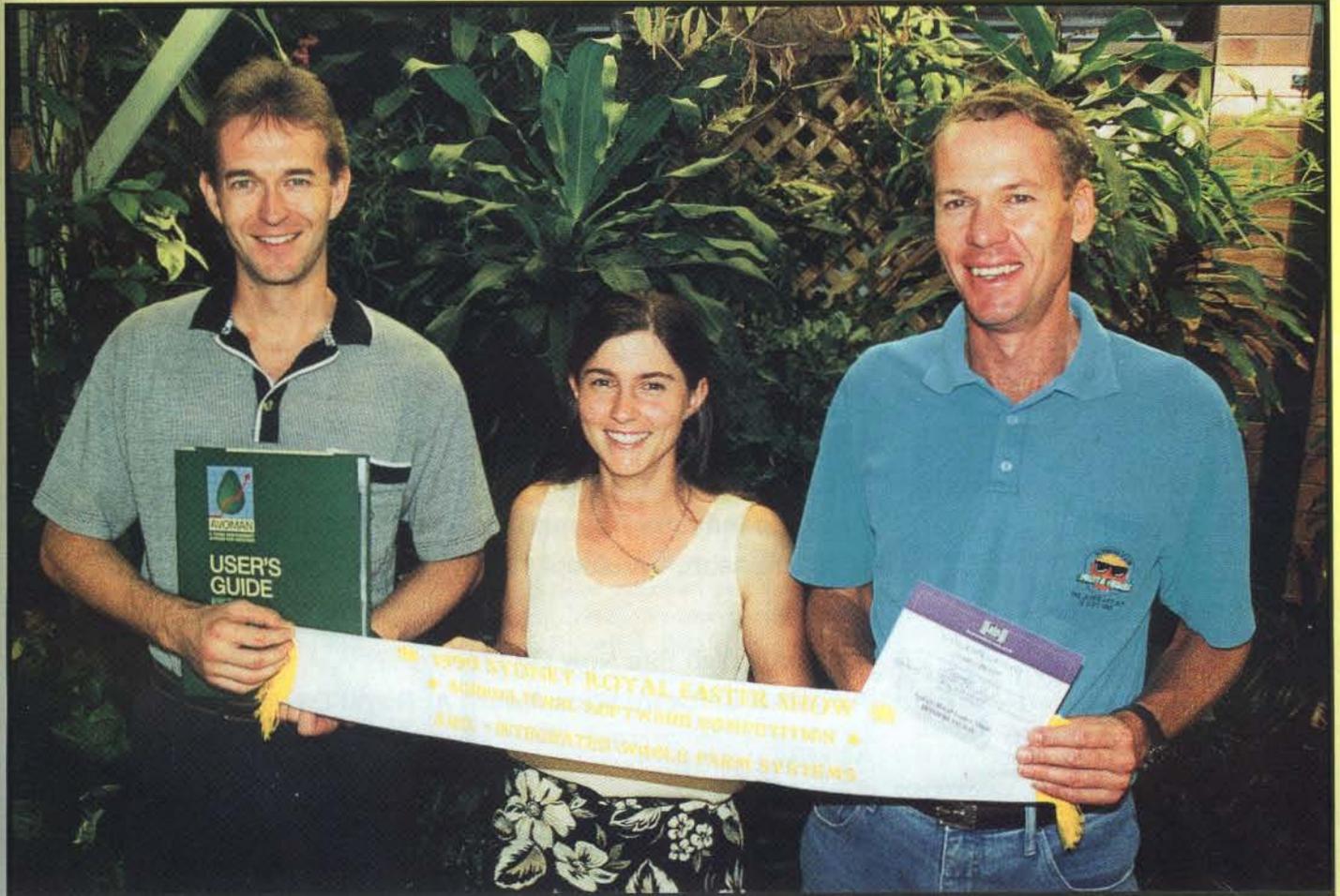


Talking Avocados



**Shane Mulo, Christine Bezzina and Simon Newett
with their Third place award won in the
Sydney Royal Easter Show computer software competition.**

- Horticultural Industries
- Chemicals Registered for use on Avocados
- South African Avocado Industry
- Fruit Spotting Bug Report

AUSTRALIAN AVOCADO GROWERS' FEDERATION

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Calendar of Events

September

- 15 **Sunshine Coast Avocado Growers Association** - Marketing and Quality Assurance Workshop and QGM. Big Pineapple, Sunset Room 10.30 a.m. to 4.30 p.m. (See Box page 7). Contact: Larissa Meyer Ph 07 5478 9455.
- 15 **Bundaberg & District Orchardists Association** - meeting Fruit & Vegetable Growers' Office, Barolin St. Bundaberg, commencing 7.30 p.m.
- 21 **AAGF Annual Reporting Meeting** - Pacific Bay Resort, Coffs Harbour, NSW, between 1.00 p.m. and 6.00 p.m. Contact Geoff Betts 02 6649 4404.
- 25-3 **Avocado Growers' Association of WA** - Royal Perth Show Stand.

October

- 5 **Avocado Growers' Association of WA** - meeting Conference Room, Market City, commencing 5.30 p.m.
- 22 **Avocado Growers' Association of WA** - South West area Field Day with Graeme Thomas. Contact Wayne Franceschi 08 9776 1332.
- 20 **Bundaberg & District Orchardists Association** - meeting Fruit & Vegetable Growers' Office, Barolin St. Bundaberg commencing 7.30 p.m.
- 22 **Avocado Growers' Association of WA** - Perth Field Day with Graeme Thomas. Contact Wayne Franceschi 08 9776 1332.

November

- 17 **Bundaberg & District Orchardists Association** - meeting Fruit & Vegetable Growers' Office, Barolin St. Bundaberg, commencing 7.30 p.m.

December

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

Front Cover:

L. to R. - Shane Mulo, Christine Bezzina and Simon Newett receiving their third place award (see article page 24).

Back Cover:

National food writers and avocado industry representatives take an orchard walk at Keith Johnson's orchard in Alstonville (see article page 16).

Pioneer Fruit Grower Passes Away

JOHN OSBOURNE DEXTER

Born: Bondi, 12 September 1925

Died: Brisbane, 10 July 1999

John Dexter was a pioneering developer of Australia's avocado and kiwifruit industries.

After a successful career as a Sydney solicitor, he bought a banana plantation at Coffs Harbour in the early 1970s and replanted with the then little-known fruits, avocados and kiwifruit.

He played a pioneering role in making both fruits popular in Australia, forming organisations of their growers locally and at a State and Federal level, and in their export marketing.

John was heavily involved in the NSW Avocado Growers Association and was an untiring member of the local group, a delegate to the NSW Association and later to the Australian Avocado Growers Federation where his efforts were greatly appreciated by his co-delegates.

In the early days of the Association there were many aspects of the industry that needed attention and John was a driving force on many committees for Quality Control, Packaging and Transport, Cold Storage, Fumigation and Marketing.

It was, however, John's legal background which afforded the industry great service in Constitution matters, Virus Indexing, and finally his greatest contribution to the industry in being a major player in convincing the Federal Government to reverse its decision to allow the import of American avocados. This was a legal battle based on the major threat of the disease Black Streak, which was prevalent in America. Its exclusion no doubt has had a profound effect on the Australian Industry.

Besides avocados, John had the honour of having a variety of kiwifruit named after him, which were developed on his farm. In 1989 he was awarded the Order of Australia Medal for services to both industries.

Mr Greg Ireland, NSW Agriculture Coffs Harbour district horticulturist, said: "John was a learned man, always willing to help and offer advice and friendship to people at all levels."



His father was NSW Swimming Association president and a World War I veteran who was awarded the Military Cross In France.

Like his father, Mr Dexter was a born leader. At Sydney Boys High School he was school captain as well as cricket and football captain. He was surf captain at North Bondi.

Leaving school he joined the RAN, serving as an able seaman. He was on board HMAS Hobart when it sailed into Tokyo Bay for the formal Japanese surrender in September 1945 to end World War II.

Post-war he graduated in law from Sydney University and joined a practice in Pitt St, which became Dexter & Healey.

He was aged 47 when he changed careers, a move he had planned with his first wife, Georgina (nee Christie), also a lawyer, who died before they could fulfil their ambition.

He continued to work long hours on the farm until 1996 when, aged 71, he sold the property and retired to Brisbane.

His second wife, Audrey Stead, died in 1994. His partner, Nola Jeffries, his children, Ruth, John and Janet, and three grandchildren, Daniel, Lucy and John survive him.

From Your Federation

R & D Meeting

The R, D & E Subcommittee met on Tuesday, 23 March 1999. The meeting considered new proposals, received updates on current projects, allocated funds and set priorities for the immediate future. Lindy Hyam, HRDC Managing Director, attended part of the meeting together with Canopy management/Nutrition researchers, Drs Tony Whiley and Peter Hofman, and Fruit Spotting Bug researchers, Dr Geoff Waite and Shaun Hood.

New Quality Project

The brief for the new quality project or market chain study as it is now called was approved. This project will address the issue of internal fruit quality. A steering committee was formed consisting of: John Dorrian (R&D Committee Member), Henry Kwaczynski (AAGF Director), Lindsay Tillbrook (Sydney Market Wholesaler), Wayne Prowse (AHC Marketing Manager), Gerard McEvelly (HRDC Industry Manager) and Astrid Kennedy (AAGF Executive Officer). The project will be dynamic with the steering committee keeping it on track to achieve the best results. The proposed project has been advertised and has generated a great deal of interest within the research community.

R & D Reworked Priorities

The research and development priority list was revisited and a number of areas were identified as next "cab off the rank". The list is as follows:

Revised priority list

1. Fruit Spotting Bug - project review
2. Spray application methods and rates (with AusHort)
3. Market research (with AHC)
4. Industry Development Officer

Needs analysis

1. R & D Planning workshop
 - (1) Revise R & D strategic plan
 - (2) Formulate emergency plan
2. Communication program
3. Maturity testing
4. Project/program evaluation

Chemical List

Your Federation has been concerned for some time about the possibility of growers using incorrect chemical application. The R, D & E Subcommittee was given the task of providing current chemical usage

information to growers to ensure that chemical application and concentration rates are not being abused and are being used in accordance with the label.

The Subcommittee contacted Gatton College, Queensland and as a service to the Avocado Industry has obtained a list of registered insecticides and fungicides from the Centre of Pesticide Application & Safety. The list was current as of 5 May 1999 and was reproduced in the June issue of this magazine. Your Federation thanks Gatton College and in particular Keith Hamilton for supplying the data. Starting on page 8 you will find more information on agricultural chemicals, especially off-label permits.

HIASC Submission

Denis Byrne, Chairman of the Horticultural Industry Alliance Steering Committee (HIASC), addressed your Federation Board at its March meeting. The HIASC was formed to develop options for amalgamating industry service providers AHC and HRDC. The steering committee developed a green paper containing various options for industry to consider. Mr Byrne outlined the content of the Green Paper and he discussed the options with directors. Directors approved the concept and listed a number of points for clarification, amendment and further discussion. The industry's submission covered your Directors' comments and requested that a second round of consultation be initiated when all submissions are received and integrated. Details of the move to a single horticultural body are given on page 6.

Peak Industry Forum

The Federation President, Rod Dalton, and Executive Officer, Astrid Kennedy, attended a workshop in Melbourne on the establishment of a Horticultural Peak Industry Forum. Senator Troeth, Parliamentary Secretary to the Minister of Agriculture, Fisheries and Forestry, representatives from the majority of commodities and the DPIE attended the workshop.

Essentially this will be a Forum for Peak Industry Bodies and during the workshop in-depth discussion took place, agreement was reached and guidelines formulated on the two key aspects of the Forum—Membership/Representation and Funding. An implementation team was formed and tasked with progressing the matter to the recommendation stage. The implementation team comprises Bob Granger, John Durham, Jeremy Gayland, Rod Fayle,

Brian Newman and Geoff Richards. The Forum will replace the Horticulture 2000 Group and is to be established by January 2000.



Emergency Plan

Bob Granger, QFVG General manager and Horticulture 2000 member, addressed you Directors during their March meeting and outlined the Horticulture Emergency Management Plan as developed by the Horticulture 2000 Group. Essentially the plan will provide a set of guidelines for preparing for and responding to an

Annual Reporting Meeting

Another date for you Diary, particularly if you live in NSW, is your Federation's Annual Reporting Meeting. It will be held at Pacific Bay Resort, Coffs Harbour, on 21 September 1999 between 1.00 p.m. and 6.00 p.m.

The agenda for the afternoon is:

- 1.00 p.m. - Light lunch - all welcome
- 2.00 p.m. - Annual Reporting to Growers
 - (1) Your Federation - What your Peak Industry Body is doing for you;
 - (2) AHC - How your marketing levy was spent;
 - (3) HRDC - How your R & D levy was spent
- 5.00 p.m. - Meet your Board and service providers

Growers are urged to attend and hear what their Peak Industry Body is doing to aid their businesses and just as importantly, use the opportunity to discuss issues with the Board.

IMPORTANT - For catering purposes please advise the NSW Avocado Association by 15 September 1999 of your intention to attend. Contacts are: Geoff Betts 02 6649 4405 or Phil Conner 02 6677 1455.

emergency situation within the horticulture industry. Individual commodities are now encouraged to use the template to develop detailed plans for their own use and to compliment the Horticulture Emergency Management Plan—the National plan. Your Federation plans to advance the matter during its next planning meeting.

New Zealand Fruit

Federation President, Rod Dalton, has written to Ron Bailey, Chairman, New Zealand Avocado Growers Association, informing him about the poor quality of some New Zealand fruit being offered to Australian consumers. Mr Bailey was advised that Australian growers were very concerned about the effects poor quality was having on consumer confidence and purchasing patterns.

The other associated issue of major concern brought to Mr Bailey's attention was the length of the New Zealand marketing season in Australia. Large quantities of new season Australian fruit was available from Mid-February and it should have been in New Zealand's best interests to have completed their marketing programs in Australia considerably earlier than mid-April.

Mr Bailey responded quickly by telephoning and advising Mr Dalton that they

too were concerned about the problems and were keen to find solutions. Mr Dalton and Mr Green, R, D & E Subcommittee Chairman, have been invited to attend and address the New Zealand local conference in mid-August. A copy of Mr Dalton's letter to Mr Bailey is reproduced below.

Next Conference – 2001

A steering committee has been formed and charged with the task of recommending when and where the next Avocado Conference will take place. Wayne Franceschi (WA), Henry Kwaczynski (QLD), Frank Moore (NSW), Ross Richards (SA) and Astrid Kennedy (AAGFEO) have met and have narrowed the multitude of locations and times to Bundaberg/Childers region in May 2001. Mark it in your diary and watch this space.

Llanos Hass

The December 1998 issue of Talking Avocados introduced readers to a new variety of Hass avocado bred by Anthony Llanos in WA. Mr Llanos is in the process of commercialising his new variety and has approached the AAGF Varieties Committee with a view to ANVAS Nurseries propagating the variety and selling it to growers

under the registered tree scheme. Discussions are now under-way.

Communications

The President, Rod Dalton, and R & D Chairman, George Green, have attended meetings and addressed growers on the Sunshine Coast, Tambourine Mountain and Atherton. Questions considered by your Board at their March meeting were: How to get information to growers? and how to receive grower input and involvement? Over the next few months a communications policy will be formulated on the "Provision of information products and services to avocado growers".

Retirement

Director Ross Richards retired from his position on the Board at the March meeting. Mr Richards is a long serving Director and has represented South Australia at National level for some 14 years. Ross has been a driving force in the promotion of avocados at the Adelaide show over many years and was reporting to growers on the quality of their fruit long before internal quality became an issue. His wealth of knowledge and subtle wit will be missed at the Board table. On behalf of Directors, thank you Ross and enjoy your retirement.

Dear Ron,

At the recent AAGF board meeting it was agreed that I should write to you and raise a number of issues of concern to the Australian industry.

The quality of New Zealand avocados available in the Australian marketplace in the latter part of your season was in many cases, very disappointing. We received feedback from a number of groups as follows:

1. Vicki Leng, a well known food writer and demonstrator in Melbourne, contacted Wayne Prowse, the Avocado industry manager at the Australian Horticultural Corporation (AHC), about her "Avocado Experience" (copy attached).
2. The merchandisers who are employed by the AHC and funded by the Avocado industry to service the retail sector in March and August, reported serious quality problems, particularly with NZ Hass in March. In one case the merchandiser cut all the fruit in a tray on retail display without finding an edible fruit. Details of that tray are attached for your information.
3. The AAGF office received a number of phone calls from consumers complaining about the quality of the fruit that they had purchased. This is very unusual and has only occurred on the very odd occasion before.

4. Numerous growers have complained about the quality of NZ fruit that they observed at both wholesale and retail level in February and March.

I appreciate that many of the quality problems may well have been associated with fruit being held too long, in the marketing chain, for whatever reason. Some aspects of the problem neither your industry, nor ours, has any/much control over. I think it is important that you are aware of the magnitude of the problem, however, and ask that you take action to address the issue of fruit quality at retail level in Australia, before next season.

The Australian growers are very concerned about the effects poor quality fruit, both NZ and Australian, has on consumer confidence and purchasing patterns. A significant portion of our research and marketing effort is addressing this issue of fruit quality at time of purchase. A positive for us was that we were able to differentiate our early season green skins from your old season Hass. We did not use that as strongly as we could have, although it will remain an option in the future.

The other associated issue of major concern to the AAGF was the length of your marketing season in Australia. With large quantities of new season fruit becoming available here from mid-February, I believe it will be in your best interest to complete your marketing programs in Australia considerably earlier than mid-April, as

was the case this year. As I saw significant volumes of NZ Hass being sold at \$4 - \$5 per tray in mid-March, I assume somebody was losing money and may have learned some expensive lessons. This price did not however make for a very good start to our marketing season.

Ron, I would appreciate an indication as to how your industry will be addressing the issues raised. Whether we like it or not your industry will continue to have ready access to the Australian market and it is in the best interests of both our industries to be working together on these issues, as much as possible. If there is anything we can do to assist you, please advise.

The communication between our RD&E committee and Jonathan Cutting seems to be working well with benefit to both industries.

I guess you are still picking some of your "old" season fruit for the domestic market, although Kiwifruit harvest must be fast approaching. I've almost completed Fuerte harvest with fair results and will not pick Hass till September. I've got a few thousand stone fruit to prune in the meantime.

I trust you had an interesting trip to Chile and the USA.

Regards
Rod Dalton
President AAGF

HIASC Releases Recommendation for New Horticulture Industry Entity

Background to Horticulture

The gross value of Australian horticultural produce (excluding wine) for 1996-97 was estimated at \$4.7 billion.

There are more than 21,000 Australian farms engaged in horticultural production employing approximately 80,000 people. This figure represents around 22% of all employees working directly in agriculture.

The total export value of fresh and processed horticultural produce in 1997-98 was \$1.16 billion, of which \$624 million was fresh produce.

The Horticultural Research and Development Corporation invests \$30 million each year in R&D programs for 43 industries, which has a leveraged value of \$200 million. It conducts over 500 projects per annum involving in excess of 350 research institutions and 500 researchers.

The Australian Horticultural Corporation invests approximately \$9 million in partnership with horticultural industries, exporters, Australian and overseas retailers to assist the positioning of Australian fresh produce in domestic and overseas markets. Activities in market access, development and promotion has seen fresh produce exports grow to \$624 million.

The HIASC

Impetus for the development of a new entity came from a workshop in March 1998 where horticulture industry leaders identified the benefits a single entity to replace the AHC and HRDC.

These benefits were:

1. Market driven research and development;
2. Enhanced responsiveness to market opportunities;
3. Implementation of marketing and R&D programs which are commercially focused;
4. Better interfacing between statutory organisations and industry;
5. Streamlined delivery of industry services to horticulture (underpinned by integrated strategic planning);
6. Greater access to industry services for smaller industries;
7. Greater efficiency, profitability and sustainability across all sectors of horticulture; and
8. Lower infrastructure costs.

The Horticultural Industry Alliance Steering Committee was formed,

comprising representatives from industry, the Australian Horticultural Corporation (AHC) and the Horticultural Research and Development Corporation (HRDC), Government and an independent chairman. The aim of the HIASC was to investigate options for a single entity and make a recommendation to Government.

Compliant with its terms of reference the HIASC published a Green Paper in February 1999 setting out the options for industry to consider in the development of a single R&D and marketing entity to service the Australian horticultural industry.

The three structural options considered in the Green Paper were:

- a. A statutory corporation (such as the Australian Horticultural Corporation and the Horticultural Research and Development Corporation).
- b. A company limited by guarantee under Corporations Law (such as Meat and Livestock Australia).
- c. A wholly commercial/voluntary funded organisation (such as industry associations).

Following an extensive consultation process, over 50 submissions on the Green Paper were received from stakeholders including peak industry bodies, producer and non-producer organisations, R&D service providers, state farming organisations, state governments, individual respondents and Boards of the AHC and HRDC.

Recommended Model

The recommended model for the new entity is a company structure under Corporations Law. "Based on Industry feedback, the HIASC came to the conclusion that this structure could best deliver the required benefits of greater industry ownership, control and accountability," said Mr Byrne.

HIASC Chairman Mr Denis Byrne said the report represents the results of an extensive consultation process with different levels of the horticulture industry nationally.

"Following the publication of a Green Paper, outlining the structural options for a new entity, the HIASC elicited submissions from stakeholder organisations on their future service requirements which have formed the basis of the final report to Government and Industry," said Mr Byrne.

The recommended corporate structure will ensure the preservation of matched Commonwealth Government R&D funding while enabling a level of commercial

flexibility not available under the other structures considered.

"The company model will maximise the bottom line contribution that industry R&D and marketing programs make to horticultural businesses by allowing greater industry control," said Mr Byrne.

Other specific advantages to be delivered by a new, single entity include better research and marketing program design, increased program flexibility and greater commercial focus. "A single entity will also deliver significant administrative savings which are forecast in the HIASC report," said Mr Byrne.

"An important feature of the recommended model is the creation of Industry Advisory Committees (IAC) enabling programs to be tailored to the specific needs of individual industries," said Mr Byrne.

Further recommendations in the HIASC report addressed funding arrangements for the new entity, company board composition, membership, and voting rights.

Mr Byrne and the Committee were pleased to report to Senator Troeth and Industry that the process was delivered within budget and in a timely manner. The HIASC convened a Summit of industry leaders in early August to discuss the recommendations of the final report and seek endorsement of implementation procedures.

The Government will now consider the HIASC report and respond to Industry. Pending that outcome, it was recommended an implementation committee be established to consult with industry and negotiate with the Government on the final details of the new entity during the transition phase. The target date for the creation of the new entity is August 2000.

A copy of the HIASC report can be downloaded from the Internet at: www.hiasc.org.au

Industry Acceptance

This week, leaders of the Australian horticulture industry unanimously endorsed the establishment of a single company to administer horticultural R&D and marketing services at a Summit in Sydney.

Representatives from the major commodity organisations within the industry were present to discuss the key components of a new commercially driven

The article on this page is sponsored by HRDC and the avocado industry.

service entity as outlined in the recent HIASC Report to Government and Industry which articulates a blueprint for future industry arrangements.

Mr Byrne said the Summit's broad agreement on the way forward underlined industry's commitment to drive real change. "There is very tangible unity evident at the leadership level in Australian horticulture at present and industry is now firmly committed to driving this process forward".

Participants at the Industry Leaders' Summit resolved to establish a Corporations' law company limited by guarantee to oversee R&D and marketing programs on behalf of

the Australian horticulture industry. This new corporate structure was widely supported during the HIASC industry consultation phase and has received final approval by industry representatives. "Industry has now reached consensus on a broad corporate model that will provide a framework for optimising industry returns on R&D and marketing investments," said Mr Byrne.

The Summit resolved to recommend to the Commonwealth Government that immediate steps be taken to mandate the transition to new structural arrangements for Australian horticulture as a matter of

priority. The resolution has now been forwarded to the Government for consideration and follow-up action.

In anticipation of a green light from the Government, an Horticultural Implementation Consultative Group was appointed to consult widely with industry on transition arrangements and negotiate with Government on more detailed structural elements of the new company.

Mr Denis Byrne was elected as the independent Chair of the new Horticultural Implementation Consultative Group along with seven representatives from the horticultural industry.

Horticultural Industry Working Group To Review R&D Levy Principles

Judith Troeth, Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, addressed horticultural Peak Industry Body Chairs and Executive Officers at a Presidents Council meeting convened by the Horticultural Research & Development Corporation on Monday, 31 May.

In light of the Fresh Stone Fruit levy increase, which has been put on hold recently, a major area of concern for industry members was the current R&D levy system. Senator Troeth assured the meeting that the Government supported a system that enabled growers who would not otherwise have the resources for R&D, to have access to R&D outcomes.

A working group comprising: Jon Durham, CEO of the Australian Apple and Pear Growers Association; Brian Newman, Executive Officer of AusVeg; Bill Hatton, Chairman of the Australian Fresh Stonefruit Growers Association; Paul Ziebarth, Chairman of Queensland Fruit & Vegetable Growers; and Geoff Richards, President of the Nursery Industry Association of Australia; will meet with the Government to review the 12 levy principles.

The working group will also look at issues regarding funding for Peak Industry Bodies.

Other topics discussed at the Presidents Council meeting included the Horticultural Industry Alliance, the Horticultural Peak Industry Forum, the formation of a Plant Health Council and the plethora of Quality Systems that growers are currently required to comply with.

Mr James McGeoch, Chairman of HRDC, said: "The Presidents Council meeting is an excellent forum for leaders of our levy paying and voluntary levy

paying industries to come together and have a frank and open discussion on topics of mutual concern and interest. I believe that the outcomes from this meeting will be significant, especially if we can create a level playing field for those for and

against the establishment or change in R&D levies."



The articles on this page are sponsored by HRDC and the avocado industry.

Marketing And Quality Assurance Workshop

A Workshop is to be held with Marketing presentations by AMCAL, Natures Fruit Company and Wayne Prowse from the AHC. Also, there will be a Quality Assurance presentation by Margie Milgate from QFVG.

A Quarterly General Meeting of the Sunshine Coast Avocado Growers Association will be held after the workshop

Date: Wednesday, 15 September

Where: Big Pineapple, Sunset Room

Time: 10.30 a.m. for 11.00 a.m. start. The Workshop will finish at 4.30 p.m.

Cost: \$15.00 including coffee upon arrival, lunch and afternoon tea.

RSVP: By Friday 10 September. Phone: 07 5478 9455 Fax: 07 5478 9869 or E-mail: sales@inkunzi.com

Here is an opportunity to have your say. Wayne Prowse from the AHC is coming to Brisbane for a meeting with the AHC Marketing Forum for Avocados on Thursday, 16 September, the day after our field day. The workshop has been organised so that Wayne can obtain input from growers on what you want to see happening in your industry with regard to marketing and market research.

- What can be done to increase general consumption of the avocado?
- What are the marketing issues that you believe impact upon you the most?
- How can we address these issues?
- What can be done to generate greater demand amongst consumers for avocados?

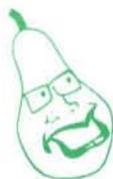
Put your thinking caps on because Wayne is looking for your input to take to the marketing forum the very next day.

In addition you will be hearing from Amcal and Natures Fruit Company, who are going to share with you what their groups have to offer the grower, so no matter if you prefer to pack you own fruit or have someone pack for you, there will be something to learn.

The QFVG are making a presentation on Quality Assurance so those that are not clear on the current or future QA requirements will leave the day better informed.

We look forward to seeing you there on 15 September.

TALKING AVOCADOS - HAVE YOUR SAY



Dear Sir,

The June 1999 edition of the AAGF newsletter, Talking Avocados Vol.10 No.2, contained a useful 4 page lift out article on pesticides registered for use in avocados in Australia.

The information, with dilute and hectare rates presented in tables, had been obtained from the Centre for Pesticide Application and Safety (CPAS) Peskem database (5/5/99). The Peskem database is just one of the possible sources of information on registered or approved uses. The others are the QDPI Infopest database, the National Registration Authority (NRA) website and AVOMAN.

The information given in the article is a useful guide to legal uses but there were some important omissions of registered and approved off-label uses relating to avocados and some inaccuracies in the text relating to dichlorvos.

Firstly dichlorvos is the active ingredient in several brand products. Dichlorvos had not originally been registered in avocados but 500 g/L formulations, the commonest of which was Mafu® 500, were (and still are) approved under a QDPI Agricultural Requirements Board (ARB).

When Mafu® 500 was withdrawn many chemical resellers apparently chose to replace it with Dichlorvos® 1140 which was neither registered or approved, and more

than twice as strong. However in the meantime two 500 g/L formulations of dichlorvos, Divap® 500 and Provap® 500, have now been fully registered for avocados. These registrations can be found on the QDPI Infopest database.

Secondly the article went on to say that if "avocados" are not on the label, it is not legal to use that product on your avocado crop. It is also said that it is only legal to use any product in the manner as described on the label. This is not strictly correct for Queensland.

It is perfectly legal to use a product on avocados where there is an NRA off-label use permit or ARB approval, despite the lack of instructions on the label. Additionally the Queensland Chemical Usage (Agricultural & Veterinary) Control Act 1988 allows for several variations in use which may not be described on the label, e.g. use against other pests in the same crop and at lower rates.

Thirdly the article omitted a crucial ARB approval of semi-concentrate rates for Thiodan®, copper hydroxide and copper oxychloride in Queensland. Until recently some registered endosulfan products did have semi-concentrate hectare rates in avocados, but since the NRA Existing Chemical Review of endosulfan these registrations for avocados have been withdrawn, e.g. for Endosan® (Crop Care) and Endosulfan® 350 (Rhône Poulenc).

While none of the currently registered endosulfan, copper oxychloride or copper hydroxide products have a hectare rate on the label, they can be used at hectare rates under the ARB approval (Manager Chemical Services, Queensland Department of Primary Industries, Brisbane, 1992).

The approved semi-concentrate rates are for 2.1 litres Thiodan®, 3 kg copper hydroxide and 6 kg copper oxychloride per hectare. This ARB approval was given in 1992 after grower-funded research by Alex Banks, then at QDPI MHRS. However, despite these 3 pesticides being the most widely used pesticides in avocados, this approval is not included on the Peskem or Infopest databases. But QDPI Chemical Services assure me it is still valid.

Finally, while Kocide® has no hectare rate on the label it does have a semi-concentrate tree-row-volume rate (up to 3x in avocados). You will only find this information on the label itself or on Infopest where you can view scanned labels.

Henry Drew
Pest Management Adviser
Palmwoods, Queensland

[Of interest to those growers wishing to use low volume applications of pesticides in Avocados in Queensland there is ARB approval for the following per hectare application rates in Avocados:

- Copper Hydroxide - 3 kg/ha
- Copper Oxychloride - 6 kg/ha
- Endosulfan - 2.1 L/ha] Ed.

Agricultural Chemicals Under Review

The National Registration Authority (NRA) is deciding if you are able to continue using a number of important agricultural chemicals such as endosulfan and parathion-methyl.

Existing Review Program

The Commonwealth Government's NRA has established the Existing Chemical Review Program (ECRP). There are four areas, which need to be satisfied if we are to continue using the chemicals under review:

1. That the chemical has no undue hazards to people (users).
2. That the chemical is not harmful to people (community).
3. That the chemical is not harmful to the environment.

4. That the chemical is not hazardous to trade.

Chemicals are under the hammer

All the names in the Table below are active ingredients and not PRODUCT NAMES. Sometimes the PRODUCT NAME is the same and sometimes not e.g. Endosulfan is sold both as ENDOSULFAN

and ENDOSAN. The active ingredient is always listed on the label.

Whose job is it to ensure you can continue using the chemicals?

The companies who manufacture and supply the chemicals have a role and so does your industry.

It all costs money and in some cases 100's of thousands of dollars are needed to provide all the data NRA requires. Even when the data is provided NRA can still say the risk is unacceptable and refuse to

Under threat NOW	Next to be reviewed	Later in 1999
Endosulfan parathion-methyl parathion-ethyl mevinphos atrazine	Monocrotophos chlorfenvinfos chlorpyrifos fenitrothion diazinon dichlorvos	Aldicarb azinphos-ethyl azinphos-methyl fenthion methiocarb paraquat diquat

AGRICULTURAL CHEMICALS

continue the chemicals' registration. Obviously judgments will have to be made about how much effort and money should be spent to defend continued registration.

How should horticultural industries respond?

Each horticultural industry will need to consult with its members to establish the long-term need for the chemicals under review. It is imperative that you as chemical users understand the significance of the ECRP and the cost of maintaining the registration of chemicals.

A good question to ask yourself is how much am I willing to spend to protect the registration and how can that money be collected? Would you pay twice the current price for the chemical or pay more R&D levy or perhaps write a cheque to a support fund?

The defence must be done in partnership with the chemical manufacturers and suppliers, as without their support it would be impossible to defend the registration. It would also be wise for industry

representatives to initiate discussions with chemical company/manufacturers to determine levels of support for each chemical relevant to their industry.

What is being done?

A number of peak industry bodies are being active on your behalf in the ECRP process. Recently the AusHort R&D Committee (part of the Horticultural Research and Development Corporation) employed consultants to develop a coordinated response to the ECRP. The initial focus is on Endosulfan, Parathion-methyl and Parathion-ethyl.

What are some examples of the impact ECRP has had so far?

Endosulfan Forty-six fruit and vegetable crops have been identified, for which residue studies are required to maintain existing registrations; the cost will be about \$20,000 per crop. Agrevo (the principal supplier) has adopted a worldwide policy **NOT** to support the use of Endosulfan in confined spaces (eg. glasshouses, igloos).

Worker exposure studies are required for nurseries, vegetable and tree crops.

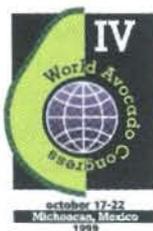
Parathion Ethyl Bayer and Cheminova (major suppliers of Parathion ethyl) will not be defending the registration of this chemical. The Goulburn Valley fruit growing region is the biggest user of this chemical, and is negotiating independently with the NRA for approval to continue using the chemical during a planned two year phased withdrawal.

Parathion Methyl Bayer and Cheminova have advised the NRA that they will be defending the use of the chemical on cotton, pome and stone fruits. The NRA requires significant new data for occupational health and safety. This is largely being met by Bayer and Cheminova. At worst, the costs to the horticultural industries for these studies if funded independently could be as much as \$400,000. Twenty-eight crops have been identified, for which residue studies will be required to maintain existing registrations.

Contacts

Your first point of contact should be the peak industry body for your industry. The following people are involved in the AusHort R&D Committee's ECRP project.

Name	Phone	Fax	E-Mail
Mark Smith, HRDC	03 9210 9320	03 9210 9321	Smitham@ozemail.com.au
Jessica Purbrick, AAPGA	03 9329 3511	03 9329 3522	industrydev@aapga.com.au
Ian Atkinson, NIAA	02 6260 5880	02 6260 4306	natnido@cyberone.com.au
Craig Feutrill, AVIDG	08 8232 5555	08 8232 1311	feutrill@world-link.com.au
Rod Dalton, AAGF	07 5466 1316	07 5466 1497	DaltonRJ@uq.net.au



World Congress



Are you going to the World Avocado Congress in Mexico?

The Congress is being held at Universidad Michoacana de San Nicolás de Hidalgo, in the city of Uruapan, Michoacan, Mexico, from 17-22 October, 1999. There will be courses and workshops prior to the Congress during the week of 13-16 October.

If you do go, why not let your fellow avocado growers know what you thought of the Congress. Write a few lines for publication in this magazine. I am sure others would enjoy your experience.

For more details on the Congress program, tours, registration, etc, go to the Congress web site at: <http://www.aproam.com/congreso/>



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Off-Label Permits Issued For Avocado By The National Registration Authority For Agricultural And Veterinary Chemicals

Pest/Purpose	Active Constituent	Product	States	Permit Number	Permit Valid To
QUEENSLAND FRUIT FLY	DIMETHOATE (400g/L)	VARIOUS REG'D PRODUCTS	NSW	PER532* PER1332* PER1764*	12 SEP 1997 30 JUN 1998 31 DEC 1998
POST HARVEST TREATMENT FOR PREVENTION OF SCALD (HASS VARIETY FOR EXPORT TO NZ)	BENOMYL (500g/kg)	BENLATE	QLD	PER966 PER1572*	10 JUN 1998 10 JUN 2000
TEA RED SPIDER MITE (Oligonychus coffeae)	FENBUTATIN OXIDE (550g/L)	TORQUE MITICIDE	WA	PER1092 PER1995	25 AUG 1998 31 AUG 1999
ECTROPIS LOOPER	METHOMYL (225g/L)	LANNATE METHOMEX MARLIN	QLD	PER1361 PER2423	30 JUN 1999 30 JUN 2000
SPIRALLING WHITEFLY	DIMETHOATE (400g/L)	VARIOUS REG'D PRODUCTS	QLD	PER1673	8 APR 1999
LATANIA SCALE	CHLORPYRIFOS 500g/L)	VARIOUS REG'D PRODUCTS	WA	PER1807 PER2783	11 AUG 1999 30 JUN 2000
LATANIA SCALE	METHIDATHION (400g/L)	SUPRACIDE	WA	PER1808 PER2784	11 AUG 1999 30 JUN 2000
TO RETARD SPRING SHOOT GROWTH ON HASS VARIETY ONLY	PACLOBUTRAZOL (250g/L)	CULTAR PLANT GROWTH REGULATOR	NSW, QLD SA, WA	PER2468	31 MAR 200
GREENHOUSE THRIPS	ENDOSULFAN (350g/L)	THIODAN EC	WA	PER2408	30 JUN 2000

Note On The Table

* The asterisk after a permit number indicates the chemical may only be used by a limited number of users and it is not for general use.

Some entries are time expired. The reason for their inclusion is to show growers what has been issued previously as well as current off-label permits. Once a permit has expired the chemical may no longer be used unless renewed by a further application to the NRA. The application for a renewal is nowhere near as complicated as for an initial request.

Pending Applications

Applications for Off-Label Permits have been lodged for the following chemicals:

- Bromochlorodimethylhydantion / avocados / stem end rot, brown rot, etc.; (QLD)
- Dimethoate (post-harvest dip) / avocados / fruit fly (WA);
- Bifenthrin / avocados / garden weevil (WA).



National Registration Authority
for Agricultural and Veterinary Chemicals



The articles on chemicals are sponsored by HRDC and the avocado industry.

National Agricultural Chemicals Permit Scheme

All agricultural and veterinary (agvet) chemical products sold or supplied in Australia must be assessed and registered by the National Registration Authority.

Under State 'control of use' legislation, registered products must only be used for approved uses. These are the uses specified on the product label.

What permits allow

Situations may arise where it is necessary to use an unregistered product or a registered product in an unapproved manner. These include:

- **emergencies** such as outbreaks of contagious disease or exotic pests for which no registered product exists;
- **minor use**, that is use of a product on a crop or animal grown on a small scale; and
- **research** on agvet chemical products, which can involve use of unregistered products to generate data needed for registration.

Permits legalise use of unregistered products and unapproved use of registered products. Without permits, these actions would be an offence.

Permits issued for minor or emergency uses of registered products are known as off-label permits, while those issued for research trials are called trial permits.

The National Permits Scheme adds a dimension of flexibility to the registration of agvet chemicals. It enables legal off-label and trial use of active constituents and chemical products in certain situations, but with stringent conditions.

Permits, however, are not a way of circumventing the normal registration process for agvet chemical products.

Who can apply for permits?

Any person or organisation can lodge an application, including individuals, grower associations, government authorities and manufacturers or suppliers of agvet chemicals.

Can permits be changed?

Permits can be issued for an indefinite period, or for a set length of time. In either case, the NRA can amend, cancel or suspend a permit at any time if it has reason to believe, or is given information that a particular use may have developed adverse health, environmental, efficacy,

crop/animal safety, residue or trade implications.

Circumstances when a permit might not be required

Australian States have different 'control of use' laws. Some allow registered products to be used in ways that differ from the label, without requiring a permit.

A permit may not be required if:

- using products at lower rates or concentrations than specified on the label, or with lesser frequency of application;
- placing additional constraints on the types of application equipment allowed;
- setting additional conditions of use such as buffer zones, aircraft approach patterns, etc.;
- providing certificates of competency; and
- exercising a 'right to prescribe' (veterinarians only).

These examples are not exhaustive, and may not be relevant in all States. Anyone unsure whether a permit is required for a particular use should contact the NRA or the appropriate State department.

Information required from permit applicants

The NRA recognises the urgency of some situations for which permits are sought. Applicants are asked to provide the following information for evaluation:

- what chemical or product is to be used;
- how the chemical or product is to be used, that is details of crops/animals to be treated and pests to be controlled, plus proposed rate/dose and frequency of application;
- where the use is to occur, including State/s and particular location;
- who is to use the chemical or product for that purpose; and
- why a permit is required, i.e. justification for the use.

Application fee

No fee is charged for emergency permits or for applications received from primary producers or government agencies. All other applications for permits attract a fee for evaluation and processing. Most applications cost \$620, although this may increase according to the amount of technical assessment and consultation required.

How a permit application is evaluated

Before doing a complete evaluation the NRA screens each application to determine:

- whether it contains adequate and complete information;
- whether the proposed use is an offence against Commonwealth registration or State 'control of use' legislation;
- for **off-label applications**, whether the use is already covered by other registered products, or for **trial applications** whether it is covered by the pre-existing small-scale trial permit, TPM0001A;
- whether the use involves food crops or animals and whether an appropriate maximum residue limit (MRL) is established; and
- level of involvement of the States and other government reviewing agencies in assessing the application.

Assessment

Before approving or rejecting an application, the NRA must assess it against the following criteria:

- justification
- human health and safety (toxicology)
- occupational health
- residues
- trade implications
- efficacy
- crop/animal safety
- environmental impacts

Depending upon how different the proposed use of the chemical or product is from the current approved use/s, the advice of expert reviewers is usually sought during the assessment process.

Advice on human health implications is given by an expert group within the Department of Health and Family Services. Worksafe Australia provides advice on occupational health and safety, while Environment Australia advises on environmental implications.

Advice on crop and animal production aspects is often sought from State departments of agriculture and primary industries. Expertise on food residues and trade is located within the NRA but further advice from marketing authorities or trade organisations may be sought. For off-label permits the NRA may also seek advice from the manufacturers of products that are to be included in the permit.

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'Emergency' applications will generally be verified with the relevant State agriculture or environment department to decide whether the proposed use is in fact a genuine emergency.

Does the NRA ever reject a permit application?

The NRA will not issue a permit if:

- the proposed off-label use is not for a genuine minor use or emergency;
- the proposed use could harm humans, animals, property, crops, trade or the environment; and
- other products are registered for the proposed use and sufficient justification has not been given as to why these products are unsuitable.

How long do assessments take?

The NRA receives large numbers of permit applications (over 400 in 1995-96) and makes every effort to process them

efficiently. While the highest priority is given to emergency use applications, which are usually processed within 5-10 days, the need for thorough evaluation against defined criteria means assessments may take longer.

In accordance with the legislated time frames, most applications are finalised within 90 days. The time frame increases as more technical assessment and consultation is required. The NRA encourages applicants to plan ahead and submit applications in sufficient time for assessment.

For more information

Information on applying for permits can be obtained from the NRA's Permits for Agricultural and Veterinary Chemical Products, available for \$11.95 from AGPS. Inquiries regarding permits may be directed to the NRA's permit evaluators:

Peter Prammer Ph 02 6272 3216

Alan Norden Ph 02 6272 3726

Please note that these evaluators use an answering machine when working on

permit applications. If you leave a message they will return your call.

Inquiries can also be directed to State Government Departments:

NSW Mr Andy Hanna, NSW Environment Protection Authority (02) 9325 5720.

VIC Mr A. Chan, Agriculture Victoria (03) 9651 7137.

QLD Mr Garth Grainger, QLD Department of Primary Industries (07) 3239 3936.

WA Mr Christopher Sharpe, Agriculture Western Australia (09) 368 3815.

SA Mr John Kassebaum, SA Department of Primary Industries (08) 8226 0551.

TAS Mr Mike Norman, Tasmanian Dept. of Primary Industry and Fisheries (03) 6233 3565.

NT Dr John Alcock, NT Department of Primary Industry and Fisheries ph (08) 8999 2272.

ACT Mr Peter McDowall, ACT Department of Urban Services (02) 6207 2643.



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SQF 2000 – An Avocado Grower's Perspective

An overview by Alan Blight of his experiences in adopting SQF 2000 at Avowest.

Quality of the product has always been a source of pride to Avowest. From a food safety perspective avocados were perceived as a low risk product due to a relatively minimal number of sprays being used and the fact that the skin is not eaten.

So why adopt quality assurance?

National market surveys indicated room for improvement in the quality of avocados available to consumers. Although not specifically implicated in these surveys, there was and is a continuing desire at Avowest to improve the quality of fruit delivered to the consumer. It was also hoped some gains in the efficiency of production could occur along the way.

The Avocado Growers Association of WA had established a generic SQF 2000 system for Hass avocados in July 1998. The intention was to use SQF 2000 as a model for individual growers to modify as appropriate for their requirements. There was, therefore, a framework available that could be readily modified.

There was a perception that quality assurance was becoming increasingly important to chain stores and would at some stage become a prerequisite for sales. Therefore, Avowest established an SQF 2000 quality assurance system in November 1998, with the assistance of Graham McAlpine (Agriculture WA). Avowest became the 393rd business to achieve SQF 2000 certification.

What is involved in Quality Assurance?

Many growers who are initially timid of quality assurance are pleasantly surprised to find that they are already carrying out many of the tasks required by SQF 2000.

What is fairly common is that the processes are not being recorded in the appropriate manner. SQF 2000 does increase the requirement for record keeping and this was achieved by adopting a two modular approach, production and packaging.

In the production module, the additional record keeping involved was especially noticeable. Six months down the track, the extra effort in keeping accurate records has already paid off. As an example, regular recording of pump station pressure enabled prompt diagnosis when a loss of pressure occurred. Regular monitoring and recording of soil moisture sensors has allowed identification of areas that were over- and under-watered.

In the packing area where record keeping and traceability were felt to be quite strong, auditing both by Avowest and the independent auditor revealed areas that could be improved.

For management at Avowest, the biggest gain of quality assurance is the certainty of regular audit. Once best practices for growing quality avocados were identified and regular record-keeping was in place, monitoring of pests, recording irrigation as a replacement of evaporation and so on, became a matter of course. There is not the temptation to take shortcuts, even when things are busy.

The monitoring and recording of these critical points stimulates thought on whether or not they are occurring effectively.

It is absolutely essential that the people who will be working with a quality assurance system are involved in setting it up by determining the best practices needed to produce your product. Your quality assurance system will then confirm that the practices you are carrying out are those you have identified as the best way to produce a product of consistent quality.

The experiences with SQF 2000 at Avowest have highlighted its usefulness as a management tool. It encourages staff to do what they know they should be doing because they were involved in defining best practice and critical points when the system was being set up.

It cannot be denied that setting up SQF 2000 costs time and money. A good quality assurance system should be much more than just a tool to market to chain stores. Avowest believes they have made some efficiency gains in production and packaging of avocados.

Alan Blight is manager of Avowest, a medium to large sized avocado orchard in Carabooda, north of Wanneroo, WA. The property has been producing avocados for about 15 years.

Alan is also principal of the consultancy AJ Horticulture. He can be contacted on mobile: 0417 179 127 for further information.

Clean And Safe Food A Major World Challenge

Rome-based David Byron is a Food Standards Officer for the UN's Food and Agriculture Organisation (FAO). Mr Byron was in Melbourne recently in preparation for a conference to help improve the world's food trade and standards.

Mr Byron said "one of the major issues the world faces in the near future is assuring access by all to adequate amounts of good quality and safe foods at affordable prices."

According to Mr Byron this will require better food production, storage,

preservation and marketing systems, as well as internationally adopted standards for food quality and safety.

This includes food hygiene, food borne diseases and emerging technologies such as biotechnology.

He says international agreement on food standards is the key to consumer protection, greater access to export markets, increased foreign exchange and food security

International Food Trade Beyond 2000: Science Based Decisions, Harmonisation,

Equivalence and Mutual Recognition, is being organised by FAO in Melbourne 11-15 October. It is first time the event has been held outside Rome.

Jointly hosted by the Victorian and Commonwealth Governments, the conference will also highlight the importance of trade issues ahead of new agriculture negotiations later this year under the World Trade Organisation.

Details on the conference are available at: <http://www.affa.gov.au/affa/events/fao.html>

Australian Round-up



West Moreton

Most growers are currently harvesting Hass with quality being quite good. The district has not had the rain that the coastal areas have had. In fact, since early March, the Lockyer Valley has had less than 120 mm so pest and disease control has been easier than on the coast. Prices seem to be firming in the markets which is good news for those with fruit left to pick.

I recently spent a day manning the Avocado stand organised by the Sunshine Coast Avocado Growers Association at the Brisbane show. The display didn't appeal to the judges; however it created a lot of interest with the public (consumers), which is the primary objective of the effort. The growers who man the stand are able to promote all aspects of our product to consumers or potential consumers although samples for tasting are not permitted.

I was pleasantly surprised by the high level of knowledge most consumers had with respect to fruit handling and storage and the nutritional value of avocado in the diet. The messages we have been incorporating in our promotions over recent years seem to be working. Many children were avid consumers although some refused to try let alone eat avocado. Hopefully with maturity will come a maturation in taste and a desire to try "new" things, including avocado. The ability of consumers to select good quality fruit at retail level remains the major challenge for the industry (all sectors) judging by the comments I received.

My congratulations to SCAGA and the growers who organised the display and to all those who manned the display over the 10 days. The show provides an excellent opportunity to showcase our product and talk to our consumers.

Sunshine Coast

There is one word on everybody's mind, rain, rain and more rain. There was a report on the local radio station this morning and it is official, this has been the wettest first six months of any year in twenty five years.

The excessive rain has brought with it many problems for horticulture and avocado has been no exception. A visit to orchards in the Sunshine Coast area has

disclosed widespread damage to tree health. Phytophthora root rot and asphyxiation due to water logging of the soil seem to be the main problems with tree health. Fruit quality has also suffered, and, in many instances, this has only become evident when the fruit reaches the retailer.

Growers would also be well advised to consider the effects of leaching of nutrients from the soil due to the heavy rainfall when setting their fertilizer program for the next year. The wise ones amongst us who have witnessed wet seasons before say that this will sort out the better avocado growing areas from the not so good ones. Little comfort when one sees one's own trees effected.

With compliance and production costs spiralling upwards, market prices tending downwards and the effects of adverse weather conditions, the area of control the grower has over the success of his/her crop is diminishing. However, farmers, being the eternal optimists, are already looking forward to a better season next year.

The first field day for this year was held during June at Kerry Smerdon's orchard in Glasshouse. Some ninety growers attended and, despite the weather, contributed largely to the day's success with their participation. We also express our appreciation to the staff at QDPI for their invaluable support in putting the day together.

Atherton Tableland

North Queensland flowering is well under way. Shepard orchards in the warmer areas have good early fruit set while Shepard growers in other areas are watching the thermometers and praying for those warm nights to return. Even some Hass growers are reporting good early set

After a larger than usual crop, in excess of 800,000 trays, and low prices, Tableland growers are looking forward to a reasonable season. The wetter than normal wet season has played havoc with a few trees.

New land valuations have caused an upset, in fact had farmers very angry, in the Mareeba Dimbulah Shires. In the Mareeba Dimbulah Irrigation Area, water allocations were included in the valuation for the first time. This saw some valuations rising by 1000%. All horticultural crops under the umbrella of Mareeba Fruit and Vegetables, the Tobacco, Sugar and North

Queensland Essential Oils industries, combined to form the Tableland Primary Industries Forum and hired an Independent Valuer. Armed with new information a meeting was convened with the Minister for Primary Industries. The result is new assessments have been issue in the Mareeba Dimbulah Irrigation Area minus water allocation. Tableland Primary Industries Forum spent in the vicinity of \$20,000 to fight this issue and have asked landholders to contribute \$100 per objection to help cover costs.

The next round of valuations will be released in October. As from this year, valuations will be on a yearly basis.

Bundaberg

Bundaberg and districts have all but finished harvest as of mid August. Trees are just beginning to flower as the new season begins.

Tamborine Mountain

This year has seen some changes take place with the format of our local meetings. Instead of the usual night time meetings we have been having meetings during the day and holding them at different members' farms. We hold a short meeting to dispense with the formalities. Then we usually have a guest speaker on any relevant subject followed by a farm walk. This format has proved very popular with our members, with over 50 people attending meetings.

One of the main issues brought up by our members is the main Industry problem of the quality of fruit presented to the consumer. After spending a morning at the Avocado Stand at the Brisbane Show again this year it was predictable the number of people who told us that they very rarely buy avocados anymore due to very bad quality.

Just think about this. If one of the major milk processors sold milk that was so bad that the consumer had to throw one bottle away in every three bought, how long would they survive in this competitive world? Looked at it in that light, our Industry is a joke because that is exactly what is happening in the avocado industry!

Back to the major milk processor. If they found they had this problem, they would employ an investigator and solve the problem within a month! Yet our Industry

WORLD NEWS

suggests it will take us two years to do a "report" on this problem. This would almost be laughable, if our income and future did not depend on consumer satisfaction.

Our members find this problem very distressing and worrying, so hopefully something can be done sooner rather than later.

A subcommittee of our LPA has been busy on land use and planning issues, the major ones being:

- Last year a consortium of conservation groups nearly persuaded the local government to stop rock moving on private land. This promptly united angry producers and as a result legislation has now been changed to permit any rock removal which could increase agricultural production.
- The problems of making a living from rural land in closely populated areas have been exacerbated by recently introduced planning controls. After much lobbying by producers we are now having constructive meetings with local and state governments about this issue, including, rights to farm and wider permitted land uses.

The LPA, with help from other producer groups in South East Queensland and from the QDPI, have recently applied for Federal funding for a study of 'Resource management strategies and land use options for rural land on Tamborine Mountain'. Results from such a study should be applicable over a much wider area than just Tamborine Mountain. We thank the QDPI and those groups who gave supporting letters.

Our area has just started picking now, due to the fact that markets have been over supplied so far this season. Flowering is looking very good for next season, so let's hope everything else will be very good as well.



South Australia

The growers in South Australia are into picking their Fuerte and mid-season avocados. The Fuerte crop seems to be light while the other varieties, mainly

Hass, have a medium to heavy crop, after two very light ones.

This winter up until the last week in July was mild with only a few light frosts in prone areas. During the last week in July, the district had widespread frosts with temperatures down to minus 7°C. We will

know in a few weeks how much damage was done to next year's crop.

At our AGM, Ross Richards retired from the position of president after many years of tireless effort and dedication to the avocado industry, both locally and nationally. Ross and Shirley's input into the many facets of the Association have been too numerous to be listed here. We thank Ross for his untiring effort over the years, it has been much appreciated.

The new committee is:

President	Colin Fechner
Secretary	Greg Liebig
Treasurer	Ted Angove
Committee Members	Kevin Heritage Richi Roberts

Guest speakers from Chiquita Brands in Adelaide spoke at the AGM on the continuing diversity of produce that they are handling. Graeme Chartres, in charge of avocados for Chiquita in Australia, spoke on trends in Avocado sales and quality aspects. He said that since selling ready to eat avocados in major supermarkets sales have increased 20-30% per year over the last 3 years.

In the Waikerie area there is a group of new growers who have planted avocados in recent years and are now meeting every month to pick the brains of the established growers. They meet from September through to March on or around the first Sunday of the month. They conduct an orchard walk then have a BYO BBQ accompanied by plenty of good fellowship as well as good cheer.

Any grower interested in attending these meetings should contact Colin Fechner on 08 8541 2819 for details of where and when.



NSW

After a disastrous start that saw greenskin growers with very low returns, the NSW season has moved on. Most growers are now well into their Hass crop and returns have been very encouraging.

Packing Facilities

Natures Fruit Company has opened a packing line at Halfway Creek in cooperation with Blueberry Farms Australia.

The packing facility gives growers in the Coffs Harbour area and south to Stuarts Point and Comboyne the opportunity to

cease their own packing, free up labour and consign fruit to a packhouse.

Quite a number of local growers have taken this course of action and have joined the Natures Fruit Company. They will find it a bit of a culture shock to find they have to accept the quality standards that are part and parcel of the packhouse operation. However, they will soon adjust and realise the benefits to themselves and the industry as a whole to have these standards applied consistently.

AAGF Meeting

This year, the Annual General Meeting of the AAGF will be held at Coffs Harbour (see Box page 4).

This move reflects the readiness of the AAGF to get more growers involved with the industry. By having the meeting in NSW more growers are able to attend and participate. Last year the AGM was held on the Sunshine Coast.

Please note the date—21 September—and come along and see your AAGF at work. It is an ideal opportunity to mix and talk informally with all Directors; they are interested in your point of view. From a NSW perspective, it is important that a significant number of local growers attend and that growers from the north of the State make the effort to come to Coffs.

Plan ahead and put the time aside, let NSW show the flag by having a good attendance.

NSW Field Day

An enthusiastic group of 90 farmers from Mt Tamborine, SE Queensland, Gosford, Carnarvon, Mildura and Northern NSW attended a Field Day on Friday 14 May at Ballina and Alstonville. The day was organised by the Richmond, Brunswick and Tweed Branches of the NSW Avocado Association.

The morning session was held at Ballina RSL with invited speakers highlighting 'Nutrition and Growth Regulation.'

The afternoon session was held at Alan and Gina Hartley's property, Lindendale, with demonstrations on:

- a. Canopy Management
- b. Mulching - using a Mulslasher
- c. Farming for the Future

Copies of the above presentations will be printed progressively in this magazine. The day was capped off by a well attended dinner at the Ballina RSL with guest speaker, Jonathan Cutting, presenting his topic: 'Marketing - The NZ Approach'.



Industry Manager's say

By Wayne Prowse



Quality is always a hot issue

After a difficult start to the year it is good to hear comments that avocados have good quality and are now selling well at reasonable prices.

Yet I believe that quality is still our major impediment to stronger year round sales performance as consumers are not always confident in selecting avocados.

Next month, our merchandising team will be calling on 600 retail outlets to assess the quality of avocados in stores as well as inform retail staff on tips to present better quality avocados to consumers. It is amazing just how many retailers keep "dead" avocados on display hoping that they can still earn their 99¢ and let the consumer throw it out (and not buy more for a while).

During the retail visits our merchandisers will be cutting at least two avocados of reasonable appearance (what a consumer would be expected to buy) in each store to monitor the internal quality. Whilst it is easy to pay attention to external quality **it is the flesh inside**, not the skin or the shape that the consumer is really buying.

The information generated from the merchandising exercise will be fed into a new quality assessment R&D project. It is a good example of the way in which the marketing programs are correlating with the R&D programs.

Market Research

Last year 46% of all households in Australia purchased avocados at least once according to AC Nielsen research. That sounds reasonable until we look more closely at the figures. Only about 18% of households purchased in any one month and in fact, only 18% of households purchased avocados more than 6 times in the year. This implies that avocados are still very much an occasional purchase even though we are selling many more now than we were ten years ago.

With occasional purchases the consumers see avocados as a special treat and often bought to please guests. When avocados

deliver rich creamy flesh, clear of defects and just ripe for enjoying, it is easy to forget what price was paid. This is the product expectation that we need to strive to deliver.

To further enhance our knowledge of consumer perceptions of avocados that will assist us with advertising strategies we are proposing more extensive qualitative market research to build on the similar research conducted in 1996.

If accepted, this research may be conducted in the November period when there is the best chance that avocados will be top of mind and will be used to help direct both generic (AHC funded) and branded (marketing groups) promotions in 2000 and beyond.

Your Levy at Work

Marketing Levy Receipts for 1998-99 were \$566,000, a 6% increase on last year's \$533,000. As levies are production based this increase also represents a production growth of 6% to 22,500 tonnes.

This indicates that production is growing strongly as predicted and marketing programs needed to generate stronger demand should be viewed as a valuable investment. Product quality as discussed is paramount if we want consumers to keep buying more. Certainly our market research suggests that we are a long way from saturating the market yet.

In store Promotions

In-store promotions have been active in NSW, Queensland and Victoria during August and will continue through November to promote avocados during the peak of the season. SA and WA are due to commence in store promotions in September.

In addition to our specific industry program, we are also working cooperatively with Coles and Woolworths to extend our promotional funds. Coles are planning a national activity in October and Woolworths will conduct a national avocados and salad promotion in November. In these promotions the retailers contribute funds and extend the value of our promotions much further.

Point of Sale

Our popular "Avocados Really make a meal unique" leaflet has been reprinted

and will be used nationally through retail stores.

We are also developing some extra material designed to bring attention to the damaging effects of "squeezing" avocados to see if they are ripe and also to the difference between Hass and greenskins. Many consumers still wait for greenskin avocados to change colour like Hass before eating. You can imagine the outcome!

Public Relations

The highlight of the Public Relations program this quarter was a national media tour to Alstonville NSW. Food writers visited an avocado orchard and packing line and heard first hand from growers including AAGF president, Rod Dalton, about the developments of the industry.

At a showcase dinner combined with the Macadamia industry, guest speaker Dr Ross Walker, a practising cardiologist, addressed the media informatively on his latest research into reducing the risk of heart disease and how the oils in avocados and macadamias play a significant role.

Avocados are also involved in the Folate awareness program being coordinated by the Australian and New Zealand Food Authority (ANZFA). This is raising the awareness of the importance of folate in diets and Avocados is a valuable source of folate.

We have retained the services of Catherine Saxelby as our consultant nutritionist. Catherine's popularity in the field has helped generate some excellent interviews to expound the nutrition benefits of avocados. In addition Catherine has supported avocados regularly in her weekly newspaper columns.

Advertising

We have three more insertions of our magazine advertising this season including a full page advertorial in the Super Food Ideas magazine that has a reach of over 400,000 through super markets.

We are also advertising in the new editions of "Baby Care" and "Pregnancy" annuals that reach 95% of new mothers each year. This is a great way to promote the benefits of avocados to mothers and their infants.



Finally we are also advertising in the Heart Smart Journal that reaches over 100,000 heart patients each year with a full page on avocados in advertorial style to discuss the health benefits of avocados.

Market Research

As mentioned earlier we are continuing with AC Nielsen data that is reporting the market penetration, consumption and demographics of avocado buyers. As we now

have 12 months data the 1999-2000 data will start to compare information with the same period last year. This will be valuable in measuring the effectiveness of overall promotion activities.

An Appeal To All Avocado Packers Date Stamp Cartons

A New Research Project

After months in the making, at last a very important project designed to reduce avocado defects at retail level is about to get under way.

Our research team, led by Dr Peter Hofman, will be sampling avocados for defects at the retail level, identifying defects, then tracing the history of how the fruit has been treated in the chain; i.e. grower - packer - transporter - wholesaler - ripener -

retailer. QA records will be used to pinpoint the causes of deterioration.

Obviously the success of this project is dependent on good Quality Assurance records at every level. The most critical of all will be **PACKING DATES OR CODES ON EVERY CARTON.**

We are seeking the cooperation of all packers to date stamp packing dates or codes on their product.

If your product is sampled during the project (and is date identifiable) you will be informed in confidence of the out turn of your fruit.

No specific dates have been set for the surveys at this stage. In the event that the technique proves effective, it is envisaged that surveys will be an ongoing exercise particularly during periods of heavy supply in the markets.



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Palmwoods South East Queensland, November 1998

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Digital Plant Doctor Diagnoses Plant Problems

By Erica Pitman, from the University of Florida Web Site, Gainesville Florida

A picture may be worth more than a thousand words

University of Florida specialists have developed a new system that uses digital cameras and the World Wide Web to send photographs of insects and diseased plants from the field to the lab for rapid diagnosis and identification.

Researchers, extension agents and software developers with University of Florida's (UF) Institute of Food and Agricultural Sciences developed the Distance Diagnostics and Identification System, or DDIS, to speed up identification of plant and animal physiological disorders. Until now, reliable diagnosis meant mailing plant material to UF labs, which often caused costly delays.

Why a new scheme?

"Basically, what we're doing is crunching down to zero the time needed to communicate with each other," said Fedro Zazueta, director of information technologies for UF. "The benefits will reach from consumers and homeowners all the way to commercial growers, where diseases can cost tens of thousands of dollars."

According to UF software developer Jiannong Xin, the DDIS also is a perfect example of university research responding to the concerns of Florida residents. "While many projects are initiated by software developers, this one was initiated by county extension agents who came to us with what they needed," said Xin.

What started the ball rolling?

In fact, the development of the DDIS started with a strange plant in a Monticello homeowner's backyard. When Pat Murphy had an allergic reaction to some vines he was trimming, he called Jefferson County Extension Director Larry Halsey to verify they were indeed what was causing him to swell up.

Unable to find an answer in any of Florida's poisonous plant guides, Halsey

snapped some digital photos of the plant, loaded them onto his computer, and e-mailed them as attachments to specialists in the herbarium at UF's Florida Museum of Natural History. When, only 40 minutes later, he got a positive identification back from botanist Kent Perkins, Halsey knew he was onto something.

"Ordinarily, it takes at least two days to get a response back on a sample that's been mailed out for diagnosis," said Halsey. "In this case, the turnaround time was reduced from a matter of days to a matter of minutes."

From small beginnings

Halsey and Madison County extension agent Jim Fletcher began snapping and e-mailing digital images on a regular basis hoping to build a system for distance plant disease diagnosis. Eventually, they realised a more effective way of developing the system would be to move it to the Web.

"We decided we needed to convert the e-mail project because of the large amount of time and memory it takes to send and store images over e-mail," said Fletcher. "The Web-based DDIS program compresses the images even further than e-mail and sends them in about half the time."

Development

When they asked Xin to develop software for the project, they found that the capabilities of the DDIS could be expanded well beyond what they had originally imagined. Xin built the program around an object-searchable database, which makes it possible to store images in a centralised archive shared by UF extension agents and specialists.

Developed by software specialist Howard Beck, the database is searchable through a broad range of categories such as individual diseases, crops, counties or symptoms. Because the archive is accessible through the Web, the images will be

easy to pull off for a wide range of instructional purposes.

Benefits

"If you can take a picture of it, you can send it to the archive," said Halsey. "For instance, we've successfully identified a strange jellyfish-like critter in a catfish pond that turned out to be an invasive colony."

Not only does the system reduce the problem of having mailed samples get held up over the weekend, according to Halsey it allows for much more flexible communication between extension agents and specialists.

"When you talk about symptoms in a crop such as discoloured foliage or leaf spots, the reason could be diseases, nutritional deficiencies or excesses, or environmental stress. Now, extension agents can get a sample to specialists in all three categories at once." While the DDIS may not rule out the necessity of sending physical samples in every case, its archive eventually will become a powerful educational tool for extension agents.

Training and Availability

"We're working on training county faculty in the basics of plant pathogens and insect identification," said UF entomologist Dick Sprenkle. "The archive will give them a wealth of knowledge that can eventually be used to diagnose a problem on-site."

The DDIS is now available at extension officer's agencies throughout Florida. Currently, agents in ten counties are testing the next phase of the project, which will equip county agents with digital stereoscopes and microscopes to produce more accurate, detailed images for Diagnosis.



The article on this page is sponsored by HRDC and the avocado industry.

Calavo's Avocado Crop Estimate and Outlook for 1999

US company Calavo's crop estimate for 1998-99 was set originally at 75.3 million pounds, of which Hass was 65 million, Fuerte was 1.9 million, Bacon was 5.7 million, and "others" were 2.7 million pounds. Last December's winds and freeze took their toll, reducing the estimated crop to what we now believe will be 66.7 million pounds. Hass took the greatest hit, reducing its estimate to 58.1 million pounds, and Bacon down to 4.5 million pounds.

The impact of the freeze can still be seen in the trees—bronzing began to appear on fruit and frost-affected stems continue to cause "chill drop". Growers are cautioned

to watch for brown stems on fruit. As the weather warms, these stems will weaken and break and fruit will also begin to separate from the stem and drop to the ground.

Scirtothrips still remain the primary reason for low crops this year, and reduced estimates as the year progresses. Their effect is two-fold: first, it has caused a dramatic increase in "standard" grade fruit, and second, it has caused a lack of size in much of the fruit.

It is felt in the industry that the original estimate published by CAC has been reduced by 10% or 27 million pounds. The opening industry estimate for the year by

CAC was set at 271.5 million pounds. Hass again has sustained the greatest reduction leading the overall reduction in crop to 244.5 million pounds with 30 million having been delivered through 23 January. The balance remaining at this time would be approximately 214 million pounds. This would substantiate a good, solid market for the balance of the year—for those having fruit.

Could there be additional losses? When these estimates were made, there was still a lot of winter left, and wind and freeze could again take a toll.

California Avocado Sales Maximised with RipeMax!

From Californian Avocado Commission Web Site

The Californian Avocado Commission (CAC) has launched its RipeMax! merchandising program that will help retailers meet the changing needs of today's consumer while they maximise avocado sales and profits.

"More than 35 million consumers now buy ripe and unripe avocados," said Robert Verloop, CAC Vice President. "Approximately 43% purchase ripe avocados to enjoy immediately and 38% purchase unripe to enjoy later in the week. Demand is high for both levels of ripeness and will continue to increase with the right displays and merchandising support."

"RipeMax! helps retailers capitalise on this enormous opportunity by encouraging them to display 1/3 ripe, 1/3 breakers and 1/3 firm preconditioned fruit to attract more customers," said Verloop. "CAC executed RipeMax! based on the input and ideas from several successful produce managers. Our produce managers say that the 1/3 concept will help with proper display rotation and will help consumers select the fruit according to their needs. It's a strategically-sound program that allows for various degrees of ripeness and reduces the bruising that can occur from consumer handling."

According to Verloop, retailers should display ripe fruit with ripe stickers on top

to attract more customers. The second layer of the display should consist of breaking avocados ready for consumption in several days. The bottom of the display should deliver firm preconditioned fruit that will soften over 3-5 days. This bottom layer of fruit will rotate to the top of the display for optimum results. To best accomplish this rotation system, chains are shipping two types of avocados to stores—ripe fruit and preconditioned fruit.

According to Verloop, retailers can obtain a special RipeMax! merchandising kit to help them get started on a RipeMax! program. The kit will include a retail audit scan to track display conditions, handling guides, POS materials, ripe stickers, web-site training materials, ripe incentives and more.

In addition, Verloop and CAC's Marketing Directors will work directly in the field on an account-by-account basis, providing retailers with technical assistance and themed merchandising programs to promote the three levels of ripeness for maximum sales and profits. Several targeted markets will also receive help with customised promotions, display contests, staff training and other programs that meet their specific needs.

Ideas

Some innovations adopted overseas could be of benefit to Australian horticulture but it is up to you the grower to request that steps be taken to introduce them in Australia. Those with the power to act are not mind readers.

For instance, the idea of an identification scheme using the Internet must appeal to many growers. Ever had a weed, insect or strange looking leaf that you were not sure of and can't get hold of a field officer for identification?

Quick identification and a shortage of departmental field officers are two good reasons for the adoption of a system as mentioned on the previous page. Its implementation would allow field officers to get on with other important work.

The computer software is available in Florida and could be used in Australia if the will to introduce such a system existed. *Ed*



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The South African Avocado Industry

By Gerard McEvilly, HRDC

"The South African avocado industry, though much larger than Australia's, faces many similar technical challenges. Highly focussed on exports, it is committed to a coordinated effort both in R&D and marketing. This is underpinned by a well-resourced national industry organisation."

These were my impressions after a short visit to the South African Avocado Growers Association (SAAGA) in May. I was invited by the HRDC Board to join a small group of citrus growers on a study



export. Similar, but larger, trays are also used for citrus to Europe.



Chris Keevy (right) and Gerard McEvilly outside the SAAGA offices in Tzaneen.

tour of the citrus industry in South Africa and arranged a couple of days in avocado country around Tzaneen, in the subtropical north. This is part of an effort by HRDC to improve links with overseas research agencies and industries.

Most of the horticultural industries in Australia are small on a world scale and we cannot afford to work in isolation. HRDC is keen to underpin the strong links already established by some researchers with their overseas counterparts.

In a short visit one can only pick up general impressions and so I am including these in note form. In the next page there is a comparison table between the industries in the two countries, similar to the ones previously prepared for New Zealand and California. By understanding more about how the industry and R&D programs are structured in other countries, we can hopefully avoid reinventing the wheel.

General

- SAAGA represents the majority of growers, with voluntary membership and levies. Executive Director is Chris Keevy. Funding of 500,000 Rand (AS125,000) is provided for R&D, with a similar amount contributed by the research agency. SAAGA employs 9 staff including two extension officers and an overseas officer who does QA checks on exports to Western Europe and the UK.

- Production is between 65,000 t and 100,000 t p.a., depending on whether it is an 'on' or an 'off' season. Production is expected to increase over the next 5 years due to new plantings and improved orchard management techniques.

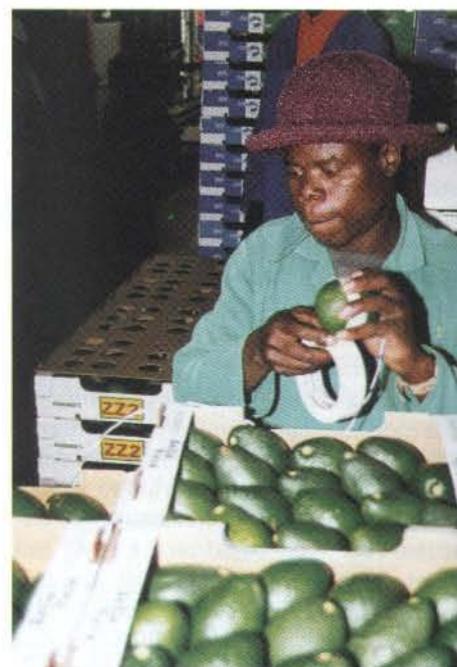
- The focus is on export marketing. After poor prices in 1998, the industry is facing short supply in 1999. High quality promotional material is produced, focussing on "Summer Avocados" for the UK market.

This includes nutritional information emphasising health benefits. The domestic market for avocados prefers greenskins, but some promotion of Hass is underway.

Two major growers were visited, Westfalia and ZZ2.

- Westfalia includes properties on the high-rainfall Eastern side of the range as well as on the dry western side at Mooketsi which sits in the rain shadow. Westfalia has a strong focus on organic production, with nutrients provided by Kraal manure—from cattle brought in at night.
- ZZ2 is a major horticultural operation with numerous properties covering 85,000ha with 180 technical/trades staff and some 7,500 labourers. The main horticultural crop is tomatoes for the domestic market, but ZZ2 is now a major avocado producer. ZZ2 operates a market selling out of grade fruit in bulk to street hawkers. This product, previously dumped, provides useful

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Thermocouple being taped inside an avocado ready for shipment to Europe.



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Avocado Industry Comparison Australia And South Africa

	AUSTRALIA	SOUTH AFRICA
Funding	<ul style="list-style-type: none"> Statutory national levy of 8¢/tray (\$13.33/tonne) for R&D. Also 16¢ promotion levy of which 10% goes to the AAGF national body. State/local associations are supported by subscriptions or State levies. R&D funds matched through HRDC, providing \$300,000 in 96-97, \$500,000 in 99-2000. 	<ul style="list-style-type: none"> Voluntary levy of 30¢/tray exported, and 1.5% of gross price on the fresh produce markets, covers costs of SAAGA also promotion and R&D in South Africa. An additional 20¢/tray exported paid by SAAGA members for export market development. R&D funding of 500,000 Rand, matched by government through the Agricultural Research Council (ARC). Additional government funding available for industry-funded research at Universities.
R&D Planning Management Priorities	<ul style="list-style-type: none"> AAGF Strategic Plan 96-2000, R,D&E plan 96-2000 (audited each 2 years, reviewed each 4 years). Gerard McEvelly part time Program Manager through HRDC, plus other HRDC input. AAGF R,D&E committee chaired by George Green. Secretariat Astrid Kennedy. Current priorities on-farm includes prevention of postharvest rots. Major past investment in tech transfer through AVOMAN. Improved quality of ripe fruit is future priority. Consider concept proposals, but mainly advertised/targeted commissioning. 	<ul style="list-style-type: none"> No R&D plan available. Derek Donkin, SAAGA Technical Manager, plus input from Dr Lindsey Milne & SAAGA Technical Committee. Several R&D committees consisting of researchers and growers and addressing different issues report to SAAGA Board. Current priorities on-farm include canopy management. Previous breeding program under Hannes Breedt of ARC has been rationalised.
Research Base strengths Gaps Resources	<ul style="list-style-type: none"> QDPI contains majority of avocado technical R&D expertise. Full use not yet made of other agencies covering technical and other R&D. Development of young researchers is left to agencies. Current strengths in physiology/agronomy, postharvest and pathology. Weaknesses in industry statistics/forecasting. 	<ul style="list-style-type: none"> Technical expertise is provided by ARC through the Institute for Tropical and Subtropical Crops at Nelspruit and by Merensky Technological Services at Westfalia Estates, near Tzaneen. (Dr Stefan Köhne, Manager R&D). Also through University of Natal at Pietermaritzburg, with Dr John Bower now the Professor of Horticulture. Strengths in canopy management, postharvest handling, packaging. The University of Pretoria has also made valuable technical inputs.
Market Focus	<ul style="list-style-type: none"> Primarily domestic, where usage is low. 	<ul style="list-style-type: none"> Primarily export to UK and France by sea freight in refrigerated containers.
Industry snapshot	<ul style="list-style-type: none"> 20,000t 3.5m trays valued at A\$50m. 740,000 trees. 1300 growers. 	<ul style="list-style-type: none"> 1998: 100,000 t, of which 51,000 t exported. Main production areas in Northern Province, Mpumalanga (sub-tropical, high rainfall) and KwaZulu-Natal. Total plantings have increased by 10% in past 4 years to a total of 12,500 ha. Industry output expected to increase over next 5 years as new plantings come into production and higher yields are realised due to improved canopy management.
Varieties Rootstocks	<ul style="list-style-type: none"> Primarily Hass on seedling rootstocks. Nursery accreditation scheme is operating (ANVAS). 	<ul style="list-style-type: none"> Hass and Fuerte. Also Pinkerton, Edranol, Ryan. Rootstocks predominantly Duke 7.
Information management	<ul style="list-style-type: none"> Talking Avocados (quarterly). AVOMAN and AVOINFO. Agrilink. Regional productivity groups. Biennial conference. Occasional field days. 	<ul style="list-style-type: none"> SA Avocado Yearbook. Monthly newsletter. Two extension officers employed by SAAGA. SAAGA website: www.avocado.co.za

income while enabling the poorer sectors of the community to access fresh produce.

R&D Issues

Derek Donkin is the Technical Manager, while Lindsay Milne also assists in the technical management of the R&D program.

- Much current research is focussed on Pinkerton issues, as well as other Hass-like cultivars. Work is also being done on rootstocks and interstocks.
- Specific local pest and disease issues are also under investigation. So far the hoped-for biological control for anthracnose has not been commercialised.

Production Issues

- Cercospora has caused major losses this season, with higher than normal rainfall of 1200mm.
- Rootstock trials have been established by Sylvie Köhne of Merensky Technological Services, the R&D subsidiary of the Hans Merensky Foundation, which also includes the Westfalia Estates. These include Duke 7, Thomas, Velvick, Merensky selections and Israeli selections. The main focus is on phytophthora tolerance.
- Topworking to alternative avocado varieties has proven highly successful, but requires careful management and attention to detail.

Canopy Management

- There are many farms with overgrown trees that are forming closed canopies and extremely difficult to manage. Trials are being run with these growers to bring the canopies under control.

- Trials at ARC Burgershall are focusing on tree spacing/canopy management, including some trellising trials.
- Sunny is now used routinely by the South African avocado industry, with a typical rate being 10 L/ha (trials are underway as part of our R&D program, with financial support from the manufacturer).
- ZZ2 farm manager, Soekie Espach, demonstrated his canopy management. Israeli consultants provided advice on this technique. A program is underway to hedge the trees in stages with sloping sides and a height to 80% of row width. The program is well-advanced with Fuerte. Hass responds with more water shoots requiring follow-up hand thinning. Yields up to 20 t/ha were reported.
- Dr Piet Stassen of ARC is applying principles of temperate fruit production to tropical fruit crops in order to increase yields and manage canopies. He states that average avocado yield of 5-8 t/ha compares poorly with highest yields of 18-20 t. Mangoes under experimental conditions have yielded up to 40 t/ha.

Scion Varieties

- Primary varieties are Fuerte and Hass. Some Lamb Hass and Westfalia Hass are also being used.
- A Workshop is to be held to address problems with Pinkerton (can be highly productive, but extremely variable in fruit quality).

Postharvest Issues

- South Africa uses 4 kg open tray packaging on a pallet sized to fit sea containers. Pallets are modified to provide extra support to the trays.
- A thermocouple is inserted into a fruit in the centre of each pallet for temperature recording during shipment.

- QA/HACCP is a major issue for packers, with UK supermarkets setting stringent standards. There is some frustration with the increasingly tight standards and the plethora of quality systems. (Sound familiar? Fortunately our Approved Supplier Program is a big step to addressing this issue for growers in Australia—see previous TA.)
- Feedback on out-turn is provided by overseas officer during export season May-September
- One large enterprise has developed technology to test avocado firmness for domestic sales of “Ripe for Tonight”, but little information was available.

Other Crops

- Mangoes are also a major export crop at Westfalia, with varieties including Heidi, Keitt and Kent.
- Large plantings of macadamias are being established in the region.

Conclusion

In conclusion, I would recommend Australian growers have a look at the South African industry, especially those who combine avocados with citrus, mangoes or other crops. Having read much about South Africa’s horticultural industry, this was no substitute for seeing it with my own eyes.

A few overall impressions for those who may be tempted. The South Africans were extremely hospitable and welcoming to visitors. However, there are serious security problems in the country, so sensible precautions are required. Travel costs can be minimised by staying in Bed and Breakfast accommodation in guest houses. The low value of the South African Rand also reduces costs. Main highways and the mobile phone network are first-class, but some back roads and land-lines may be less so.

My visit was funded by HRDC and I acknowledge the help and advice of Jan Toerien and Tony Whiley in Australia and Chris Keevy and Derek Donkin of SAAGA in South Africa and the assistance of the growers and researchers with whom I spent time.

Please contact me if you wish to follow up on any of the above information on phone: 02 9418 2200, fax: 02 9418 1352 or e-mail: mcevilly@hrdc.gov.au

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HRDC Avocado Research Projects 1998-99

Key Outputs and Outcomes, 1998-99 R&D Program

- Access to information on better farm management practices improved through the release of the AVOMAN and AVOINFO computer software products.
- Spray application procedures improved through completion of "hands-on" grower workshops in major growing regions.
- Appropriate and minimally disruptive control strategies identified for fruit spotting bug as a result of completed investigations into seasonal factors, high-risk orchard types and potential "hotspots".
- Effects of root rot infection and fruit mineral levels on postharvest disease and fruit quality established from trials which tested and compared fruit from orchards with differing disease levels.
- Promising new orchard treatment for anthracnose control identified as a result of field screening trials of fungicides.
- Effect of foliar-applied and trunk-injected phosphonate determined as a control for anthracnose and stem-end-rot.
- Literature review and experimental plan used to progress avocado irrigation experiments.

Ongoing Activities

Area of Activity	Objective/Market Issue	Key Outputs /Target Dates	Intended Outcomes
PRODUCT DEVELOPMENT	Varietal improvement To meet consumer needs by harnessing the potential of improved rootstocks to achieve gains in productivity and fruit quality.	Establishment of rootstock trials as part of canopy management project (Dec 1999).	Improved fruit quality through the availability of high-quality rootstocks which will boost productivity, disease resistance, dwarfing and uniformity.
PRODUCTION	Production efficiency To produce fruit that meets market requirements through an improved understanding of the impact of orchard practices on fruit quality.	Recommendations on canopy management practices (Mar 2000). Postgraduate thesis, industry articles and decision tools suitable for AVOMAN specifying the stages of development that are most sensitive to water deficits (Mar 2001).	Improved productivity, pest and disease management and fruit quality resulting from better practices. Improved water use efficiency, productivity and fruit quality.
	Natural resource management To meet market needs for high quality fruit, free from disease and pest damage, with minimal pesticide use.	Identification of the optimum mineral content of avocado fruit (<i>project to be initiated</i>). Recommendations for maintaining critical concentrations of phosphonate for control of phytophthora (Dec 2000). Data to enable the registration of alternatives to endosulfan for the control of fruit spotting bug (Sep 2000). Recommendations on tree management practices including fungicide use to minimise anthracnose disease (Mar 2001). Recommendations on monitoring and control of garden weevil and fruit borer (Sep 1999).	Ability to optimise fruit size, yield and quality through management of tree nutrition. Improved management of phytophthora root rot through availability of efficient, cost-effective and registered control methods. Improved fruit spotting bug control through use of integrated control strategies which minimise disruption to beneficial orchard organisms. Improved avocado quality in the marketplace through adoption of a package of measures to manage postharvest diseases. Improved productivity through the use of effective control strategies that minimise disruption to Integrated Pest Management practices.
INDUSTRY DEVELOPMENT SERVICES	Dissemination and adoption of R&D outcomes To improve industry competitiveness by providing information on better practices arising from the R&D program.	Regular updates on the R&D program, AVOMAN, and other technical issues, through "Talking Avocados" (Jun 2000).	Greater access to information on better practices for all avocado growers.
PRODUCT TO END USER	Quality supply systems To meet consumer requirements by optimising fruit handling practices.	Program established to reduce avocado defects in retail outlets (<i>to be commissioned</i>).	A demonstrated improvement in the internal quality of avocados at retail level.



AVOMAN Web site now on line!

The first version of an AVOMAN web site is now up and running. It is part of the Queensland DPI site and can be accessed at: <http://www.dpi.qld.gov.au/avoman>

As well as providing information about the AVOMAN and AVOINFO software to potential new users, the site is also designed to be a handy facility for existing users and also contains a link to the newly formed AUSSIE AVO-NET discussion group.

The web site features a "notice board" where users can get up-to-date news about the software, and details about upcoming field days and meetings. It contains a handy method of e-mailing a message or enquiry to the AVOMAN team in

Nambour and it lists Australian avocado industry contacts, such as current AAGF office bearers and local avocado growers associations. Back copies of the AVOMAN Newsletters can be accessed and order forms for the AVOMAN and AVOINFO software are provided.

There is an explanation of what a "discussion group" is and a link to the newly established AUSSIE AVO-NET discussion group. The AVOMAN team has established AUSSIE AVO-NET in conjunction with the Queensland Department of Primary Industries Web Services and it is another way for growers and others to communicate with each other on matters

avocado and perhaps help beat the "tyranny of distance"!

Simple and basic in design the web site is not littered with pictures that take forever to download, but aims to be functional in design and will be developed as required to meet the needs of the project and its users. It may become part of a much larger Australian avocado industry web site in the future.

We invite you to visit the site and send us your comments and suggestions via the e-mail facility within the site. We also invite you to give the AVO-NET discussion group a try, discussion groups are only as good as the questions and answers that are sent.

AVOMAN Software Wins Award At Sydney's Royal Easter Show

In Australia's premier agricultural software competition the AVOMAN software was awarded 3rd prize in the Integrated/Whole Farm Management category against stiff competition from commercial companies and seasoned exhibitors. The photo on the front cover of this magazine shows

Shane Mulo, Christine Bezzina and Simon Newett receiving their 3rd place award.

Project leader Simon Newett commented: "First prize would have been better, but when you consider we were competing against commercial companies that have been in the game for many years we did pretty well. I suspected competition was going to be tough when a team of exhibitors turned up in a stretch limousine!"

The competition involved demonstrating the program to a panel of judges for one hour. "It was a good opportunity to have our product compared with others in the game, and encouraging to know it is up there amongst the leaders" he said.

AVOMAN is a feature packed avocado orchard management package that has achieved widespread adoption throughout Australia (over 180 copies) and interest from overseas. The project's sister program, AVOINFO, was entered in the Information category and attracted very favourable comments but it was the sophisticated Internet applications that won the prizes.

AVOINFO is an avocado reference database that contains more than 4000 avocado related references drawn from 85 years of material published from around the world. Over 150 copies have been sold in Australia and overseas.

The project that produced the software packages was an initiative of QHI staff at the Maroochy Research Station and the project team consisted of QDPI staff from Nambour, Mareeba, Bundaberg and Brisbane, NSW Agriculture staff from Alstonville and Coffs Harbour, an Agriculture WA officer in Bunbury and Piccone Horticultural Consultancy. It was funded by the Australian Avocado Growers' Association and the HRDC.



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Fruit Spotting Bug Report

By Dr Shaun Hood and Russell Parker, Queensland Horticultural Institute

In this report we discuss the results of the survey sent out with the last progress report. We look at just how difficult it is to identify spotting bug damage and finally, we give you the latest on pheromones; it doesn't appear to sound as good as it smells!

Progress Report Survey Results

Thank you to everyone who returned the Progress Report Survey. Of the 100 posted we received an impressive 63 responses.

The progress reports are now sent to over 130 individuals and are re-printed in various industry newsletters. This means over 2185 people get regular project updates!

The feedback we received was very positive and encouraging. It looks like almost everyone was happy with the content and the length, so things will stay much the same. The following summary will give you an idea of what most people had to say:

- 55 said they read the report from cover to cover.
- 51 said it was easy to read
- 38 said it was interesting
- 44 said the length was just right

When our readers were asked what they would like more information on, the following topics attracted a reasonable amount of attention:

- 52 said natural enemies and their potential
- 44 said host plants of fruitspotting bugs
- 31 said monitoring and damage assessment
- 31 said high risk orchard types and "hot spots"
- 26 said chemical registrations and permit applications
- 18 said photographs of the bug and its damage

In future Progress Reports we plan to follow up on the requests for further information. In response to public demand we have prepared the following article on "Natural enemies and their potential", we hope this will answer a question or two.

Natural enemies and their potential

Natural enemies like parasitoids, predators and pathogens are some of the agents commonly used in biological control; if they are successful they will suppress the pest population and make it less damaging.

Unfortunately, although Spotting Bugs have a number of natural enemies most are thought to have little impact on the population dynamics of the pest. Ants, spiders and assassin bugs are among some of the more important Spotting Bug predators. These predators are all generalists and will feed on anything within reach when they are hungry.

Although we can't be certain, we suspect large armour-plated adult spotting bugs are probably hard work and not all that high on the list of favourite menu items. The softer colourful nymphs on the other hand, may well be a lot easier to find and a little easier to consume.

Parasitoids on the other hand have the potential to be a little more effective. Some parasitoids are quite specific, targeting just one or two hosts. Others attack the eggs and are able to eliminate the pest before it reaches the damaging stage. Harry Fay and Stef De Faveri recently completed a project titled "Egg parasitoids of fruitspotting bugs (*Amblypelta* spp.): Potential for their mass-rearing and strategic release". The report identified three egg parasitoids of the banana-spotting bug, *Amblypelta lutescens*.

In a series of glasshouse experiments, *Anastatus* sp. was found to be the most effective, parasitising up to 84% of experimental bug eggs. Increasing the number of

bug eggs, releasing larger numbers of *Anastatus* sp. or caging adult bugs in the vicinity of the deployed eggs enhanced parasitism levels. Small-scale field releases of *Anastatus* sp. resulted in negligible parasitism, however when pairs of adult bugs were confined with the deployed bug eggs, parasitism levels varied between 22% and 50%. This suggests the parasitoids may be attracted to the pheromones produced by the adult bugs (they are not the only ones!). Harry and Stef concluded that the potential

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We need your help!

Last season we asked you to help us catch some bugs. Thanks to you we managed to collect a massive 1,190 spotting bugs. The same deal applies this season. If you would like to donate some bugs to science we would be more than happy to take them off your hands. We need around 1000 bugs! We are also interested to know on what host plants you collect them

If you collect even one bug and we get it with all six legs attached, we'll give you a certificate and add your name to the "Spotting Bug Hall of Fame".

PS: Crispy critters collected after endosulfan sprays don't count!



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of *Anastatus* sp. was probably dependent on the number released. In China they release approximately 600 *Anastatus* sp. per lychee tree to achieve maximum parasitism rates. Harry and Stef only released 50 in their study.

Before *Anastatus* sp. can be utilised as a control agent or integrated into existing control systems more research is required to overcome the problems associated with mass rearing. Massive numbers would be required to have any impact on spotting bug populations that fly into the orchard from nearby natural breeding areas.

What have we been up to since the last report?

We have had a project review. When the spotting bug project was initiated back in 1997, the organising committee decided the project should be reviewed. This review was held on 17 of August at the Alstonville office of the New South Wales Department of Agriculture, and was facilitated by Mark Smith (HRDC entomologist). It gave the Spotting Bug Team an opportunity to get together with industry representatives and consultants to discuss the work that had been done in the past couple of years. It also gave us the opportunity to discuss our plans for the next project.

We have been working on our website: [Http://www.dpi.qld.gov.au/qhi/fsb](http://www.dpi.qld.gov.au/qhi/fsb) The spotting bug project website continues to develop with more spotting bug news and information. The DPI is currently moving over to a new and improved website setup, so now we will be able to add a lot more features to the spotting bug pages. Lots of plans are in progress—identification guides for various insect pests, including spotting bugs, guidelines to pinpoint spotting bug damage and compare it with other types of crop damage, etc, etc.

As always, I am keen to hear from you as to what you would like to see on the website, given that we have greater possibilities than what we can do in the printed Progress Reports. Please drop me an e-mail at: parkerr@dpi.qld.gov.au

I would also like to start a notification list for those who access the website, so I can e-mail you as soon as the website has been updated. Be the first to read the latest Progress Report! Marvel at full-colour pictures of spotting bugs and damage! All this can be yours if you send me an e-mail at: parkerr@dpi.qld.gov.au and say "Add me to the list!"

The spotting bug damage you can't see in avocado

Those of you with a good memory may recall the experiment that involved caging bugs on fruit for 24 hours at various times throughout the season. As part of this experiment we also counted the number of spotting bug feeding sites (we call them 'stings') and this damage was recorded on each fruit when the bugs were removed.

It is important to note that these counts were obtained by checking fruit in the field while they were still hanging on the tree. In Fuerte, the experimental bugs fed on average five times during each 24-hour period, irrespective of whether the size of the fruit was small, medium or large. Bugs caged on Hass didn't appear to find the fruit as appealing, especially as the fruit increased in size. Although an average of four stings was recorded on the small fruit, we struggled to find a single sting on the large fruit. Based on this, one might assume Hass is less susceptible than Fuerte. Well, we have some data that might just change your mind!

After the February bagging experiment we moved all experimental bugs onto another fruit rather than returning them to the culture. This time when the bugs were removed after 24 hours the fruit were picked and the number of stings counted before and after peeling.

On Fuerte, fresh damage was relatively easy to identify, with a similar number of stings recorded before and after peeling. In complete contrast, identifying damage in Hass was virtually impossible. Prior to peeling we struggled to find any evidence of damage, whereas after peeling we found an average of 6 stings per fruit. Therefore in this non-choice situation spotting bugs fed at the same rate on Fuerte and Hass fruit! There was no significant difference between the two in terms of the number of stings recorded after 24 hours.

Earlier this year at a Sunshine Coast Avocado Field Day around 40 growers participated in a Spotting Bug Damage Assessment Trial. The growers were given 10 Hass fruit and asked to identify which ones were damaged. If they thought a fruit was damaged they had to tell us how many stings they could see. The exercise was well received and we generated lots of great data to highlight just how difficult it is to identify spotting bug damage in Hass. In this report we will use some of the data generated on just two of the fruit, one of which was damaged.

The data clearly demonstrated just how difficult it is to identify spotting bug damage in Hass. The damaged fruit actually

had six stings on it, yet not one grower saw all six. An amazing 24% of the growers couldn't see any damage at all! Of those that said the fruit was damaged, the majority found only one sting (61%).

Based on what we already knew we expected the growers to have a problem identifying the damage, but what we didn't expect was to have growers seeing damage that wasn't there. Believe it or not, 48% of the growers saw one or more stings on what was a clean non-damaged fruit. Perhaps this confusion may explain why some damaged fruit is still turning up in the market place!

So where can the avocado industry go from here? Obviously identifying spotting bug damage is pretty important, not only from a marketing perspective but also from a pest management point of view. Given that the spotting bug itself is virtually impossible to find we must be able to detect its damage.

You might ask why should you bother monitoring the damage? What is wrong with calendar spraying every two to three weeks, this approach certainly seems to work? Perhaps we should answer the second question first.

There can be a number of problems associated with calendar spraying. They include the development of insecticide



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resistance, the elimination of natural enemies, ground water contamination and concerns regarding worker exposure and food safety. By monitoring spotting bug damage at frequent intervals you will know exactly when the pest is present within the orchard and this will mean your insecticide applications can then be used effectively and only when required. If monitoring is successful it should result in considerably fewer insecticide sprays during the season.

What do we have planned for the next three months?

The next three months will be our busiest yet. We are keen to make the most of the last season for the project and develop some of the ideas mentioned in this report. It is a shame the project only goes for three years, with all that we have learnt about biology and ecology we are now in a position to develop some research activities that will ultimately improve the way we manage the pest.

This season we will endeavour to address the next milestone, Milestone No. 4 - *Canopy characteristic/microenvironment studies completed and primary native fruitspotting bug habitat characterised.*

- Describe host tree canopy types and particular microenvironmental conditions preferred by bugs
- Determine if canopy manipulation can alter bug behaviour
- Identify major fruitspotting bug hosts and clarify the role of windbreaks as breeding sites and refuge for bugs

We will look at the time lag between feeding and visible damage. Although we looked at this last season there is still so much to learn, using a refined experimental method we will repeat the bagging experiments in avocado and macadamia. In avocados we will look closely at the relationship between spotting bug damage and the subsequent development of anthracnose. In macadamia we will concentrate on the damage that turns up at harvest time, we are keen to find out exactly when this damage occurs.

We will continue to evaluate insecticides in the field. This season we will continue to evaluate some of the more promising insecticides in the field. We are especially keen to evaluate how these insecticides affect beneficials. Here on the Sunshine Coast we will perform a series of knock down trials at various times throughout the season in both macadamia and avocado orchards.

Pheromone For Fruitspotting Bugs – Not Likely!

By Geoff Waite, Queensland Horticultural Institute

It's difficult to believe that the research that has been conducted to investigate the existence and identity of fruitspotting bug pheromones was initiated ten years ago. While we have made considerable progress in that time and now know the identity of the male pheromone components, we have not been able to synthesise a blend and test it.

One of the stumbling blocks was identifying a major component from *Amblypelta nitida*. Dr Chris Moore, Principal Organic Chemist with QHI until recently, working with University of Queensland researchers, eventually elucidated the chemical structure of this compound. There were no matching gas chromatogram traces in the data bank and it was then realised that this was a new chemical that had not been seen before.

The work to elucidate the structure required high levels of skill in organic chemistry. We now need to synthesise that compound as well as a couple of others. While Chris was working on the unknown component, a German PhD student at the university determined certain characteristics of one of the other components and how to synthesise it.

Now, don't get too excited! We are a little way down the road but nowhere near the end. We won't know how useful the

pheromone might be even if we are able to create the correct blend.

The cost of doing this research and the high risk involved, precludes the use of industry funds. In fact, **the entire project so far has been fully funded by QDPI**, apart from \$1,000 contributed by local associations in 1991 to assist with expenses for Jeff Aldrich (USDA) during the initial investigations. QHI budget constraints and changing priorities may prevent further work. I would like to make it clear that **pheromone research was never part of the current spotting bug project.**

Pheromones can be useful tools for monitoring and even controlling some pests, mainly moths. The difficulty with bug pheromones is demonstrated by the fact that although there have been some successes worldwide, they are few in number. **The message here is that there will be no useful pheromone-monitoring tool available for fruitspotting bugs in the foreseeable future, if ever!** On the other hand, I believe that research into host plant attractants could yield potentially useful information that might lead to the development of attractants. Again, this area of research may be risky and alternative sources of funding should be sought.

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National food writers and avocado industry representatives take an orchard walk at Keith Johnson's orchard in Alstonville.