of information that are readily accessible to people living in and near major centres.

Countrylink offers four main services. These are:

- The COUNTRYLINK Answer Line, toll free (008) 026222.
- A COUNTRYLINK display that visits country shows and field days.
- COUNTRYLINK community information stands.
- The Rural Book, an up to date guide to Commonwealth services and programs.

The Countrylink Answer Line

The Answer Line (008) 026222 is free of charge. It will help you to find answers to questions about Commonwealth services quickly and easily. The line is staffed from 9 a.m. to 6 p.m. (EST) Monday to Friday.

If you need more detailed information, staff can put you in touch with the right people to answer your questions.

Countrylink Community Information Stands

Community groups and individuals can become involved in distributing information about Commonwealth Government services and programs. More information is available from the Answer Line (008) 026222.

Agribusiness Assistance - One Stop Shop

An Agribusiness programs Board is being developed by the Commonwealth Department of Primary Industries and Energy (DPIE) to provide a "one stop shop" for agribusiness assistance programs. The Board is expected to simplify the application and approvals process for DPIE agribusiness assistance programs developed to meet the needs of new and emerging exporters, especially those associated with rural and related industries.

The assistance is to enhance international competitiveness and assist Australian companies to take advantage of opportunities emerging in world markets.

DPIE's Marketing and Business Service offers assistance under four programs:

- **Marketing Skills Program (MSP):** provides rural industries with modern marketing skills, develops innovative approaches to export marketing and first hand experience in overseas markets.
- **Rural Industries Business Extension Service (RIBES):** improves access to

professional business and marketing support services to improve competitiveness domestically and internationally.

- **Innovative Agricultural Marketing Program (IAMP):** administered jointly with Austrade provides development finance to commercialise and market innovative rural based products, processes and marketing systems that have the capability to generate exports and/import replacement sales.
- **Business Advice For Rural Areas (BARA):** aims to expand, diversify or stabilise income opportunities by assisting local entrepreneurial capacity, fostering business talent and ideas and improving individual and rural economic diversification.

The Government has established three new marketing and business programs to assist rural industries.

- **World Best Practice Incentive Scheme:** aims to accelerate the introduction of a culture based on world best practice throughout the Australian

agricultural industry by encouraging groups to benchmark their current practices against equivalent practices regarded as the most competitive in the world.

- **Rural Enterprise Network:** will enhance links between rural business through all elements of the supply chain within Australia and overseas. It aims to encourage rural business to form links, networks or consortiums to achieve common outcomes.
- **Rural Development Incentive Scheme:** aims to assist rural business communities to take action that will improve the competitiveness of rural and related businesses and industries. This may be by the concentration of local strengths and opportunities, identification of infrastructure deficiencies and development of approaches to attracting and securing investment.

People wanting further information about any of these programs should contact David Gregory at DPIE on (06) 272 5096.



AAGF And AHC Look To Avoman For Help With Quality Problems

By Alex Banks, for the Avoman Project Team

A recent meeting of AHC staffers Bart Gannon and Richard Bennett, the AAGF Subcommittee on fruit quality and Avoman team members Scott Ledger and Alex Banks considered how industry and the AHC should work together to address the problems uncovered by the fruit quality surveys conducted as part of the Avoman project. Scott presented further information on the problems in handling Hass on domestic markets which helped the meeting understand the situation better. Four steps were identified in the pro-

duction and handling of fruit from farm to consumer. The meeting nominated Avoman as the logical vehicle for helping growers deal with field problems in controlling anthracnose and stem end rot.

Avoman will be able to do this by enabling growers to record details of their spray programs and equipment setup as well as providing recommendations to growers on when sprays should be applied. The nutrition of fruit is also important in helping produce a quality product. Here again, Avoman will use records of

fertiliser programs and leaf and soil analysis results to indicate problem areas and give recommendations on what action should be taken and when this should be done.

New year salutations

May I take this opportunity on behalf of the Avoman project team to wish readers all the best for the coming year. We look forward to working with industry in the development of this resource which we feel sure will be of benefit to industry.

Hass Mask Problems But Consumers Find Them

By Scott Ledger for the Avoman Project Team

The recent surveys of avocado quality in Sydney retail shops have found that internal problems are worse in Hass than green skin varieties. The black skin colour of Hass masks internal problems but the consumers discover them when they cut the fruit to eat.

Unacceptable Problems

The level of unacceptable fruit in the three surveys ranged from 28 to 41% for Hass compared to 7 to 17% for the green skin varieties; Fuerte, Sharwil, Shepard and Reed.

Defect	Incidence (% fruit)		
	S1	S2	S3
Anthracnose	24.8	21.5	23.1
Stem end rot	20.5	25.7	18.0
Flesh browning	29.0	31.4	26.4
Chilling injury	11.7	2.1	4.9

Table 1. Incidence of defects in Hass, Sydney retail surveys, 1993.

Defect	Incidence (% fruit)		
	Hass	Fuerte	Sharwil
Athracnose	21.5	8.0	5.1
Stem end rot	25.7	6.2	3.8
Flesh browning	31.4	17.6	23.8

Table 2. Incidence of anthracnose, stem end rot, flesh browning in avocado varieties, Sydney retail survey No 2, 20-21 May 1993.

Anthracnose, stem end rot and flesh browning were the main defects while chilling injury was severe in a few sample lots. Other defects such as hard lumps, dark flecking and firm flesh were sporadic.

In Hass, the incidence of anthracnose and stem end rot was consistently around 20 to 25% of fruit for each defect (Table 1). The level was similar for all of the main production districts in New Zealand, Queensland and New South Wales. Who said that Hass doesn't get these problems?

The level of fruit rots was lower in the green skin varieties (Table 2) because the rots are easier to see. In our surveys, we were sampling only sound avocados and fruit with moderate or severe infection would not have been sampled. In the real world, green skin fruit with rots are either removed from the display by the retailer or rejected by the customer.

Ripeness

Judging the ripeness of Hass is difficult. Skin colouring and softening are often not synchronised. Some Hass that are fully coloured are still hard, some coloured fruit feel sprung but are eating ripe inside

while other fruit are soft when only partially coloured. By the time Hass is fully coloured and soft to feel, the flesh is often overripe. This accentuates problems with anthracnose and stem end rot.

Most of the flesh browning appeared to be bruising damage. Bruising can be caused by impact from dropping fruit and cartons or by pressure from customers squeezing the fruit. Susceptibility to bruising increases as avocados ripen.

The majority of avocados in Sydney are purchased hard green from the wholesaler by the retailer. Impact bruising is therefore most likely occurring in the retail shops when ripening fruit are handled. The retailers are not aware of the damage because the symptoms are not externally obvious.

In almost all of the shops, fruit on display range from sprung to overripe. Hard, unripe fruit were less common. The retailers have responded to their customer demand for ripe or near-ripe fruit. The adverse consequence is that the customer cause pressure bruising as they check fruit for ripeness.

The inconsistent ripeness of fruit on display force the customer to squeeze fruit. Pressure bruising is more obvious in the thin, green skin varieties such as Fuerte and Shepard but difficult to detect in Hass and the thick, green skin varieties such as

Sharwil.

Retailers are generally unaware of the extent of internal quality problems. They prefer to sell Hass because external appearance is better than green skin varieties and shelf life appears longer. They are also not aware of the optimum temperature for ripening and storage of avocados.

Conclusion

The conclusion from the surveys is that the probability of customers finding prob-

lems with internal quality of avocados is high.

Recommendations

Recommendations for future action are:

1. Growers pay more attention to orchard management of Hass for effective control of anthracnose and stem end rot.
2. Consumers and retailers be informed through promotional material that softness is a more reliable indication of ripeness in Hass than skin colour.

3. Research be conducted into factors affecting the rate of skin colouring and softening of Hass and the susceptibility of fruit to impact bruising at different stages of ripeness.
4. Studies be conducted into the retailing of avocados to identify effective methods to handle and merchandise ripe fruit.



Avoman Computer Software Giving Growers Answers

By Alex Banks, for the Avoman Project Team

Many growers will have seen demonstrations of the Avoman software which showed what the package looked like and even what it was intended to do, but up until now, the software never actually did anything. Well as of the beginning of December, development work by the project team now allows AvoGRO to use descriptions of production units recorded in AvoREC to give recommendations on control of root rot.

Avoman actually provides recommendations at three levels. Firstly, it gives you a yearly recommendation of orchard activities in relation to the crop cycle. Many growers are now starting to record the timing of the different growth stages of their trees and this will be used to create growth cycles specific to your situation.

The yearly recommendation lets you see at a glance the overall management of your orchard. At the second level, you will be able to select a month and see what specific activities should be carried out on your trees. For example, in October you might want to see what's coming up in November. You select November, then

push the monthly recommendation button and a box appears on the screen listing all the activities that are recommended for that month. Among these would be the suggestion to treat trees for root rot control.

Having found out that root rot treatments are needed, the next question is "How do I do this?" This is answered at the third level of recommendations which are specific to your orchard because they are based on information recorded by you in AvoREC.

Root rot recommendations take into account when treatments should be applied (based on the research of Ken Pegg and Tony Whiley), the method of application (injection or foliar) and, if injecting, whether you want to use a full or half strength injection.

For example, say you had a block of 6 year old Hass trees with canopies 5 metres in diameter. They are showing some symptoms of root rot and from the monthly recommendations in AvoGRO you see that you should be injecting them in spring. The box below shows the recommendation that Avoman would give.

Tree age = 6 years Tree canopy diameter - 5 metres

Inject trees that are growing new spring leaves after these leaves lose their red colour and turn green.

Inject each tree with with 75 mL of Fos-ject 200 or Agri-fos or Phosphorous acid or Aliette Ca.

Use 4 injection sites per tree with not more than 20 mL of product at each injection site.

See the DPI publication "Protect Your Avocados" or the Root Rot video for instructions on how to inject trees.

back. Following this development period, the program will be released to industry generally. Details of when and how this will occur have yet to be worked out but will be notified through Talking Avocados.

Recording Sheets

A series of sheets for recording tree growth stages have been produced and sent to about 80 growers who are members of Regional Productivity Groups (RPG's). The sheets allow growers to record budbreak (when flower stalks start to appear out of the fat flower buds), flowering, leaf drop, spring and summer new leaf growth and measurements of fruit size and amount which will be used for crop forecasting. Unfortunately, the sheets were delayed in their release which meant that growers received them after many of the growth stages had passed.

It was the hope of the project team that even though kits arrived late, growers may still be able to remember back to the timing of the stages and then fill in the sheets. However, feedback from RPG's indicates that growers are finding this difficult. Most are using the kits as training and practice for next season and will supply growth cycle information then.

Recording kits will eventually be available for sale to all interested avocado growers. At present RPG members are testing kits and providing the feedback we need to create recording systems that are easy to use and collect the right information. Recently, Nambour and Glasshouse Mts growers provided suggestion on which records should be developed next.



Avoman - What Value Is It To Us?

By Tonia Smith and Marie Piccone, Piccone Horticultural Consultancy Townsville

Time and again good observations and monitoring have been identified as a key to successful farm management. A very important component of monitoring is keeping records. By keeping a record of information such as tree growth cycles, nutrient analysis results, irrigation practices, climate, pest monitoring results and spray and fertiliser applications, more informed management decisions are possible. Records help us to judge the effect and therefore success or otherwise of management decisions over time. Records also help us with forward planning and organisation.

Keeping Better Records

The recording module of the Avoman computer program in particular should be invaluable to us as consultants. Avoman will promote informed and well planned management decisions by placing more complete and consistent information at our finger tips (e.g., crop cycles for the main avocado varieties on a client's orchard).

As consultants we generally deal with 'innovators' in the industry who are also early adopters and likely to derive the

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The following list was the order they came up with. It is the intention of the project team to develop appropriate AvoREC and AvoGRO sections to allow growers to record and process information into recommendations.

TREE GROWTH CYCLE	started
ROOT ROT CONTROL	started
FERTILISER / LEAF and SOIL ANALYSIS	
WATER USE	
CLIMATE	

SPRAY PROGRAM / SPRAYER CALIBRATION
PEST MONITORING
ORCHARD FLOOR ACTIVITIES
CANOPY MANAGEMENT
HARVEST / MARKETING
FRUIT MATURITY

As you can see the list is divided into two groups. The aim is to send out the first group of recording sheets in March/April to coincide with leaf and soil analysis. The second group would be sent out in July/August before next season's flowering. Training on the use of these sheets would be provided through the RPG's.

greatest benefit from the Avoman computer program. We see Avoman becoming a very important link in the information chain with conscientious clients.

As Avoman will encourage the recording of complete and consistent information by a client about their orchard, mis-information or inadequate information will become a frustration of the past to consultants, who require complete and consistent information in order to do their job most effectively.

Benefits Of Recording

We have seen the benefits of a good recording system time and again. For example, by recording leaf and soil nutrient levels on a block by block basis over a number of seasons problem areas can be identified and improvements monitored. A number of situations come to mind where records containing information such as this have played a major role in improving the nutritional status of trees, in turn improving yields and fruit quality. For instance, a leaf and soil analysis for an avocado orchard shows boron to be deficient in the leaf. The following factors would need to be known before the best, most informed decision could be made about treatment:

- Previous leaf and soil analysis results and 'changes' in nutrient level from year to year.
- Existing fertiliser program.
- Response to previous treatments (for this nutrient) on the property and in local area.
- Soil type.
- Irrigation practices/effective rainfall.
- Current research and developments (e.g., new and improved application techniques and fertiliser formulations).
- Avocado rootstock.
- Monitoring results (e.g., observations of boron deficiency symptoms).
- Local district fertilising practices (successes and failures).

Without the availability of current or historical information such as this, results are achieved more slowly. Likewise with recording pest outbreaks. If a 'picture' of pest outbreaks can be established, serious damage can be avoided by knowing when outbreaks are most likely to occur and either taking precautions or being

prepared to act immediately should it be necessary.

An avocado orchard that had significant damage occurring as a result of fruitspotting bug outbreaks began recording the dates these outbreaks occurred. Over a number of seasons it was discovered that outbreaks were nearly always experienced 2-3 weeks after flowering and continuing until March. The occurrence of avocado leafroller was also able to be narrowed down to a period when the pest was most likely to appear, depending on certain climatic conditions. The records kept showed a relationship between climate, period of pest outbreak and stage of crop cycle. By knowing this the grower was able to be far more vigilant and act upon the problems as they appeared, before any significant damage was given the chance to occur.

A Tool For Better Planning

The level of planning possible with Avoman is also of great value to both consultants and clients. A well organised enterprise ensures that both the consultant and clients' time is utilised most effectively. For example, by having a record of the local crop cycle, fertiliser programs can be planned with accuracy well in advance. This would allow time to ensure access and supply of the appropriate products and to plan labour accordingly.

Keeps You Up-to-date

It is also very important to be properly informed about the latest research and developments occurring in the industry. Avoman will have a significant 'extension' role in this area. By having this information readily accessible to us and our clients we envisage a faster and more complete adoption of new and improved practices derived from research and industry progress. Adoption of better practice of course benefits the industry further.

We have always strongly encouraged our clients to plan carefully and keep records of all farm activities and have developed many individual recording systems ourselves. We see Avoman as complementary to our total crop monitoring approach and it will help us to work with clients toward a fully integrated, complete and consistent farm management system.

Interharvest Receives International Award For Shepard Avocado Marketing Campaign

From Queensland Fruit & Vegetable News, 2 December 1993

Brisbane wholesaler Interharvest has received international recognition for its Shepard avocado marketing campaign. National marketing manager Treena Welch said Interharvest was presented with the 1993 Marketing Excellence Award from international commerce magazine "Produce Business".

Interharvest was appointed by avocado grower group Shepard Australia to market its product during the 1993 season.

Ms Welch said the Shepard campaign was honoured for its "outstanding attention to detail", which prompted Produce Business to break with tradition in



Treena Welch, National Marketing Manager INTERHARVEST

declaring a winner.

"In an unprecedented move, the judging panel from Produce Business chose one overall winner for the five award categories—retailers, restaurants, wholesalers, shippers and commodity organisations.

"Usually there is one winner from each category" she said.

"The acclaim for Interharvest is even more special as Produce Business received a record number of entries for the award this year.

"The publisher of Produce Business, Mr Whitacre, said the award was a testimony to our company's 'progressive marketing strategies and leadership in the field'.

"He said our campaign successfully addressed all areas of the marketing mix, on a low budget, and involved co-ordination and co-operation with a number of groups to ensure the campaign objectives were met.

"We have proven that you don't need a lot of money to produce an effective campaign. We had an excellent product to work with and were able to achieve a high consumer profile for Shepard Avocados—a major reason for the success of the campaign.

"Community awareness campaigns and the use of media which specifically reached our target audiences was the secret to the campaign's success.

"Recognition should also go to the Shepard growers themselves. They put their hearts and souls into the promotion."

The Shepard Australia grower group was as excited and pleased with the award as it had been with the promotion campaign.

The award amplifies the strength that can be achieved when a united group of growers are prepared to work with an imaginative marketer and progressive retailers in an atmosphere of co-operative partnership. It will be a blueprint for future marketing efforts for the whole of the horticulture industry.

"The Smith Snack Food Company's promotion of Shepard avocado dip in their 'CCs' campaign was the perfect compliment to our publicity and outstanding coverage by various media contributed significantly to our success" Ms Welch said.

Interharvest was presented with the Marketing Excellence Award at the annual Produce Marketing Association convention in Washington DC.

Avocado Conference

It had been proposed to conduct the next Avocado Conference in May/June 1994. Circumstances beyond the control of our industry, primarily the inability to secure sponsorship, have dictated that the running of the three day proceedings would not be cost effective. Accordingly, it is with reluctance that the 1994 Avocado Conference has been cancelled.

In its place the Federation is considering an informal one day weekend seminar to be run in May 1994, probably in South East Queensland. The seminar would be attended by growers only. A time controlled agenda would be put in place. Such an activity would only be considered, if there was significant grower support.

Therefore, avocado growers should give thought to the need to conduct a one day seminar, a suitable venue and agenda items. Please forward suggestions that you may have in writing to the Executive Officer, AAGF, P.O. Box 19, Brisbane Market Qld 4106 by no later than **Monday, 28 February 1994.**

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Quality Management For The Avocado Industry

by Richard Bennett, AHC Quality Operations Manager

The Australian Avocado Growers Federation has made a commitment to implement quality assurance in the avocado industry and the AHC's 1993/94 Avocado budget reflects this commitment with a total of \$31,165 set aside for quality related activities.

The AAGF's commitment will build on the initial development of quality systems in a number of the major packhouses in New South Wales and Queensland over the past few years, and a growing realisation that there must be industry-wide awareness of the benefits of quality management. In September 1993, the AAGF Executive nominated a Quality Sub-Committee to steer the direction of the implementation of quality assurance.

The sub-committee met in November to discuss options for quality assurance adoption, development and publication of a quality procedures manual, and other influences such as the Avoman project and the promotion of ripe avocados. At the meeting it became clear that the quality issue for avocados has become more complicated than initially thought and therefore requires a more detailed approach.

Training Package

One of the cornerstones of Quality Assurance awareness in the medium term will be the development of a training package in quality skills. Initiated at the AHC's Industry Leaders Conference in June 1993, the training package is to be jointly developed by Scott Ledger from QDPI, and the AHC, with the assistance of representatives of various state departments. This package will be able to cope with the generic aspects of quality management training and will require minimum adaptation, if any, for avocados.

Retail/Consumer Education

The greatest changes to the existing plan of attack have been as a result of the retail survey of internal quality of avocados. It appears that most fruit leaves packhouses in reasonable condition, but that wholesale and retail practices lead to repeated

consumer disappointment. Bruising, and the latent disorders of anthracnose and stem end rot, become increasingly prevalent if fruit is not merchandised correctly. This is particularly so for the Hass variety where skin colour as a ripeness determinant is not fully understood.

This does not mean that packhouse and orchard practices are not partly at fault, for they surely are. It means that starting from the consumer end may be wiser at this stage because this is where most of the major gains are to be made. Also wholesale should be considered where it includes ripening. Orchard practices are largely covered by Avoman.

The other reason for this approach is that the ripe fruit promotions could work against the industry, not for it, if there is not a better understanding of just what is ripe and how to rotate and display stock correctly. Promoting a product with up to 25% of the line unacceptable, as found in the retail survey, could lead to substantial losses, costs and untold embarrassment.

Strategy

The Avocado Marketing Forum which met on 7 December recommended that: "A group of representatives of AHC, retailers, growers and merchants convene to consider strategies". The best starting point would appear to be the recommendations from the Avoman Retail Survey, as follows:

1. The results of the retail surveys be widely published in Talking Avocados and at grower meetings.
2. Wholesalers in the major markets be informed of the results of the retail surveys.
3. Growers be made aware of the need to maintain an effective spray program for control of anthracnose and stem end rot in Hass through articles in Talking Avocados and talks at grower meetings.
4. Regional Productivity Groups be encouraged to identify effective orchard management practices for control of anthracnose and stem end rot for inclusion in Avoman.
5. The AAGF promotion material be amended to inform consumers and

retailers that softness is a more reliable indication of ripeness in Hass than skin colour.

6. Studies be conducted into the factors affecting the rate of skin colouring and softening of Hass and the susceptibility of fruit to impact bruising at different stages of ripeness.
7. Studies be conducted into the retailing of avocados to identify effective methods to handle and merchandise ripe fruit.

In summary, the development of the AHC's quality skills training program for horticulture is proceeding and the avocado industry will be a beneficiary of this project when it is completed in late 1994.

As there appears to be a more urgent need to educate the retailing sector, the production of the AHC's Avocado Quality Management Guide has been put on hold.

The retail survey has uncovered some glaring problems where they count the most—with consumers. Spurred on by the marketing forum, the time is now ripe to tackle these problems head-on with practical and profitable solutions before it is too late.

Promotions For Smaller U.S. Crop

California is expected to produce approximately 120 kilotonnes of avocados for the 1993/94 season, with another 12 kilotonnes carried over from the near-record 1992/93 crop estimated at 232 kilotonnes.

While significantly more funds are being re-directed to an increased ripe program, the California Avocado Commission says it has refocused promotions. Public relations programs are being increased to spread the industry's message of taste, versatility and health. Radio and print advertising still feature but are targeted at "developing" consumer regions.



California Programs Are Ripe

By Bart Gannon, AHC Product Manager, Avocados

Programs offering ripe fruit to consumers have become a success story for the California avocado industry and should be urgently implemented in Australia on a national industry basis.

Following last year's best-selling success story, the California Avocado Commission has dubbed the 1993-94 season "Ripe .. the Sequel" and is planning to expand the ripe promotions with training programs and incentives that encourage retailers and wholesalers to ripen avocados. The Commission is planning to increase its funds for the 2 year old ripening program for the 1993/94 season by 80% broadening it to a more national scope.

Last year the fledgling program saw a higher percentage of preconditioned avocados appearing at retail level and a steady increase in consumers buying more avocados. In fact the ripe avocados are now outselling their unconditioned counterparts 2 to 1, with one retailer reporting that avocado sales jumped as much as 40% when ripe fruit was stocked. Australian retail chains which have introduced ripe fruit have also reported dramatic increases in sales.

Merchandising

To help encourage and assist retailers to develop ripe fruit programs the California Avocado Commission has "ripe" merchandisers based in key market cities to

provide training, technical support and merchandising support. The ripe technicians certify retail warehouses by evaluating their facilities and training personnel to ensure fruit is being properly handled and conditioned.

Advertising Incentives

During the 1993/94 season the commission is also planning to offer cooperative advertising incentives to encourage retailers to promote ripe fruit. This is considered particularly important in a short-crop year because consumers will demand that high priced fruit be ready to eat.

AHC "Ripe To Eat Tonight" Program

The experience and results being achieved by the California Avocado Commission clearly indicate that the program promoting ripe avocados could help increase consumer demand for avocados in Australia. Where a ripe program has been run, sales have increased by up to 4 times.

Currently the AHC has plans in place to commence a "Ripe Tonight" pilot program. The pilot will run in a limited number of retail shops and supermarkets in Brisbane and will test the logistics of a full campaign so that any unforeseen problems in design and implementation can be ironed out before being presented to consumers. Merchandising plans have been

written, in-store posters mocked up and in-store tastings and product demonstrations lined up. The pilot will run early in the new season and the results will guide the preparation of resources for a nationwide "Ripe to eat Tonight" program to launch later in the year.

Pick The Tick To Span The Tasman?



In a move that will simplify the marketing of healthy foods on both sides of the Tasman, the national Heart Foundations of Australia and

New Zealand are harmonising the guidelines for their Pick the Tick programs.

As more New Zealand and Australian products appear together on the supermarket shelves, harmonisation is becoming increasingly important. A recent meeting of program representatives established agreement for many areas and brought the nutritional guidelines for both programs more closely aligned. However the Australian guidelines for dietary cholesterol and sodium levels are more stringent in Australian than in New Zealand and this was a subject of much debate.

US Foodservice Market Opens Up

From the US Newspaper, *The Packer*, December 1993.

Californian Mexican restaurant chain, El Torito, is drawing in customers with its table side preparation of guacamole using fresh avocados. The table side guacamole program is being cited as a prime example of the success restaurants have had using fresh avocados amid a strong California Avocado Commission foodservice push.

Foodservice avocado use has more than tripled since 1980 with low prices in 1992/93 enticing restaurants to use more fresh avocados instead of processed product.

El Torito, a 95-restaurant chain, said it initiated the table side program in its drive

to be identified with freshness and quality. Avocado consumption has increased at least 25 per cent since the table side program was initiated about a year ago and the guacamole product has moved from being its lowest selling appetizer to its highest.

Each restaurant now uses at least a carton of avocados a day. The Avocados are split and scooped at the table, then mixed with diced tomatoes, onions, lime juice and seasonings. The Californian restaurant chain also promotes the fact that it uses only California-grown Hass avocados.

However the program director says the key to the success has been the marriage between the restaurant and its supplier, Mission Produce. The restaurant contracts prices and ripe volume for an entire year and in exchange for fixed pricing, the restaurant agrees to use Mission as its exclusive supplier.

* Unless otherwise indicated, all articles in this section were prepared by Suzanne Conley, Australian Horticultural Corporation, Level 14, 100 William Street, Sydney 2001. ph. (02) 357 7000, Fax (02) 356 3661.

Six Steps To Better Spraying

By B. Pinese and S. DeFaveri, QDPI Mareeba

The following steps will improve spray coverage in avocado trees and result in more effective and cheaper insect and disease control. The information relates directly to higher volume airblast sprayers but is in part also relevant to the lower volume misters.

Maximise Air Delivery

The main limiting factor in getting adequate penetration into larger trees is inadequate air volume. The aim is to replace the air inside trees with air from the sprayer which is laden with the fine spray droplets. We have found that a significant increase in air volume delivery can be obtained by:

- Setting the fan cowling at its maximum width (the Silvan airblast has an adjustable cowling).
- Adjusting the fan blade pitch to the maximum which can be handled by the tractor.
- Operating the tractor at 540 rpm PTO speed.

Use Single Sided Air Delivery

Trees higher than 3 m need single sided delivery to get adequate air displacement at realistic spraying speeds. Trees higher than 5 m will benefit from a tower to deliver spray to the tops of trees.

Target The Tree Correctly

As a general rule 2/3 of the air and spray volume should be aimed at the top half of the tree. This is the most difficult area to cover adequately with spray.

To achieve this, select nozzles with higher output to deliver 2/3 of the spray to the top half of the tree or preferably increase the number of nozzles in this area so that the higher volume is directed to the top half of the tree.

Adjust the air deflectors inside the cowling to direct the spray into the tree canopy and avoid spray being wasted above and below the tree canopy.

When spraying, a good distance between the sprayer cowling and the nearest tree canopy is 1.5-2.0 m. If the sprayer is too close, poor uneven coverage and excessive runoff will result. If too far, losses can occur from drift and evaporation and the influence of wind would become increasingly important.

Use Correct Nozzles

Hollow cone ceramic nozzles are recommended since they produce a higher proportion of desirable, fine droplets. Ceramic nozzles are much longer wearing than other materials and therefore are a good investment. Solid cone nozzles can deliver very high volumes but produce a greater percentage of large droplets which produce poor results. Always refer to the manufacturers charts to determine spray

output volumes at various spray pressures for each nozzle size and select the most appropriate size.

Match Spray Speed And Spray Volume To Tree Size

We have shown in field trials that to effectively spray medium to large avocado trees (6-8 m high) with a large airblast sprayer delivering 90,000 m³/h the spraying speed had to be as low as 1.5- 2.5 km/h. This is a very slow walking speed. Check the tractor manual and select a suitable gear. For trees of this size spray volumes would need to be about 1000 L/ha.

Calibrate The Sprayer Each Season

Nozzles do wear and need to be replaced. If the spray output varies by more than 10% from the tabulated new output volumes the nozzles should be changed. Old worn nozzles have higher output than new nozzles but more importantly, with wear, the droplet size becomes larger and hence spraying becomes more inefficient causing excessive runoff. The cost of a new set of nozzles will be more than compensated by chemical savings and better pest and disease control.

Educating Avocado Handlers

Those handling avocados have been criticised for unknowingly causing damage to the fruit through adopting unsound handling practices. The major problem is educating these people, especially the retailers, in the right way to handle the fruit. Don't forget, some may be of ethnic origin where the english language is not their strength.

One way would be to print clear and concise handling instructions on the lids of tray and boxes, an area normally seen by handlers, not the consumer.

Such an approach would have to be coordinated throughout the industry with one standard set of instructions being used, otherwise conflicting instructions from different growers may cause confusion.

If you consider this approach worthwhile, contact your industry representative and ask him to make representation to the AAGF on your behalf.

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Anthracnose Discussion Paper

By John Bolton, Maleny Qld

Anthracnose Control

Control may be effected by:

- a. a combination of cultural practices, and
- b. post-harvest treatment.

Cultural practices include:

- a. application of copper based fungicides,
- b. canopy management,
- c. tree aeration,
- d. removal of plant debris, and
- e. control of insect attack.

Post harvest treatment is currently restricted to over-spraying with Prochloraz (Sportak) prior to polishing. It is to be noted that due to the "stripping effect", Prochloraz cannot be recycled and must be run to waste.

Failure Of Anthracnose Control

Very few growers have an ability to apply post-harvest treatments and therefore the majority rely on field management or cultural practices.

In two words the reason for the failure of cultural practices to control anthracnose is a lack of quality control. The potential problem areas include:

- Irregular application of fungicides.
- Too long an interval between fungicide applications.
- Incomplete coverage of the tree canopy by fungicide sprays.
- Worn nozzles, valves and regulators and poor calibration.
- Incorrect mixing rates.
- Weather impacts, i.e. rain and wind.
- The Hass myth which suggests that because of the variety's thick, rough skin it is less susceptible to pest and disease attack and therefore spray applications may be stretched out!
- Build up of tree debris and pest damaged fruit.
- The weekend or some time farmer.
- Apathy aided and abetted by short term money saving.

Better Anthracnose Control

To achieve better overall control of anthracnose, it must first be recognised that the grower community falls into four general farming groups:

- a. conscientious,
- b. organic,
- c. apathetic, and
- d. sometime or weekender.

The first group uses common sense and hands on experience to modify the

published procedures and for the most part have little problem with anthracnose.

The tree organic farmer accepts the dictum that copper fungicides are compatible with organic principles and is at one with the conscientious farmer. On the other hand, the "would be" organic grower buries his head in the sand and will not use any spray to control the disease. This subgroup fortunately does not appear to sell through the central or direct market system.

The last two groups, the apathetic and sometime farmers, are the two which must be convinced to improve their on-farm cultural practices.

The means of better control are suggested as being:

- a. regular application of fungicides with the maximum time between applications **not exceeding** four weeks;
- b. mixing rates, spray equipment care and maintenance and calibration as published in various manuals;
- c. tree management practices incorporating:
 - (1) canopy management to achieve;
 - i. total spray coverage for pest and disease control,
 - ii. light penetration to increase fruiting,
 - iii. control of insect pests, and
 - iv. reduction in the incidence of stem end rots;
 - (2) selective pruning to allow air penetration to assist in reducing humidity and pest harbouring,
 - (3) removal of dead wood and vegetative debris,
 - (4) skirting where wind is not a problem for mulch and leaf litter, and
 - (5) judicious applications of pesticides to minimise pest injury—a source for the development of anthracnose spores.

The Message

The wholesaler, the retailer and most importantly the customer do not want anthracnose infected fruit. For the vast majority of Australian growers the national domestic market is where they make their living. For any one grower to put anthracnose infected fruit into any market is tantamount to "soiling your own nest", i.e. creating buyer resistance which affects all growers.

The AAGF may pursue marketing as part of its strategic plan. The AHC can expend growers' levy payments to develop both domestic and export markets. The QFVG can spend grower funds on promotion campaigns, but all will be to no avail if the industry continues to place anthracnose infected fruit into the market place.

Anthracnose can be controlled with current technology but the responsibility rests with all growers.

The message must be transmitted and what better way than to publish this discussion paper to stimulate debate and action. The following raises the subject for discussion and should not be taken as instructions on how to treat for anthracnose.

Introduction

As part of the Avoman Project four retail surveys were conducted between January and August 1993. Among other matters, all four surveys indicated that anthracnose was a major contributor to retailer and customer rejection of avocados.

The surveys suggest that the problem is to be found regardless of growing district, time of maturity, and variety.

Of concern is the incidence of the disease on the Hass variety which due to the darkening of the skin conceals the evidence of the problem.

Aim

The aim of this discussion paper is to list probable reasons for the failure to control anthracnose and to propose a course of action to minimise anthracnose infected avocados getting into retail outlets.

Discussion

Anthracnose is endemic to many fruits and is common to all avocado varieties.

As demonstrated by the results of the retail surveys, it is a myth that the Hass variety is not susceptible to anthracnose. In general Hass is the most popular variety with wholesalers, retailers and the customers. Therefore in the interest of achieving greater domestic consumption of avocados more emphasis should be given to producing anthracnose free avocados, Hass in particular.

It is therefore concluded that the myth which shrouds Hass as being less susceptible to disease and insect attack should be put in its proper context.

Sustainable Management Of Plant Diseases, Including Phytophthora In Avocados

By Robert A Hill, HortResearch, Ruakura Research Centre - from the NZ Avocado Growers Association Scientific Research & Technical Supplement No. 17 August 1993

Introduction

The viability of NZ's horticultural industry depends on the efficient production of high quality produce for export. World trends towards reduced pesticide availability and use require effective alternative controls for plant diseases. Biological control provides an alternative approach with the advantages of greater public acceptance and reduced environmental contamination.

Biological Control and Natural Products

The use of beneficial micro-organisms such as biological control agents, seeks to restore the balance often lost in the crop situation.

Advantages of using biological control agents and natural products from micro-organisms and plants include: Reduced pesticide use and residues (environmental safety, safer produce); greater public acceptance; they produce natural products that are pesticidal; production is relatively inexpensive; they are a renewable resource; they have high specific activity (used at a few grams vs kg per hectare for synthetic pesticides; are usually target specific; and are biodegradable (do not persist in the environment and have no persistent residues).

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Therefore it is essential to get the message across to growers, in particular the apathetic and sometime growers, that in-field cultural practices must be improved to minimise the likelihood of anthracnose infected fruit being placed before the buying customer.

The Critical Control Measure

It is suggested that the critical control measure is the regular application of copper fungicides with a maximum time between applications **not exceeding** four weeks. The only rider to this message is to reduce the duration between sprays during periods of prolonged moist and/or humid weather.

Background

In natural ecosystems, such as undisturbed native bush of New Zealand, a balance or equilibrium has evolved over the millennia through bio-diversity and the interactions between micro-organisms, plants, animals and the environment.

Five thousand years ago the Persian philosopher Zarathustra described the concepts of natural disease suppression in his book *Zend Avesta*. In it he showed how all the elements of nature collaborated and outlined how to produce the best foods through co-operation with natural forces.

The Essene Brotherhood which dwelt by the Dead Sea in the centuries immediately preceding the Christian era, knew and followed the ancient Zarathustrian traditions of natural gardening.

The Essenes succeeded admirably in adapting these ancient traditions to a most unfavourable environment. Out of desert and rock they built wonderful gardens and grew an abundance of fruits and vegetables. The key to their success was their utilisation of a great law; "The wheel of organic life".

This wheel of life consists of the following processes:

1. plants take different substances and nutrients from the earth,
2. animals eat the plants,
3. the non-edible parts of the plants are returned to the soil, together with animal by-products,
4. man eats food,
5. all the inedible and unused parts of the plants and the animal by-products are returned to the earth,
6. the cycle being complete, the wheel begins to turn again.

The ancient Essenes knew the laws of nature, of a natural agriculture and gardening, and also the laws of methodical thinking. They made this law of the wheel of organic life the foundation of their horticultural and agricultural system.

In the nineteenth century Charles Darwin proved that earthworms play an important role in the formation of the topsoil. Successful organic production through the centuries has been based on an intelligent correlation of all the forces

and laws of nature, the use of composting and the development of a worm population; which form the three pillars of a natural system of food production.

This philosophy of working in harmony with the natural forces underpins our research program.

Sustainable Management of Soilborne Diseases

Naturally disease suppressive composts and mulches may be used successfully to control soilborne fungal diseases. The basic principle of the treatment is to increase natural disease suppression and learning to grow plants in a way in which natural suppression is maintained. This can be achieved in greenhouses or out in the orchard through mulching and composting to develop a good suppressant population.

In the natural state avocado trees grow with a deep litter (or mulch) over the root system. The feeder root tubes grow into the decomposed layer of this mulch where the activity of beneficial "disease suppressive" micro-organisms is high.

An especially formulated disease-suppressive growing mix for strawberries which contains beneficial fungi, including selected strains of a fungus *Trichoderma*, has given complete protection against the phytophthora disease, a major problem for strawberry growers world-wide.

In Phytophthora-infected avocados in the Bay of Plenty, the use of composts and mulches has resulted in increased vigour and less visible disease. By contrast, untreated trees declined in vigour and disease symptoms became more severe. Preliminary trials with a *Trichoderma* metabolite injected into avocados infected with Phytophthora have shown a dose related benefit from the treatment. Further trial work is planned for this season.

The bare earth approach used in some avocado orchards is incompatible with the use of composts and mulches outlined above.

We need to go back to a more natural system which is sustainable and a lot less costly to the environment. The research part is understanding what's happening and why, so we can help to do it better.

Fruit Mineral Concentration And Postharvest Quality Growth Model

By G.Thorp and K.Marsh - from the NZ Avocado Growers Association Scientific Research & Technical Supplement No. 17 August 1993

Summary

Preliminary results from the first year of research are presented for two avocado projects: "Fruit mineral concentration and postharvest quality" and "Phenological growth model for avocado".

Soil type, fertiliser history and crop loading can influence the mineral contents and thus postharvest quality of fruit from different orchards. A survey has been initiated to investigate these factors on avocado orchards in New Zealand.

Although a seemingly wide variation in mineral concentrations was observed in fruit from different orchards, and from different trees within the same orchard, at this early stage in the investigation, no

clear correlation between fruit mineral concentrations and postharvest quality was found.

Fruit from lighter cropping branches tended to have more disorder symptoms than fruit from branches with higher fruit yields. However, any link between disorder symptoms and fruit mineral concentrations cannot be investigated until all fruit analyses have been completed.

Orchard management strategies for many fruit crops are based on knowledge of tree growth cycles. Most growers have a general knowledge of the flowering and shoot growth patterns of their avocado trees, but there have been few studies of root growth. A research trial has been

initiated to produce a New Zealand model of avocado tree growth cycles with special emphasis on observing patterns of root growth.

Sites at Awanui in the Far North, and Katikati have been selected for this research. Detailed records of flowering, shoot growth, fruiting and root growth will be obtained from each site over the next two years. Small root observation chambers have been installed and should enable accurate recording of root growth. An orchard survey has also been prepared and circulated to growers to obtain more general information on the range of growth cycle and management situations encountered on New Zealand orchards.

Postharvest Handling Of Avocados And Fruit Quality Research Results For 1993

By A.White, S.Forbes, G.Hopkirk and D.Beever - from the NZ Avocado Growers Association Scientific Research & Technical Supplement No. 17 August 1993

Summary

Despite the commercial use of a chlororaz dip, avocado fruit exported from New Zealand can suffer from high levels of postharvest rots and other fruit disorders, such as internal browning and uneven ripening, when fully ripe. Over the past four seasons we have undertaken a series of trials which have evaluated the conditions for handling and ripening fruit in an attempt to reduce these disorders.

Trials in the 1992/93 season repeated and expanded some of our earlier trials to confirm previous findings, and continued our investigation of the natural resistance mechanisms which operate in avocado fruit to control rot development.

Storage and Ripening Temperatures

Results this season have confirmed our earlier findings that ripening fruit at high temperatures, such as those usually experienced by fruit being marketed during the Australian summer, results in fruit

which is generally of poor quality. Fruit quality is poorer if fruit have previously been stored at a temperature much lower than the ripening temperature, such as the normal storage temperature of 6°C.

However, this season we have found that if fruit are to be marketed at high temperatures, they may be able to be coolstored without adversely affecting fruit quality by including an initial ripening period at 17°C prior to completing ripening at 25°C.

In this season's trial, where all fruit were ripened at least partially at 25°C, fruit of best quality were those which had been coolstored and then pre-ripened at 17°C, and those which had not been coolstored at all, prior to final ripening at 25°C.

New Postharvest Treatments to Control Rots

In trials overseas, the treatment of Fuerte fruit after harvest with either food-grade antioxidants, or high concentrations of carbon dioxide for short periods, have

both been shown to reduce postharvest rots and increase fruit quality. For two consecutive seasons in our trials in New Zealand, using Hass fruit, we have not been able to reduce rot levels with these treatments and in some instances the treatments have actually increased the levels of rots or disorders above natural levels.

Natural Resistance to Postharvest Rots

Recent research overseas has suggested that compounds(s) present in the skin of avocado fruit are responsible for the natural resistance of unripe fruit to anthracnose rots.

At HortResearch, a fungal inhibitor has been extracted from the peel of unripe New Zealand avocados. Methods are being developed for its purification and measurement. Attempts will then be made to identify methods of influencing the resistance mechanism to delay rot development.

Getting Adequate Nutrition

By Ben Faber, University of California Co-operative Extension Farm Advisor in Ventura and Santa Barbara counties - from California Grower, October 1993

So you took your leaf analysis in mid August, or are having it done now in October, and you are planning your fertility program for the year ahead. The sampled leaves were the most recently expanded, and matured, healthy, terminal leaves from the spring flush and from non-fruiting branches. This is also the time to start planning applications of mulches, such as manures and chipped materials, in anticipation of the rains. It is good to get these materials out so that any potential salt problems that might come with manures are lessened by the leaching effects of rain.

The reason for taking leaf samples in this period is that this is a relatively stable period in nutrient content when sampling the prior spring's flush. Some nutrients (e.g. nitrogen and potassium) start out high and decrease with age, while others (e.g. calcium and magnesium) increase with time. By comparing this year's values with last year's and knowing what you did last year, you can adjust up or down the amounts of nutrients applied, as well as evaluate the adequacy of your irrigation program. If chlorides, sodium or boron have increased significantly over last year, you know timing and amounts of irrigation need to be altered or that your water quality has changed and irrigation needs to be managed differently.

A leaf analysis is essential for guiding a fertility program since indiscriminate fertiliser applications can cause serious imbalances of other nutrients. For example, excesses of both macro-nutrients and micro-nutrients can cause iron chlorosis. Depending on soil texture and pH, unjustified additions of phosphorus, potassium, calcium, magnesium, zinc and copper have all been implicated in iron chlorosis. Have a definite reason before applying a nutrient. In general, avocados need water, nitrogen and, on occasion, zinc, and these can be adjusted with leaf analysis, or a sound mulching program. As mulch decomposes, all the stored nutrients are gradually released, and these are normally in the balance required for plant growth.

When the lab returns your results you should look not only at last year's, but the avocado leaf analysis guide available from your Co-operative Extension office. The Guide gives ranges of leaf nutrient

concentrations for the various elements of concern. The range for each element often has a fairly wide range for adequate levels of nutrient concentration.

If your tissue levels fall within the adequate range, the trees are fine. It is not necessary to worry if your levels fall toward one end or the other of the adequate range. The adequate range means just that, you are doing a good job. It is only when the values fall beyond the deficient or excess level that you need to be alerted. An example of how to read the Guide for nitrogen would be to look at the table and see that 1.6-2% by dry leaf weight is an adequate range. Below 1.6, it is time to change the application timing or amount of nitrogen fertiliser. It is not always necessary to increase the amount applied, a change in practice may be what is called for. Instead of broadcasting urea once or twice a year, get a fertiliser injector and start applying the same or possibly lesser amount with irrigation.

If tissue analysis shows an excess of 2%, it is time to think about reducing nitrogen applications. This is not only to conserve money, energy and potential imbalances of other nutrients, it is also to reduce the potential of nitrate contamination of surface and ground waters.

The ranges in the Guide have been developed over many years. Tom Embleton at U.C. Riverside did some very important

nitrogen work in the 50's and 60's. The work has more recently been examined under a micro sprinkler regime by Arpaia, Meyer, Witney and Bender near Valley Center. In a five year trial, they found there were no significant cumulative yield differences when either no nitrogen, 1.5 lb/tree or 3 lb/tree applied on a yearly basis. Leaf tissue values for this trial ranged from nearly 2.5% to around 1.7%. Tree yields bounced around on a year-to-year basis as they do with avocado, but the cumulative yield of the three treatments were nearly the same.

If you think about it, in a mature orchard yielding 10,000 lb/acre, the nitrogen in the fruit that is removed from the field to the consumer, only represents about 24 lb N/acre. The rest, hopefully, is in the tree or in the root zone of the soil. The avocado is a closed system, where leaves are raining down to the ground, rotting and returning their nutrients to the soil to be absorbed by the tree again. It is really an elegant nutrient system, with the numerous superficial roots soaking up needed nutrients like a sponge. Following the Leaf Analysis Guide only helps us nudge the system along. The Guide is only that. When it is obvious that yields are going to be larger or smaller than normal or that the trees have been hit by a freeze, it is also necessary to incorporate these facts into a managed fertility program.

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US Research Program Yields Results

By Len Francis, Research Co-ordinator for the California Avocado Society - from California Grower, October 1993

Since November 1991 the avocado industry production research program has provided some very substantial results that growers are already utilising to battle the Persea mite, and will utilise for fertiliser and citricola in the future. Here is a brief recap of recent progress:

Persea Mite

This pest reared its ugly head two years ago. Because Dr McMurtry of U.C. Riverside was already doing biological control research on brown mite and greenhouse thrips, he was right there to investigate and commence control research. Within six months he had a predacious mite, *Galandromus helveolus*, that feeds on the Persea mite, and could be reared in insectaries. This process normally takes two to four years to reach this point of biological control. Many pests never attain this step of use of natural enemies.

The Persea mite is still not under control. In fact it is raging in San Diego County and has moved to Riverside and Ventura Counties. But, we do have a tool that will eventually lead us to the point of not needing the use of chemicals.

A major drawback so far is the availability of the *G. helveolus* for sale. In March of 1993 only 200,000 per week were

being reared. With emergency research funds, techniques were found that have allowed an increase in production to one million a week. We are two years behind the Persea, but two to four years ahead of where we would have been without our in-place research program.

Fertiliser Rates

Many growers and consultants see the results of use of nitrogen, phosphorus, and potassium and use or recommend copious applications. This practice is justified because of the large percentage of avocado acreage on very marginal soil.

A research project started in 1987 in the Valley Center area has concluded that 300 pounds of nitrogen per acre gives less production over four years than does 150 pounds. The equivalent of 50 pounds of nitrogen yielded as much fruit as the 300 pounds of nitrogen. At 30¢ per pound of nitrogen this is a tremendous savings. It also obviates the soil and water contamination that excess nitrogen causes.

There were no yield increases from addition of phosphorus on this decomposed granite soil. Response to phosphorus has been shown on Escondido soil series where a reddish clay subsoil exists.

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Export Of Avocados To NZ

By Roslyn Stark, ANVAS Registrar

Due to the sunblotch viroid free status of New Zealand (NZ), only holders of Avocado Nursery Voluntary Accreditation Scheme (ANVAS) registered blocks of avocados are in a position to export to NZ.

Background

From June 1990, avocados from ANVAS registered blocks were allowed entry into

NZ Export Treatments

The New Zealand Ministry of Health has legislated that the maximum permitted residue level for Ethylene Dibromide (EDB) is 0.1 ppm for fruit and vegetables in NZ. AQIS considers that it is extremely unlikely that any Australian produce, including avocados, that has been EDB treated at the required dosage rates will be able to meet these new conditions.

The Ministry is still assessing data submitted to them some months ago on cold disinfestation treatment. Subject to this data being acceptable to them, cold disinfestation treatment for avocados will be the only method of treatment permitted.

NZ under permit. This interim arrangement was to cover avocados until the final requirements of the Bilateral Quarantine Agreement (BQA) could be developed.

In September 1992, officers of the NZ Ministry of Agriculture and Fisheries (MAF) visited Australia to look at a range of produce with a view to endorsing NZ's quarantine requirements. During their visit, the audit team met with the ANVAS Registrar, a major ANVAS nurseryman and registered blockholders to gain an understanding of the Scheme. They gave a good report of ANVAS and the recommendation that this Scheme be implemented as part of NZ's quarantine requirements.

This hurdle having been overcome, the major concern for exporters to NZ is compliance with regulations in regard to fruit fly.

Fruit Fly

MAF requires that growers be registered specifically for trade to NZ and one of the requirements of registration is active monitoring and application of sprays for the control of fruit fly. This will be audited annually by AQIS who will view spray and monitoring control diaries (which should be kept by all growers). They will also assess the hygiene of each

property (i.e. look for rotting fruit left lying around, likely cross contamination from adjacent properties, etc.).

Avocados must also have a postharvest treatment before leaving Australia. From 1 January 1994, NZ is banning the use of EDB as a disinfestation treatment for fruit fly. This means that an alternative postharvest treatment must be used.

Andrew Jessop's work on "Curing Hass Avocados for Cold Storage Disinfestation Against Queensland Fruit Fly" (article May 1993 issue of *Talking Avocados*) has been forwarded to MAF. The treatment which Andrew recommends is dipping in 0.05% benomyl for 3 minutes at 46°C, drying at ambient temperature for 2 hours and storing at 1°C for at least 16 days. We have yet to hear whether New Zealand will accept this treatment.

Summary

Due to the sunblotch viroid free status of NZ, ANVAS registration of blocks is a requirement for export of avocados to NZ.

The major concern of exporters to NZ is meeting requirements in regard to fruit fly, particularly postharvest disinfestation.

As from 1 January 1994, the use of EDB fumigation for exports to NZ will be banned.

NZ To Export 300,000 Trays To Australia

The New Zealand Export Council advised Australia that New Zealand would be sending approximately 300,000 trays of Hass avocados to Australia this season.

In November, the Australian and New Zealand avocado industries exchanged crops forecasts and market timing information, part of the now regular trans-Tasman talks. Former Australian Avocado Growers' Federation (AAGF) director Don Lavers has been maintaining contact with the New Zealand Export Council on behalf of the Australian industry.

Mr Lavers said the New Zealanders expected to begin exporting Hass in late November and would continue until late February or early March '94.

The projected New Zealand crop is about 25 per cent larger than last year, slightly down on the record crop of the 1991/92 season.

Mr Lavers said that the New Zealanders began exporting Hass in December and expected to continue until mid or late February.

He said supply during the latter part of December was heavier than last year but declined over the Christmas break and has been slow to build up in early January.

Fruit size has been a little smaller than expected and this has delayed the picking in some cases. Also with unfavourable exchange rates more exporters would be forwarding by sea rather than air.

Their fruit will compete on the Australian market with late Australian varieties—mainly Hass, Reed and Wurtz—and with early season varieties, particularly Shepard.

Reports from various districts indicate that Sunshine Coast and most of NSW will be finished before the NZ product is

seen in volume. Tamborine will phase out in January while Sunraysia and South Australia will continue into February. West Australia will probably go into February also but volume will be down and there will be less product directed at the eastern markets.

The Shepard crop from the Atherton at an estimated 120,000 trays will be 59% up on last year and will be in greatest volume from mid February to the end of March.

There is concern among Australian growers that NZ exporters will delay the entry of their fruit into the market as they did in 1991 and severely depress the prices for early season Shepard and Fuerte.

However, NZ exporters have been encouraged to wind down by mid February and only a few trays should arrive after that time up until early March.

A Better Fruit Picking Stick

By Col Bridges, Gold Coast Queensland

I was working on a property in Central Queensland in the mid 1970's where there were some big old mango trees growing. The owner offered me the fruit from the tops of these trees but how was I to harvest the crop? Thus evolved my first picking stick.

Cutting the fruit was one thing, getting it to the ground undamaged was another. I finally located a product called Polynet from which I made a tube to act as a chute. It did the job and was cheap enough to replace when it tore or got dirty.

I was given the address of an engineer at Palmwoods who had an avocado orchard. He modified the picker and marketed it for a couple of years.

The Queensland Department of Primary Industries and the Australian Broadcasting Corporation in Rockhampton were so impressed with the picker that they featured it on a TV show called "The Countryman". The demonstration took place at the property of Doug Edwards near Yepoon.

After several years and many modifications to the picker, I was lucky enough to meet Bob Brimsmead of Avocado Land. He and his crew were most helpful with suggestions and it became clear that a bag was more suited to picking avocados. They have used the final result for several years and consider that it's the best picker they have used.

My aim was to make a light strong unit

with an easily replaceable cutting blade and bag and this has been achieved.

The main body is constructed of aluminium for lightness with steel being used where strength is paramount.

The type of handle to fit to the picker is up to the operator. However, the picker's 25 mm outside diameter handle attachment point will fit inside the smaller end of a 5 metre telescopic swimming pool handle. This is ideal for fruit from 3 to 7 metres above the ground. A length of 32 mm orange electrical conduit also makes a good handle, especially as it is not prone to kinking or denting as is aluminium.

The bag can be removed quickly for cleaning or replacement. A net tube or something similar can be used in place of a bag if the fruit is very high and a chute is considered preferable. Polynet is no longer available but Netlon A670/R can be purchased by the metre from International Traders, South Brisbane.

The picker uses a utility knife blade as a cutter and this can be quickly replaced if it gets blunt. These blades are readily available from any hardware store. However, they do need two special slots ground into them to allow for correct placement, a job easily done using a standard angle grinder. Trials show the cutting blades last for several years before needing to be replaced.

An important factor for people using the picker is its ease of use. Compared to other picking sticks, only about half the force is needed to operate the cutting blade to remove the fruit from the tree. This reduces the fatigue factor for operators.

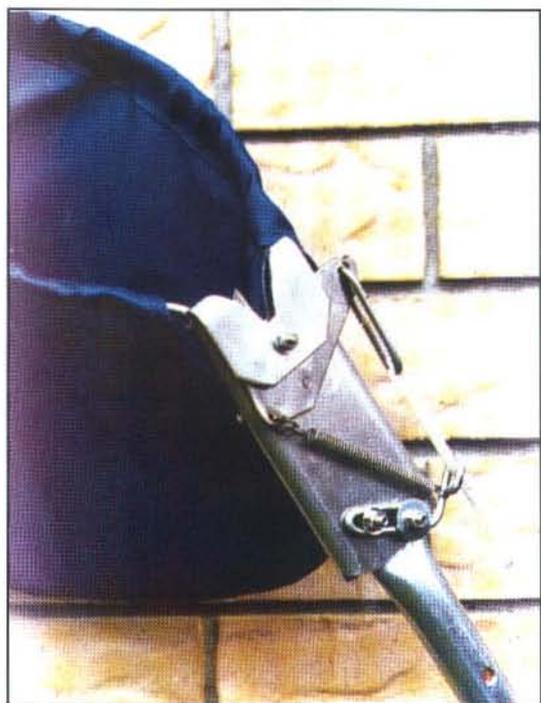
The ring holding the bag can be changed to suit other fruit. We use a different one for custard apples so they can be either cut or pulled from the tree.

The picker has evolved over the years and is now quite different from the original. Almost 500 pickers have been sold Australia-wide and I would be pleased to

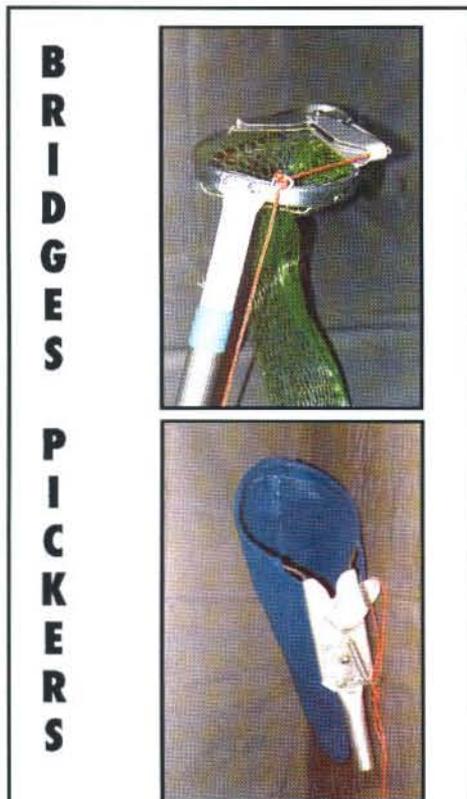
hear from users, especially about any ideas for improvements or special changes to suit particular needs. I can be contacted at 215 Nineteenth Avenue Palm Beach Qld 4221 or by telephone 075 358036.



The cutting blade, bag and bag ring are all easy to replace. The ring shown has a notch for pulling custard apples.



The Bridges Picker



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