

COASTAL FRUITGROWERS' NEWSLETTER

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Fruitgrowers' Newsletter
Edited by Sandra Hardy
Design & Layout - Ann Boesen



NSW Agriculture

No. 41 Winter 2001

Dear Growers,

Welcome to the Winter edition. This edition contains a number of reports from the various field days (both stone fruit and citrus) held in the last few months. There's also a bit to catch up on in the "News in Brief" section.

The 2001/2002 Orchard Plant Protection Guide should be available towards the end of July at local district offices. Also, I encourage as many growers as possible to attend the Grey-headed Flying-fox workshop (details below), now that it has been listed as a threatened species.

Happy reading,

Sandra Hardy

Managing the Grey-headed Flying-fox as a threatened species in NSW

Royal Zoological Society of NSW

Saturday 28 July 2001

9am-5pm

Venue: the Theatrette, The Australian Museum, Sydney

(Enter from William Street)

Registration 8.30-9am

Program

The aim of the forum is to consider options for managing Grey-headed flying foxes now that they have been formally listed as a threatened species in NSW. The day will include spoken presentations from the various parties interested in flying fox management. Speakers will include representatives of NSW National Parks & Wildlife Service, NSW Agriculture, wildlife ecologists, commercial fruit growers and community groups. Audience participation is encouraged and is an integral part of the day.

Registration: the registration fee includes lunch and morning tea.

RZS members: \$35.00 non-members \$40.00. To register, please ring the RZS office on 02 9969 7336 and leave your name.

You may also register and obtain membership forms, via the web (www.rzsnsw.org.au) or by email (office@rzsnsw.org.au)

For program details, contact:

Danny Lunney on 02 9585 6489 or Peggy Eby on 02 9387 6134

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Agriculture or the user's independent adviser. Inclusion of an advertisement or sponsor's symbol in this publication does not necessarily imply endorsement of the product or sponsor by NSW Agriculture.

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Stone Fruit Seminar Report

Julie Brien Horticulturist-in-Training Gosford

A seminar for growers was held at Ron Christie's packing shed in Glenorie on Monday the 21st of May. Attendance was good, with at least 50 people attending the afternoon.

Speakers included:

Dr Peter Stephens (QDPI Stanthorpe), Bob Wickson (ANFIC), Peter Malcom and Joe Ekman (NSW Agriculture) and Dr. Barry McGlasson (UWS Richmond).

Peter Malcom: Update on the Stone Fruit Rootstock project

Peter is looking at the effects of Root Zone Temperature (RZT) on some rootstock varieties. He has found that RZT affects total plant growth, carbon partitioning, vegetative bud burst, physiology and leaf colour (due to nutritional effects).

On whole plants, he found that overall growth was better at 25°C air temperature.

Root Zone temperatures were compared at 5, 15 and 20 degrees C. Control plants were grown in ambient greenhouse temperatures (not directly controlled). The plants were grown in special temperature controlled cabinets that controlled RZT only. The tops of the plants were subjected to the ambient (air) temperature of the green house.

When only the root zone temperature was controlled, plants exhibited the best leaf and stem growth at 20°C. Similar results were found with root growth.

When dormant plants were grown under the same conditions for six weeks, the best growth also occurred in the 20°C groups. A general trend of the growth doubling each time the temperature was increased by 5°C was seen in nearly all aspects such as leaf, stem and root weights.

These results were from one variety only. Individual rootstock varieties react differently to temperature eg: Golden Queen - 19°C (ideal). Flordagard - 12 -25°C (range.)

Infra red imaging equipment was used to record the temperature of the foliage and roots in growing plants. It was found that the warmer the roots were, the cooler the foliage became. It is thought that plants with warmer roots transpired more. It is known that transpiration has a cooling effect on the leaf surface (much like when we sweat). At cold root temperature, the leaves were hot because the plant was not actively transpiring.

To see whether 20°C RZT was possible in the field, the soil temperature was recorded at the Gosford research station. In July to October soil temperature starts at 10 and slowly increases to 15°C by October and 20°C during the summer months.

This suggests that the use of mulch may help to raise and better stabilise RZT in the orchard. However, temperatures above 20°C can adversely affect root growth.

Dr. Peter Stephens: Bacterial Spot Project

Bacterial spot is a serious disease especially in plums that is often difficult to control. The bacteria overwinter in cankers on the outside of the tree. Each canker is home to thousands of bacteria cells, which are capable of causing new infections in the new season.

Copper Sprays:

Traditionally copper-based sprays have been used to control the disease.

In terms of copper, it is crucial to apply the winter spray, and not to mix it with anything else. Copper sprays are frequently deactivated when tank mixed with other chemicals.

To minimise the disease early in the season, Kocide® was found to be the most effective when applied at 10% petal fall, rather than at dormant bud. However, care must be taken when applying several copper sprays this late, as it can cause russetting of the fruit on some varieties.

New Approaches:

Chemicals: Several different chemicals have been used in glasshouse trials, including Tilt®, and a new Japanese chemical called "Starner".

In the laboratory Tilt® was promising, as it killed bacteria in suspension. Unfortunately these results did not occur in the field trials. Tilt® in this situation had little effect on the disease.

It is thought that bacteria are more resistant to chemicals in the field because the bacteria are not spread evenly over the leaf surface (as they are in the lab), occurring mainly in leaf crevices. They also produce a polysaccharide gum that protects the bacteria from the environment, and sprays. Chemical applications may be more effective if a gum-dissolving agent could be found.

"Starner" is not yet registered in Australia, and is being used to control fire blight in Japan. Some preliminary experiments indicate that it has potential for spot control.



However, excessive use overseas has seen resistance develop after 2 years. Further trials will only continue after an infection model for the disease has been developed. Sterilants were also trialed, with calcium hypochlorite being the best of them.

Hot Air Treatment: The feasibility of using hot air to kill bacteria was looked into. It is possible to put a plastic tent over an infected tree and blow hot air into it (43-45°C for 5-6 hours). A misting system must also be used, so the tree does not die from intense heat stress. It would cost \$30 a tree, and its practicality would mainly be limited to young nursery trees.

Controlling Spot in Nurseries

Hot Water Treatment: Dipping bare-rooted trees in hot water (48°C for 10 minutes) is effective for treating small cankers. Increasing the exposure time has no extra effect. To kill bacteria in wood with large cankers 45°C for 3-5 hours was more effective. Wood must be two weeks into full dormancy to avoid damaging the buds.

The infection chain: From inoculation trials it was discovered that only newly formed growth was infected. This may translate to the field that lush new growth may be more susceptible. Also injured fruit is more likely to develop infection.

To prevent tree and fruit injury (and reduce disease risk), a grower can do the following:

- Use windbreaks on the orchard;
- Hail netting;
- Reduce damage caused by biological agents (birds, insects etc) and sprays;
- Minimise bare soil;
- Prevent unnecessary & excessive foliage growth after canopy has filled.
(Reduce N fertilisers)

Joe Ekman: Update on Freshcare and other QA issues.

Joe gave a quick talk on retailers and other people who have adopted Freshcare as part of their QA systems for direct selling.

It seems that most of the major retailers (Woolworths, Coles Myer, IGA) have accepted Freshcare to some degree. A "Frequently Asked Questions" sheet was available on the day. If you would like a copy, contact Joe on (02) 43481900, and he can fax/mail one to you.

Dr. Barry McGlasson: New maturity Indices for Stone Fruit

The final report for this grower levy funded project has just been submitted to HAL.

Many varieties of stone fruit must reach set levels of maturity before harvest, otherwise the required brix may not have developed.

Most of the time the decision when to pick is left to guesswork, relying on factors such as firmness and colour. An integrated testing system is needed. Because ripening is genetically controlled, protein markers can be found in the juice/flesh when the fruit has reached the ripe stage. These proteins have been isolated in plums, and this work is expected to carry over into other stone fruits.

The goal now is to develop a test that relies on antibodies reacting with the marker proteins in the fruit. This has been developed for other commercial tests for antibodies in blood (home pregnancy tests) etc. Ideally the kits would be cheap, single use and rely on a colour change to indicate ripeness.

Further work is required (likely to be another two seasons) before a cheap and easy test kit is available to the grower.

Talstar® for control of Carpophilus beetles



Sandra Hardy

As you are aware Talstar® 100EC (bifenthrin) has been trialled around Australia over the past two seasons for control of carpophilus beetles in stonefruit. These trials have been undertaken and funded by NSW Agriculture, CropCare and AFSFGA.

I have been informed by Glen Tucker (Technical Manager - Insecticides & Fungicides) that CropCare is currently preparing the application for registration of Talstar® for use against this pest in Stonefruit (excluding cherries). The application for registration will be submitted to the National Registration Authority later this year and it is hoped the product will be registered in time for the 2002/2003 season.

Bob Wickson (ANFIC): What's New in Stonefruit

Bob introduced many new varieties available from ANFIC for the coming season. Most of the descriptions and pictures are available on ANFIC's web site at www.anfic.com.au

For those without access to the Internet, here's an abridged list of varieties. Contact ANFIC for more information.

White fleshed, low acid Nectarine series

Exclusive to ANFIC, tree royalty, no other controls

Origin	Variety
Italy	Caldesi 2000; Caldesi 2010; Caldesi 2020
France	Emeraude; Zephyr; Topaze; Jade (star fruits)

Yellow fleshed Nectarines. Exclusive to ANFIC

Origin
 Australia
 California?

Variety
 Splendor
 September Sun

Low Chill Peach and Nectarine varieties

Origin
 USA Florida

Variety
 UF Delight peach;
 UF Gold peach;
 UF Charm peach;
 UF Queen nectarine
 94-15n nectarine

Bradford Varieties (Peach & Nectarine)

Type
 Supersweet
 Yellowflesh
 Nectarine

Variety
 Ruby Sweet; (avail 2002)
 Grand Sweet;
 Kay Sweet.

Type
 Supersweet
 White Flesh
 Peaches

Variety
 Ice Princess; (avail 2002)
 Snow Princess.

Type
 Supersweet
 White Flesh
 Nectarine

Variety
 August Pearl.

Californian Plum Varieties

Howard Sun; Ebony Sun; October Sun.

New Israeli Plum Varieties

“Extremely sweet, good flavour” 20+brix.
 These varieties are relatively expensive and
 are controlled:

Blue Amber; Morrel; Bandora.



Californian Best Selling Varieties (98/99 season)		
Peaches		
Early season	Mid season	Late season
Super Rich 14.4% Spring Snow 13.2% Queencrest 10.6%	*Ivory Princess 12.1% Elegant Lady 8.3% Summer Sweet 8.1%	Autumn Flame 17.2% Sweet September 15.4% September Snow 12.9%
Plums		
Early season	Mid season	Late season
Earliqueen 24.7% Red Beaut 15.8% Showtime 13%	Joanna Red 32.7% Fortune 17.7% G or 2 16.5%	Angeleno 28.9% *October Sun 19.2% *Howard Sun 16.5%
Nectarines		
Early season	Mid season	Late season
Honey Blaze 17.2% Crimson Baby 16.2% *Diamond Bright 13.8%	*Ruby Sweet 19.0% *Spring Bright 18.8% *Spring Sweet 8.8% *Diamond Ray 8.7%	*September Red 15.6% *Fire Sweet 14.8% *August Red 6.9%
* varieties available through ANFIC		

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News in Brief

GENE TECHNOLOGY – Opportunity or threat to our future?

Helen Berecny, Stonefruit Grower, Mangrove Mountain

GMO's are a widely discussed topic in many areas today and seem to bring strong responses whatever people's views.

At a recent CSIRO workshop in Canberra on Gene Technology, I was given an insight into the research involved. This included a basic understanding of the laboratory techniques behind it, and a comprehensive look at the regulations and management of gene technology developments in Australia.

Plant gene technology is already beginning to have an enormous impact on agriculture,. Applications ranging from plant breeding, insect and weed control and plant quality improvements are some areas where the technology is already in place or undergoing field trials.

Developing a genetically modified organism requires many years of research, with stringent regulations governing the project at every stage. Extensive trials in glasshouses for 2-3 years and grower situations for 3-5 years are conducted. At this point potential risks are

evaluated, and management plans submitted. After community consultation occurs, a decision is made whether to release or not.

Attending this workshop highlighted the importance of having a greater level of knowledge regarding this issue, and also the possible applications for the technology.

Potential benefits include, improved crop productivity, lower chemical usage, healthier fats and oils, renewable sources of industrial oils and plants with enhanced levels of vitamins.

The media provides regular articles about genetically modified foods, and possible risks to us and the environment. This tends to strongly influence public perception.

As a food producer, I now have a better understanding of the scientific process involved with GMO's. As there are many areas of research currently underway, GMO's will impact on our future. When the time comes for public comment, knowledge based on fact will assist us in our decision making.

My thanks to the NSW Farmers Association for providing funding for me to attend this workshop.



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Environmental Management

Systems in Agriculture project is underway

A new project on Environmental Management Systems (EMS) in Agriculture is underway in New South Wales funded under the NSW Salinity Strategy. This project will assist farmers to better manage natural resources and improve the on-farm and off-farm environment. The project also has potential to help farmers capture market benefits arising from improved environmental management. It will help farmers to cope with and in some cases take advantage of changing trends in the environmental awareness of consumers, regulators, financiers and the general public.

Some international markets are now requiring that claims of “*environmental friendly*” production be backed by a credible third-party validation. For instance, international companies such as Birdseye, Sainsburys, Tesco’s and Safeway stores in the UK, now “**strongly suggest**” that their supplying farmers use both audits and protocols in order to demonstrate environmentally friendly production methods. An EMS is one way to demonstrate that such production systems have been followed.

EMS in simple words is a **PLAN, DO, CHECK & ACT** approach, aimed at ensuring food is produced with a minimal impact on the environment. An internationally recognised Standard, ISO 14001, can be used to guide the development of EMS.

Roughly 85% of all farm produce from Australia is exported. Therefore, keeping in mind the international food market’s requirements, we should produce and supply both “Clean and Green” food, with these claims verified and supported by the use of well recognised systems. Using an international standard to achieve this means that less advertising is required to market the product. Farmers who implement an EMS generally reduce their production costs, increase net profit and gain a better knowledge of their operations. An EMS also assists in gaining improved data on which to base management choices. Farmers may also achieve higher ultimate prices in the real estate market when they want to sell their properties.


Adoption of EMS in Australia is gathering momentum as a result of NSW Agriculture’s work and the pressure of consumers and other groups. EMS Officers are located at Agricultural Institutes at Wollongbar, Orange and Wagga Wagga. These officers can assist farmers in the salinity hazard and other areas of NSW through the process of developing systems that are compatible with the international standard ISO 14001.

Interested farmers engaged in grains, horticulture, pastures, cattle, sheep and other relevant industries throughout the state are invited to join this innovative project to better understand EMS and improve their environmental management.

To join or for any further inquiry, please contact:
Parmjit Singh, EMS Officer, NSW Agriculture, Orange
Tel.: 02 6391 3885; Fax: 02 6391 3899
Email: parmjit.singh@agric.nsw.gov.au

Gareth Adcock, EMS Officer, NSW Agriculture, Wagga
Tel.: 02 6938 1991; Fax: 02 6938 1809
Email: gareth.adcock@agric.nsw.gov.au

Gavin Tinning, EMS Officer, NSW Agriculture,
Wollongbar Tel.: 02 6626 1217; Fax: 02 6628 3264
Email: gavin.tinning@agric.nsw.gov.au

Genevieve Carruthers, EMS Specialist, NSW Agriculture,
Wollongbar Tel.: 02 6626 1237; Fax: 02 6628 3264
Email: genevieve.carruthers@agric.nsw.gov.au 

Better access to natural resource and environmental data

The Community Access to Natural Resources Information (CANRI) Program (www.canri.nsw.gov.au) was successfully launched at Parliament House Sydney on 15 March 2001, by NSW Deputy Premier the Hon Dr. Andrew Refshauge. CANRI is a four year collaborative program sponsored by all NSW natural resource agencies.


Dr. Refshauge remarked that “CANRI places the NSW Government at the forefront of international efforts to provide its citizens with the most current environmental information available”. It’s a one-stop website for environmental information and the system is unique in that it allows users to build their own overlay and merge maps, and present environmental data from different sources to form an individual profile of any area of the State.

The new CANRI homepage is a portal of an impressive range of State-wide interactive natural resource websites including:

- Natural Resources Atlas;
- Natural Resources Data Directory;
- Coastal Atlas;
- State of environment reporting for Local Government;
- Wildlife Atlas;
- PlantNet; and
- DLWC’s River information:

<http://www.waterinfo.nsw.gov.au>

Soil profiles: <http://spade.dlwc.nsw.gov.au>

Landcare: <http://clio.dlwc.nsw.gov.au> 



Plant Health Australia takes first step towards landmark funding and compensation arrangements

The first major step towards establishing an industry and government agreement to address funding and compensation issues within the plant sector was taken today when Plant Health Australia (PHA) released a discussion paper on *Funding and Compensation for Emergency Eradication of Exotic Plant Pests and Diseases*.

“If we can establish agreed planning, management, decision making, and funding and compensation arrangements before incursions occur, Australia will clearly be better positioned to effectively respond to and prevent incursions of exotic plant pests or diseases, reducing costs and benefiting plant industry, government and the community”, the Chairman of Plant Health Australia (PHA), Mr. Andrew Inglis, said today.

“At present, an informal cost sharing arrangement between State and Commonwealth Governments is used to fund eradication activities for exotic pests and diseases in the plant sector. There is no general agreed compensation arrangement covering the destruction of crops or other assets during an eradication program. Decisions about responses to exotic incursions are made primarily at the Government level”, Mr. Andrew Inglis advised.

“Consultation with our members indicated both plant industry and government have major concerns about the current arrangements. The PHA discussion paper outlines a range of key principles for a funding and compensation framework, and then seven potential frameworks. PHA will consult with members to determine if any of these frameworks are widely acceptable and offer better outcomes for the management of exotic pests and diseases”.

“PHA will hold a member workshop in October to discuss the roles of industry and government in the management of incursions, decision making and funding and compensation. PHA wants any agreed funding and compensation arrangement to compliment the wider task of managing the risk of exotic pests and diseases, preferably through a partnership approach.”

The funding and compensation discussion paper was commissioned by PHA and prepared by the Centre for International Economics (CIE). The paper includes material drawn from extensive consultation with plant industry bodies and government, as well as a review of funding and compensation mechanisms and approaches employed internationally.

PHA is a Public Company, limited by guarantee, established to identify and coordinate priority plant health issues in Australia and to promote international and domestic confidence in Australia's plant industries. Plant Health Australia has 22 plant industry and government members.



Copies of the discussion paper are available by contacting PHA. For more information contact: Garth Donovan, Communications Officer 02 6260 4322 or 0402 429 677.

DuPont to withdraw Benlate® from global markets

DuPont will discontinue the manufacture of its fungicide benomyl and will phase out sales of Benlate® in all its forms from the global market. No sales will occur after December 31, 2001, and we expect all product will clear the channels of trade by the end of 2002.

DuPont advised customers that this is not a product recall, but a voluntary business decision based on a review of global market conditions and other factors. The decision is part of the recently announced restructuring to improve the overall competitiveness of its agricultural business.

A significant element of the reason to withdraw is that the company says it is no longer willing to bear the high and continuing costs of defending the product in the U.S. legal system where factors other than good science can influence outcomes. In addition, there are significant ongoing costs and resources necessary to meet increased regulatory requirements around the world and keep the product active. The company believes those resources are better applied to other areas of the business.

DuPont remains fully confident that Benlate® is safe when used as directed. The 30-year old fungicide has been an excellent crop protection option for growers worldwide.

Sydney Market Reports

NSW Agriculture ceased to operate the Market Reporting Service on 30 November 2000. Control Quality Services now provide market reports.

To contact Control Quality Services - phone 02 9746 3437 mobile 0416 108 639. Control Quality Services is an Ausmarket service, and Ausmarket operates a Infobox service for Brisbane, Sydney, Melbourne, Adelaide and Perth fruit and vegetable price reports
1902 262 580

News in Brief

Stonefruit Shipping trial success

Reprinted from: Northern Victoria Fruitgrower, Volume 25, Issue 5, May 2001.

Fresh stone fruit from the Swan Hill region was part of some very successful export stone fruit shipping trials completed to the Middle East and UK/Europe during the recent season.

The new system uses a combination of air freight and sea freight through Singapore cutting current shipping transit times from Australia in half, ie to UK/Europe 20-21 days and to the Middle East 10-11 days.

Trials were conducted through the auspices of the Air Freight Council of Queensland Ltd. and Air Freight Export Council of NSW Inc. and supported by Agri-Chain Solutions Ltd. and the Sea Freight Council of NSW.

The trials involved the air freighting of fresh stone fruit to Singapore and loaded into reefer containers and transported by sea freight to the UK.

In Singapore the shipment was handled by P&O Nedlloyd and their agent Kimtrans. The product quality on arrival was described as "excellent".

In recent years the establishment of fast reefer handling and on transit in the Port of Singapore has made this service possible.

Two ground service providers specialising in the handling of perishable cargo have been selected to provide the handling service in Singapore.

These providers are the Singapore Air Sea Trans-shipment Services Ltd. (SASTS) and Warehouse Logistics Net Asia Pty Ltd (WLNA), both able to provide cold store, in-transit cooling, unloading and loading and temperature monitoring records.

Full details and costs of this service can be obtained from Australian perishable specialist air-freight forwarders or either one of the two Air Freight Councils who have developed this service.

Contact details are: Mr. Peter Langdon, Executive Officer, Air Freight Council of Queensland Ltd, phone 07 3860 5244 or e-mail: afcqlang@powerup.com.au

Mr. Malcolm Bush, Executive Officer Air Freight Export Council of NSW Inc., phone 02 9350 8117 or e-mail: mal.bush@romtech.com.au

A world wide web contact for either is:
www.australianairfreight.com



Fruit fly project takes flight

Fruit fly control is a major issue across many of the horticultural industries and the AusHort R&D program now plays an important part in funding research in this area.

A project is underway to conduct trials in the Riverina, Queensland and Western Australia, involving staff from the agriculture departments in each state. Financial support has been provided by AusHort and chemical companies Dow and Aventis. The planned outcome is the registration of two new competing baits as well as continued work on dyes and techniques to improve the performance of the existing baits. Dr. Bob Mangan from the USDA has provided external expertise and reviewed the work in March.

Additional funding has also been allocated by AusHort for field research on fruit fly and a planning workshop was held in April 2001 to develop priority areas as well as recommending a planning process for future R&D on this topic. *Extracted from: Horticulture Australia, Citrus Industry Report 2000-2001.*



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NSW Farmers Horticulture Conference 2001 Report

Helen Berecry, Regional Delegate NSW Farmers Horticulture Committee

The conference was opened in Orange on Friday 15th June by Senator Judith Troeth who spoke about the value of horticulture as an export prospect and stated 'the key to long term survival is how we respond to challenges'.

She talked about the work of the National Food Advisory Committee, which is currently assessing all Processing and Primary Production in order to advise government on how the food industry is positioned and what can be done to develop it.

Reports to Conference on Agricultural Chemicals, Water Issues, Native Vegetation and Plant Health Australia were given by various delegates to NSW Farmer's Committees.

Tony Biggs from Good Fruit & Vegetable Magazine spoke about his vision for horticulture, both nationally and internationally. His thought provoking presentation was divided into strengths, weaknesses, threats and opportunities and outlined the impact of globalisation on our trading environment.

David Newton, the Retail Grocery Industry Ombudsman talked about resolving disputes between farmers, wholesalers and retailers. He outlined how disputes are handled, what is the role of the Ombudsman and talked about mediation, rather than expensive legal proceedings. A \$50 fee on lodging an application is required. He urged growers experiencing problems with wholesalers or retailers to contact him for assistance.

The Ombudsman is fully funded by the Federal Government.

Further information is available from website www.rgio.dewrsb.gov.au or phone (02) 6121 7302 fax (02) 6121 7598.

A workshop on Improving the Supply Chain for \$\$ benefits was conducted by Associate Professor Tony Dunne from Gatton, Qld. and was very challenging. This built on the same themes that Tony Biggs had outlined the previous day.

Producers are being urged to form grower supply groups or co-operatives to secure stability in markets and better sales and returns by having a reliable volume of quality controlled product.

The final speaker was Jonathan McKeown, Chief Executive of NSW Farmers outlining the changing trends in horticulture. He spoke about future directions for the Association and his vision for an alternate marketing system for producers in Australia, similar to the Growers Market, in USA.

The conference was a reflection on the commitment and enthusiasm of the Chairman, John Rogers, whose priority is improving profitability for the Association's horticultural membership.

Conference organisation was capably handled by Liz Chamberlain and Kate Donald who are the horticulture staff members in NSW Farmers.



NSW Stone Fruit Growers' Report

Rowan Berecry, Chairman

Mr. David Rowlands, Chairman of the newly formed Cumberland Hills Stonefruit Growers, has been elected to represent NSW on the Executive of the Australian Fresh Stone Fruit Growers' Association. David replaces Bill Hatton, who has held the position since the inauguration of the organisation. We thank Bill for his service over the years. David will do an excellent job of presenting the views of the NSW industry to the national association.

Flying Foxes

Consultation has begun with the National Parks & Wildlife Service (NP&WS) over the listing of the Grey-Headed Flying Fox as vulnerable, under the Threatened Species Conservation Act. Listing as "vulnerable" does not mean that the flying fox is under any threat of extinction. It just means that if current practices continue, the population may be threatened. Over the next few years NP&WS are aiming to have a crop protection plan, involving controlled culling, for growers prior to the next season.

A symposium on managing the grey-headed flying fox has been organised for Saturday 28th July, (see front page for details). This is aimed at bringing all the parties with an interest in the flying foxes, together to discuss ongoing management. Speakers will come from NP&WS, NSW Agriculture and the Humane Society, as well as presentations by wildlife ecologists and commercial growers. Stonefruit growers are urged to attend and participate.

Growers are also reminded of the Australian Fresh Stone Fruit Growers' Association Annual Conference in Hobart on 25-27th July - see page 23 for details.



SOUTHWELL AGRICULTURAL SALES

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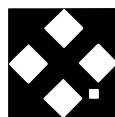


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Complete pumping, filtration and fertilizer injection systems for every need.

*** Southwells are suppliers of *Netafim Drip Tape* ***
The drip tape that out-performs all tapes on the market



SOUTHERN CROSS



Report on Low Chill Marketing Field Day

Philip Wilk, District Horticulturist, Alstonville

The recent low Chill Field day held at Gordon Shultz's Orchard was well attended by approximately 75-80 growers, industry and agency representatives. The first session was a Research and Development update.

ICAs

A review of the Interstate Certification Assurance scheme for stonefruit into Victoria and South Australia was presented by Peter Regan, NSW Agriculture Senior Inspector (Regulatory). His report stated that very few infringements if any had occurred in relation to ICA 21, the in-field treatment of stonefruit for fruit fly with Fenthion.

The industry has been pushing for a review of the procedures for fruit entering South Australia, which needs to be treated in-field and also dipped in Dimethoate. South Australia will still not accept fruit treated in-field only, but a review of the procedures will be on the agenda for the next Tri-state meeting of importing states. The evidence based on Victoria's experience and the performance of NSW and QLD stone fruit growers will be used as supporting evidence.

Dimethoate as an alternative to Fenthion

Andrew Jessup and John McDonald from NSW Agriculture are working on aspects of replacing fenthion with dimethoate as an infield treatment for fruit fly control due to dimethoate being one seventh of the cost.

South Australia will not accept dimethoate as an alternative because penetration of the chemical into the fruit is variable depending on the ripeness of the fruit. There is further evidence that little difference exists between a 3 day or 7 day withholding period in terms of efficacy of the chemical but this will be determined later this season by doing residue testing on treated fruit.

Bacterial Spot Update

Carol Haase who is the technical assistant for Dr Peter Stephens QHI gave the update on work in controlling bacterial spot. It seems to be much worse on sandy soils and less so on red clay soils. A series of heat treatments were used which did show promise in the lab or greenhouse but most of these methods were impractical for the average grower, ie spraying 45°C water over trees inside a plastic canopy. At present the only realistic method is in selection of the appropriate varieties.

Low Chill Variety Block Update

Phillip Wilk from NSW Agriculture gave an update on new low chill varieties being planted in the trial block.

150 varieties were recently removed from the block to make way for new planting material from a number of sources. University of Florida, Pomona International and UWS material has been planted mid last year and is 6 months old. Information from varieties tested last season is available.

There are currently 300 varieties of low to medium chill peach, nectarine, plum and plumcote that are to be assessed this season. A varietal field day is planned for later this year.

Calcium Silica interactions

Martin I'Ons who is a Geologist and local stonefruit grower has funded some of his own work to try to solve apparent calcium deficiency problems on his own orchard. The work is in relation to the widespread promotion of foliar calcium sprays that are being recommended to growers by a number of commercial companies to counteract the soft tip problems that are encountered on some varieties in some seasons.

Martin tested soils in a range of climatic zones where stone fruit is grown from Swan Hill, Orange, Stanthorpe and locally to measure the silica levels in soils and the relationship to available calcium for plants. Red soils were generally low in silica due to high rainfall and leaching, where in places like Swan Hill silica was higher and so was available calcium. The higher calcium levels, Martin explains, are associated with firmer fruit, increased sugar levels, reduced insect problems and increased flower and fruit set. Further work is to be carried out this season. A data logger has been installed to measure the chill units on the block. This work is being partly funded by a voluntary contribution from the local association and HAL. The budget for this season is still in a healthy condition.

Privately funded research during the past four months indicates:

1. Silicon levels of around 1,000 ppm in leaf tissue are required before trees will take up and hold optimum calcium concentrations (around 3%).
2. Plant available silicon in soils appears to be about one tenth of the leaf analysis figure i.e. soil values have to be above 100ppm to achieve 1,000 ppm in leaf tissue.
3. Silicon application options:
Ground application: Martin has looked at a number of options and tested the plant available silicon levels of different materials with the conclusion that a product 'Kwik Release Siliconite' from Queensland is the best material. One application at 1 ton per hectare thrown under the trees should provide sufficient silicon for 2,3 and maybe 4 years

depending on the amount of rainfall and the initial analysis of the soil. It can be blended with lime or dolomite and applied in one operation. Soil values still need to be monitored to determine optimum application rates and intervals. This product is now available through Batsons Eco Earth Products at \$450 per ton plus GST.

4. According to literature, higher silicon levels in plants have the following benefits: reduces moisture loss, improves photosynthetic capacity resulting in higher brix, strengthens cell walls (like calcium), reduces fungal infections and insect attack (plants are tougher), plants have more flowers and pollen in more viable resulting in greater fruit set.

For more information contact: Martin I'Ons - phone 02 6687 1862.

Collective Marketing

Bill Hatton, Chairman, John Rogers, secretary, NCLCSFA, Andrew Ford, NSW Department of State and Regional Planning.

This item is and has been put on the agenda in an attempt to address the problem of supermarket dominance. The previous week the QLD low chill stonefruit growers had a meeting on the same issue - that of forming one or more collective marketing groups to increase the volume of and clout that growers may exert in obtaining a fairer return for their produce.

Low chill stonefruit would have a stranglehold over the supply chain if they could market collectively.

To make the marketing work there would probably need to be a legal or formalised agreement between parties. This may also mean some other advantages in terms of bulk purchasing, trade terms and sharing of some equipment or plant.

Thirty growers showed an interest in paying a facilitator (Professor Ray Collins) to address the group in a workshop to explain the intricacies of collective marketing from other available industry models that are already successfully marketing their produce collectively.

Andrew Ford talked about financial and non-financial incentives available from government agencies and business investment opportunities in NSW for collective marketing groups.

Open Forum on Low Chill Industry Priorities

Most growers felt that post harvest issues were the more important at present for the low chill industry.

They were in order of importance:

1. Developing new varieties, varietal evaluation and matching varieties to microclimates.

2. Market power. Alternative marketing. Getting the right market signals. Collective marketing.
3. Cost of production, benchmarking and best practice.

Other issues

1. Crop loading and fruit size
2. Consumer research and preferred customer varieties. Brix levels versus trade needs
3. Technology transfer
4. IPDM Environmental codes of practice (EMS)
5. AQIS and trade policies
6. QA programs. Which system to use? Which system is adequate for customers?

The major difference between the previous and the present priorities is the recognition that the low chill sector lacks the varieties to develop markets and provide profitable returns to growers.

New on Farm technologies

Dr A.P. George, DPI, Nambour.

Alan George talked about new production systems that either had been developed or were being developed to minimise labour input in stonefruit production. Cultar® had been used effectively to control growth on most soils. This will reduce labour costs and increase fruit quality. Some work on bark applied Cultar® is useful on red Krasnozem soils that tie up the chemical as well as foliar applied which is used on apples but it will need to be re registered for foliar applications on stone fruit.

Chemical flower thinning was also being used with Ralex®. The use of this chemical may need to be used with other thinning agents eg soybean oil which is used in USA and is environmentally friendly and will not need to be registered. These techniques may reduce labour costs substantially.

Nitrogen and Cultar® when mixed together gives a synergistic response with a 20-30% increase in fruit size. Negative effects of nitrogen on fruit firmness are negated when applied together.

Retain® a promising new chemical which inhibits ethylene production when applied prior to harvest may increase fruit size, sugar and firmness and give more flexibility with picking by delaying maturity for 2 weeks.

Waiken® a rest or dormancy breaking chemical will be registered in 2001. It will allow dormancy to be broken with Californian varieties and will extend the range in which these varieties may be grown.

The use of fruit fly exclusion netting to gain market access to countries such as Japan. It may also reduce chemical usage, as other pests will be excluded also.

Formation of a Stone fruit export marketing group or company

Bob Nissen Maroochy Research Station, Nambour : Bob gave a very stirring talk on developing a whole systems approach for growing handling and marketing stone fruit. The world scene and the reality for stone fruit growers in the near future is:

1. Deregulation
2. Fewer but larger supermarkets wanting fewer sellers
3. More direct selling to supermarkets
4. Patenting of varieties with selected growers having access to technology or varieties
5. Emergence of China as a major exporter
6. Food safety issues
7. Environmental Management Issues.

On the Australian scene we have:

1. Oversupply
2. Increased production costs
3. Decreasing returns
4. Uncoordinated marketing
5. Many small growers
6. Variable quality
7. No control over product after the farm gate
8. Superseded varieties
9. Little R&D

The only options available then are:

1. To become more efficient
2. Reduce production costs
3. Become larger by forming marketing groups
4. Increase exports
5. Control the supply chain by direct marketing

The most desirable option that will have the most direct impact would be forming a marketing group. The company would market stonefruit from South East Queensland and Northern NSW. Growers would need to contribute an annual running fee and a levy for each tray of fruit sold through the company. The company would need to employ a marketeer, a marketing coordinator and someone to implement QA schemes

Varieties

Dr Bruce Topp Maroochy Research Station Nambour: Bruce talked about varieties coming from University of Florida program that will have some of the following characteristics:

1. Non melting flesh varieties that may be tree ripened
2. The insertion of a gene for full red skin colour
3. Improved aroma for peaches and nectarines

He is stationed at Nambour now and will be breeding varieties from the already imported low and medium chill germ plasm to identify suitable characteristics from the progeny to produce further low chill varieties with suitable characteristics.

ANFIC Varieties

Miles Porteus Birdwood Nursery: Some new varieties either made commercially available or that have come out of quarantine to be tested at Bangalow include:

- 91-7 white opal
- 94-42 white non melting peach (425 chill)
- 93-14c non melting peach (325 chill)
- 94-15 n melting flesh nectarine, 100% red 11-13 Brix

Chiquita Export Australia

Bill Hatton reported on a meeting in Brisbane on 9th March where select growers were sent invitations to an information session organised by 'Great Fruit' Pty Ltd, a marketing arm of Chiquita International and the University of Western Sydney.

Growers were told that some varieties of stone fruit from UWS breeding program were purchased by Great Fruit and they were seeking commercial alliances with certain local low chill stone fruit growers to produce their fruit varieties. This is a classic case of vertical integration of the stonefruit industry where growers will be contracted to produce fruit for a company that has ownership of the variety. This will guarantee a uniform product that will be identifiable and will not flood the market and therefore demand a price premium for those growers in the 'loop'. Chiquita have purchased 3 peaches, 2 nectarines and a plum.

Formation of a Peak Industry body for Low Chill Stonefruit: Bill Hatton.

This was an open forum to discuss the formation of a Low Chill stonefruit Peak body that will still operate under the national stonefruit body but would be able to leverage more funding for marketing and R&D for the specific low chill sector. The low chill sector represents 10% of national stone fruit production. This equates to 2 million trays worth \$100,000 worth of levy money collected. Very little of this money ever finds its way into solving specific low chill sector problems. It is proposed that the low chill sector to be called "Springfruit" rather than stonefruit or low chill stonefruit as this has no meaning to the consumer who generally equates stonefruit with "summerfruit".

The QLD Low Chill (LC) stonefruit industry is represented by the Sunshine Coast Sub-Tropical Fruits Association and the NSW LC industry is represented by North Coast Low Chill Stonefruit Association. Both are members of the National Australian Fresh Stone Fruit Growers Association. There were a number of models put forward for the formalisation and formation of a peak body for the QLD and NSW Low Chill sectors. A meeting with the various committees will take place in April to finalise the organisational structure of a Low Chill /Springfruit peak body.





BioVerm

Life support for your soil

Are you finding that sustaining yields and maintaining quality is becoming increasingly difficult with each season passing? Most growers acknowledge that years of continued fertiliser application is taking its toll on the farm.

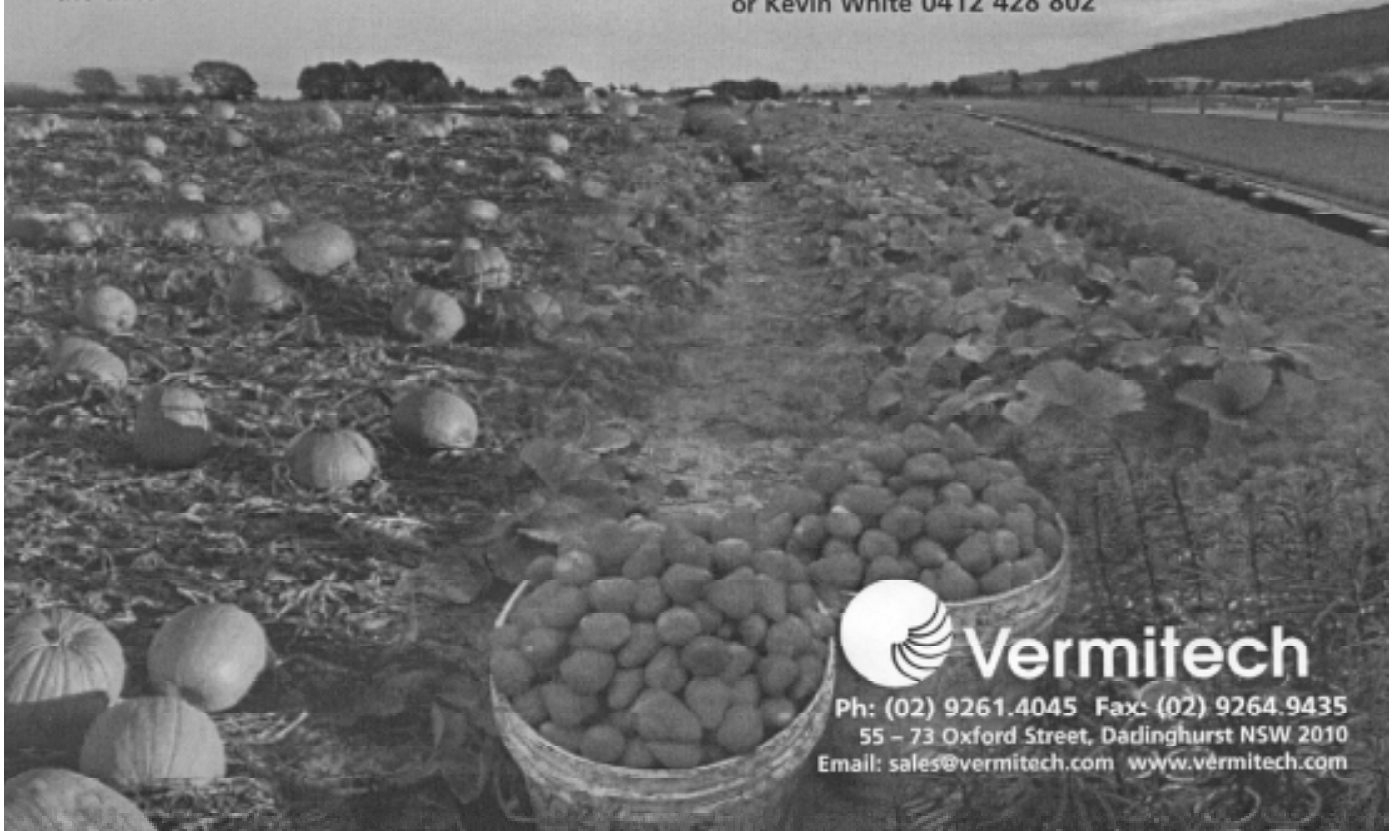
Yet balancing the agronomic equation is a complex business and whilst working your soil is smart practice – getting the soil working for you is smarter.

And when it comes to soil smart – BioVerm is top of the class.

A rich humus based product, using BioVerm is one of the easiest ways to return long term fertility to the most important resource you have – the soil.

Grower and scientific trials have shown increased yield, improved emergence and plant disease fighting properties amongst BioVerm's key benefits.

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Citrus field days - Renmark - 2001

Compiled by Sandra Hardy**, NSW Agriculture, Gosford

** Text in italics are my notes from the field day, other information taken from official field day booklet

Yandilla Park: Enviroscan demonstration

Been in operation 7-8 years with continuous logging being the main benefit. Are able to tell the difference between day and night water use. The site has drip irrigation (2 lines) and measurements are taken in the well-wetted zone about 10-15 cm from drippers. There are 26 probes over the 360ha property.

Irrigation practices have changed since installation. They were watering every second day during summer and have changed to every day in summer and every two days once the weather cools - this has resulted in more consistent productivity.

When using the data you must "ground truth" the information you receive (they use soil augers to verify data). They forward plan using the Bureau of Meteorology's seven-day forecast. They water during the day in summer for maximum uptake by trees. There are differences in water use by variety. If sub-soil moisture is being used, then you are not meeting the trees' needs because this water is the hardest to extract, therefore, using up a lot of energy. The top 10cm of soil (surface water) should never run out of water as this is bad for maximisation of fruit size.

They do not worry about root rot except in cooler weather. Use between 5.9 and 6.6 ML/ha (excluding windbreaks). Water use is rising. Mandarins use more water than Navels, which is important for sizing fruit and to stop them drying out.

Hand thinning demonstration (on four trees)

Crop load was measured early December, 10-14 per quadrant (1/2m cube) which was three times more than wanted.

Hand thinning, although a time consuming and expensive operation has become a necessary part of the citrus industry as growers strive to produce more large, blemish-free fruit which all markets demand.

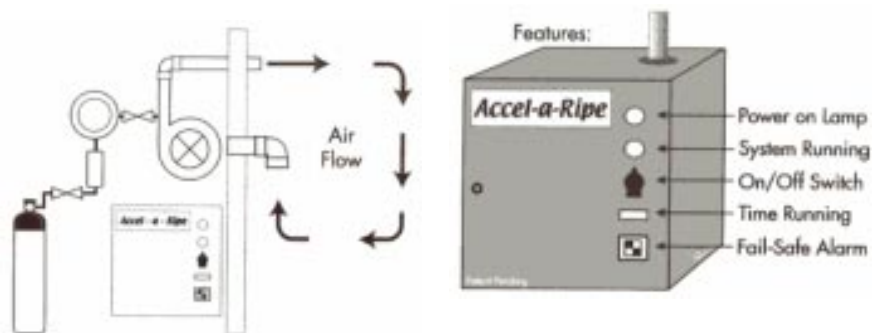
History has shown again that some of the most profitable seasons for citrus growers were 1998 and 1999, due largely to the production of an average or below crop of good sized fruit. Fruit counts per quadrant in these years were 3.3 and 5.7 respectively. Average size of fruit in May for the 1998 crop of navels was 80 mm and 1998 crop 74 mm. Therefore it appears that density counts have a direct reflection on fruit size and with the push towards larger fruit in all markets the above figures are statistics growers cannot ignore.

REDUCE RIPENING TIME AND INCREASE YOUR MARKET PRICE

The newly developed Accel-A-Ripe ripening system reduces ripening time, which means that produce can now be ready for market much quicker than other conventional ripening methods. Accel-A-Ripe reproduces the natural ripening process by maintaining an optimum level of ethylene gas in the ripening room. Produce is ripened evenly, maximising the price received at market, with no marking from ethylene and CO₂ droplets.

The Accel-A-Ripe system is easily calibrated to deliver the right amount of ethylene gas for the size of the ripening room and the produce being ripened. This results in a reduction in gas usage as well as quick and even ripening.

Accel-A-Ripe uses ethylene dissolved in CO₂ for safe application and features a fail safe mechanism in the event of a component failure.



Accel-A-Ripe is suitable for ripening all fruit and vegetables that benefit from ethylene ripening such as avocados, bananas, citrus (degreening), honeydew melon, kiwi fruit and tomatoes. It also has specialised applications for mangoes, certain varieties of plums and persimmons and williams pears for processing.

The Accel-A-Ripe system comes complete with instructions and ready to install with the only extra materials needed for installation being low cost PVC pipe. Developed by S&RD GasTech Systems it is recommended that the system is installed professionally. **For more information phone 02 4389 4979, visit www.srdgas.com or email us at mail@srdgas.com.**

The Citrus Field Day trial is purely a demonstration trial to look at the effect of crop load on fruit size. Initial density counts in mid December on this particular patch showed numbers around the 10-14 fruit per quadrant. The trees were then thinned not long after this time prior to Christmas.

Further counts and observations were made in January and on the 25th the trees were once again counted and thinned. This second thin took 8-10 minutes per tree including the use of a ladder to do the tops.

The density count figures shown are the counts prior to the second thin. In this trial the aim was to thin the trees down to levels around 2.5-4 fruit per quadrant.

Approximate costs of thinning in this trial with wages at \$13/hour. Combined thinning time - 12 minutes the first time and 8 minutes the second time = 20 minutes per tree = 3 trees per hour. 3 trees/hr divided by \$13/hr = **\$4.35 per tree.**

Date	Average fruit size (mm)							
	25-Jan	25-Feb	23-Mar	17-Apr	25-Jan	25-Feb	23-Mar	17-Apr
Tree 1	52.25	62.25	68.5	72.25	54.5	65.5	72.75	76.75
Tree 2	50.4	61.0	67.76	71.5	53	63.8	70	73.5
Tree 3	53.66	64	70.66	75	53	63.5	70	74
Tree 4 Control	53.33	63	69.5	72.33	50.4	61	67.6	71.6
Density counts prior to thinning								
Tree 1	5.8	approx 180 pieces of fruit removed						
Tree 2	4.6	Approx 180 pieces of fruit removed						
Tree 3	2.8	Approx 130 pieces of fruit removed						
Tree 4	3.5	Untouched control						

Confidor® for the control of Citrus Leaf Miner

Bayer Australia Limited is currently developing Confidor® as a soil applied treatment for the control of citrus leafminer in citrus.

Trials have been conducted to investigate the potential for Confidor® when applied as a soil drench, in order to provide sustained control of the pest through summer and into autumn. This eliminates the need to use oil sprays during the heat of summer and allows each successive growth flush to remain free of citrus leafminer. Confidor® drench treatments are usually applied in late October to early November.

Confidor® applied as a drench is most reliable on smaller, non-bearing trees. It is probable that considerably higher (and uneconomic) rates of Confidor® would be required to treat large trees. As citrus leafminer is only economically damaging to small trees, there should only be a need to treat trees until 4-5 years of age.

Trials to date involved spraying or pouring a drench around the base of the trunk in around 1L of water per tree. Future work will also look at applying Confidor® through irrigation systems.

Treatments

White tags untreated:

Black tags 10ml)

Green tags 15ml) @ 1 L/tree

Red tags 20ml)

Yellow tags 20ml @ (250 ml/tree)

My observations - Untreated, green and black tags - trees still had some damage. Red and Yellow tags - only the last one or two leaflets were damaged. Definitely reduced attack and damage on red and yellow tagged trees but possibly treatments could have been applied a little later.

NuFilm-17 and Plant Growth Regulators

NuFilm-17 is an organic product derived from pine tree sap that is refined to a product called Pinolene. When combined with plant growth regulators it increases uptake by adhering them to the plant cuticular waxes. Pinolene and cuticular waxes are almost identical in chemical composition and subsequently the plant growth regulator is melded into the plant itself.

Similar to sap, the layer of NuFilm-17 sets through interaction with ultra violet light, but remains viscous below the surface. This enables plant growth regulators to remain in an ionic state, which is the key to optimal uptake.

One hour after application and exposure to sunlight, NuFilm-17 has adhered to the plant cuticular waxes and will not re-wet, which is a major disadvantage of non-ionic surfactants. This property ensures absolute rainfastness. As NuFilm-17 is a sticker, the spray applied will not sheet off, increasing initial deposition by an average of 30% and ensure even coverage, rather than ponding at the lowest point.

As an organic product, NuFilm-17 is registered with BFA, and is a food grade product. The concept of NuFilm-17 is to enhance the performance and optimise every dollar invested in spray. The same principles apply to fungicides, insecticides, foliar nutrients and bactericides. Rates applied vary depending on water volumes being applied per hectare to achieve coverage.

Commander Fruit Harvester

Does three bins/hour up to four with modification. Cost \$64,000. Halved picking time compared to people and ladders. Four bins/hour with two people. Compared against hydro-ladder and Commander is twice as fast. Machine made narrower for citrus. Uses 20L fuel/day. Double boom could do six bins/hour. Single boom goes both sides.

Vaporguard in Citrus

Vaporgard is a shorter chain polymer of Pinolene, an organic product derived from pine tree sap.

Being a short chain polymer, it adheres to cuticular waxes in such a way that it effectively thickens the wax layer, the plant's natural defence against ultra violet light and moisture loss. By applying to citrus in peak water uptake periods, we see a reduction in moisture stress, impacting on fruit size and overall plant health. Similarly sunburn to fruit can be markedly reduced through its shielding of UV. Vaporgard is a food grade product, and will not effect photosynthesis or respiration of the plant.

The main benefits of Vaporgard are seen in the packhouse in reduction of reject fruit and increase in size distribution. Application rates are on a concentration basis of 1% of water volume applied. The product must be applied to point of runoff, to ensure complete coverage.

Increases photosynthetic capacity by reducing transpiration. Increase in fruit size similar to that from thinning. Cost \$300-400/ha - applied at golf ball size when temperatures are hotter and natural wax layer not fully developed yet. Product stretches up to three times the surface area it is applied to.

Polymer sticks on outside of fruit but does not reduce uptake of other things anymore than natural leaf cuticle does. Increases amount of chlorophyll in leaf because it prevents natural breakdown in high temperatures.

Increasing the size of Navels (Peter Gallash)

This research aims to provide information for the registration of dichlorprop, a new auxin type growth regulator, used to increase fruit size of citrus. Dichlorprop (owned by Nufarm) is not registered for use on citrus in Australia. It is used in South Africa and Spain, especially on mandarins, but also on oranges. It is sold in these countries as Corasil E® or DPGross™.

Current formulations are the 'racemic' form of dichlorprop. In this experiment the 'optical' form of dichlorprop (dichlorprop-p), which was recently produced by Nufarm chemists, will be evaluated for the first time. Dichlorprop-p should be as effective as dichlorprop, but at half the dose rate.

A range of concentrations of both products were applied at two timings, to determine which will give maximum economic benefits.

Overseas Experience

- Early applications of dichlorprop at 15-18 mm diameter have a thinning effect on fruitlets which indirectly aids fruit sizing.
- Later applications at 25-30 mm have a direct fruit sizing effect. This later timing generally requires higher rates.
- Care should be taken at application to avoid extremes of temperature, humidity, and wind speed and to avoid treating stressed trees.

Eleven treatments, consisting of two spray applications, with three rates for both chemicals at the first application and two rates for both chemicals at the second spray application and one unsprayed control. Sprays were applied at high pressure using a hand sprayer, at 1,500 L/ha.

First Spray (often used in South Africa) when fruitlets averaged 18.5mm diameter, occurred on 24/11/00.

Second Spray (often used in Spain) when fruitlets averaged 25.1 mm diameter occurred on 4/12/00.

Just prior to harvest an indication of fruit size will be obtained by measuring 50 randomly selected fruit per tree.

Rugby® (Nematicide by CropCare): Greg Walker

Rugby 100G® was evaluated in pot and field experiments in navel oranges against nematodes including Citrus Nematode, and Stubby root Nematode. Multiple applications at 15-30g/m² to the entire root zone, particularly 3 applications in one season, were found to be highly effective in suppressing nematode levels in soil and on roots. Results obtained represented a significant advance on traditional use of nematicides.

Significant yield increases were observed in many, but not all, orchards especially in the third and succeeding seasons following treatment with Rugby 100G®. Yield increases (of up to 140%) were observed following treatment of both bearing and (young) nonbearing orchards. More evidence was found to suggest that increased yields were a result of increased number of fruit per tree rather than an increase in mean fruit size.

Cost-benefit analysis suggested that the value of potential yield increases could exceed the cost of chemical applied. Other potential barriers to cost-effective usage/industry adoption that were identified included poor distribution uniformity of irrigation systems leading to reduced penetration of the chemical into the soil profile; difficulties in removal of leaf litter and potential adsorption loss of the chemical; non-wetting soils; the need to skirt trees possibly before each application to allow penetration of chemical and irrigation water under the canopy. In general, maximising cost-effectiveness of this chemical will require an increased level of management skills from growers compared to that used in annual, banded application of nematicides.

Not registered yet, but registration expected later this year around September-October. Non-systemic- short withholding period. Works by direct contact or by ingestion by the nematode. Has been used in Queensland on mandarins with 100% control after 200 days. Need to rake heavy mulch away before application.

Band from trunk to drip line of tree. Need to incorporate with water within 24 hours (a 25-50mm irrigation). Drip irrigation not enough to get product into ground. Monitor nematode population after one year. Need to get below economic level of 1,200/100 g soil.

Auscitrus update: Paul Florrisen

High demand for citrus budwood has continued with more than 300,000 buds supplied to the Australian citrus industry in spring 2000. High demand for budwood has also continued for summer/autumn 2001. Requests for propagation material of new varieties is growing with demand for mandarin varieties such as Fallglo, Daisy and Okitsu satsuma steadily increasing.

Recently Released Varieties – Available now:

A limited amount of early release budwood is available from container grown trees of Fukumoto navel, Avana Apireno mandarin, Avana Tardivo di Ciaculli mandarin, Afourer mandarin, Corsica 1 clementine and Corsica 2 clementine that have not fruited. Recipients of budwood should understand that the fruiting characteristics of these varieties have not yet been evaluated in Australia.

Fukumoto navel Early maturing navel orange selection that has become very popular with Californian citrus growers. Rind is highly coloured under Californian growing conditions. Tree tends to be slow growing with moderate yields and fruit rapidly loses flavour due to low acidity in California.

Palmer Navel – This navel variety is marketed as an early/mid-season variety in South Africa. The budline supplied to Auscitrus from the South African improvement scheme appears to have a later maturity period. Preliminary observations from reworked trees at Waikerie in South Australia indicate that it is fully mature in August/September. Fruit appears to hold well on the tree and has medium to large fruit size. Growers and nurseries purchasing budwood or trees of Palmer navel should be aware the budline currently available in Australia has similar characteristics to Lane Late navel.

Avana Apireno and Avana Tardivo di Ciaculli mandarins – Originating in Italy. The Apireno selection is expected to mature from May to mid-June in Australia. The Tardivo selection is expected to mature from early August to early October in Australia. No fruit have been produced under Australian growing conditions.



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- Solution grade fertilizers of consistent quality
- No bags to open and dispose of
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- No manual lifting
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- Accurate measure of nutrients per hectare, per tree or per tank
- No down time waiting for products to dissolve
- No insolubles so no blockages
- Non Dangerous goods
- Easy to handle

Pump It Don't Lump It !!

How do you apply easy liquids?

- Direct feed into irrigation lines for fertigation through:
 - Drip
 - Trickle
 - Overhead and undertree sprinklers
- Pumped into mixing tank as blend ingredient
- Directed spray application to soil
- Not recommended for foliar as yet (until trials are conducted)

Products Include:

EASY N : Liquid Nitrogen

- Nitrogen is present in 3 forms Urea 21.5%, Ammonium 10.5% and Nitrate 10.5%
= Total (W/V) 42.5%

EASY ATS : Liquid Nitrogen and Sulfur

- Nitrogen 16% Sulfur 34% (W/V basis)

EASY Cal : Liquid Calcium nitrate

- Calcium 12% Nitrogen 18%
Phosphorus 0.2% (W/V basis)

EASY KTS : Liquid Potassium and Sulfur

- Potassium 30% Sulfur 25% (W/V basis)

Afourer mandarin - Originating in Morocco, this mid-late season variety was imported from California. Marketed in California as Delite and known as Nadorcott in South Africa. Trees are vigorous and reported to be high yielding. Young trees set fruit within eighteen months of establishment and it appears that trees will require thinning to prevent overcropping. Upright growth habit means that sunburn of terminal fruit is also a potential problem.

Corsica 1/Corsica 2 clementines - Originating in Corsica. They are both early maturing clementine selections expected to mature earlier than Imperial mandarin under Australian growing conditions. No fruit have been produced under Australian growing conditions.

New Variety Observations from Reworked Mandarin Trees at Dareton:

Graeme Sanderson, NSW Agriculture

Fortune Mandarin – The first season crop in 2000 required hand thinning of up to 500 fruitlets per tree, and a similar level of thinning has been required for the 2001 crop. Even with hand thinning final fruit size remained small. High acid levels are maintained well into August at the Dareton trial site. Skin deterioration is apparent before acidity has fallen to acceptable palatability. This variety will be a challenge to grow successfully under Australian conditions.

Topaz (Ortanique) – Initial concerns over suitability as a fresh fruit variety have been reduced due to potential of this variety for fresh juice production.

Encore – Continues to receive very favourable comments with regard to eating quality. Fruit from trees on *P. trifoliata* remain palatable until mid-November at Dareton, but external skin blemish has caused negative reactions to fruit displayed at Melbourne Wholesale Markets in 2000. Sensitivity of rind to hot climatic conditions will probably prevent commercial growing of this variety in southern Australia.

This variety is grown commercially in New Zealand and in Japan where individual fruit are bagged to improve rind quality.


Profile of the “Top End” Citrus Industry Dr. John Mansfield, D.P.I. Katherine.

The citrus industry in the “Top End” has expanded rapidly in the last few years. There are currently nearly 70,000 trees planted and of these 40,000 are located in the Katherine region. In addition, another 12,000 trees will be planted in the Katherine region in May/June 2001. Of the trees planted there are around 30,000 grapefruit trees, 26,000 lemons and 12,000 limes.

There are also another 1000 trees of other citrus types.

In the Katherine region, around 50% of the 40,000 trees planted are lemons and 45% are grapefruit. The remaining trees are limes and other citrus types.

Over 80% of the citrus trees planted in the “Top End” are yet to come into production. Almost none of the citrus trees planted in the Katherine region were producing at the time of the survey. This is in contrast to the Darwin region, where nearly 70% of the lime trees and 50% of the grapefruit trees had come into production, but most of the lemons trees are still yet to produce.

There is a difference between the Darwin and Katherine regions in the cultivars of lemons and grapefruit grown. In the Katherine region, mainly the red-fleshed grapefruit cultivars are planted. The Darwin Region differs in that the trees of the pink-fleshed grapefruit cultivar “Ruby Red” are mainly grown though some red-fleshed cultivars are now starting to be planted. For lemons, “Eureka” and “Lisbon” are the main cultivars grown in the Katherine region, though some “Fino” are also planted. In the Darwin region there are plantings of Lisbon and Eureka but there are also plantings of lemon hybrids - Myer and Lemonade. 

PERMIT: Quarantine Measure for Citrus Red Mite

FOR MINOR OFF-LABEL-USE PERMIT NUMBER - PER4515

This Permit is in force 2 May 2001 to 30 September 2005 until it expires or it is cancelled, suspended or surrendered.

Reason for issue of permit: Citrus red mite is a pest restricted to the counties of Northumberland and Cumberland in NSW. As a quarantine measure, to prevent the spread of the mite to inland citrus areas, plant quarantine restrictions were introduced in 1974 and proclaimed in 1976. Off-label permits have been required in the past to treat citrus budwood, bare rooted citrus plants and potted citrus plants for transport (within and without) the counties of Northumberland and Cumberland as a plant quarantine and disease control measure. A chemical treatment that provides both miticidal and ovicidal properties is required for this important treatment. It has been requested by NSW Agriculture that a permit be issued to allow the combined use of several currently registered actives to provide both ovicidal and miticidal properties, these two activities being abamectin (miticide) and clofentazine or amitraz (ovicide).

Directions for use:

Crop
CITRUS TREES
(BARE ROOTED AND
POTTED NURSERY
PLANTS NSW ONLY)

Pest
CITRUS
RED MITES

Rate
Apply at the rate of 25mL Abamectin
(formulated product) i.e. ‘Vertimec’
PLUS EITHER
30 mL ‘Apollo SC’ **OR**
5mL amitraz (formulated product)
per 100 litres of water

Apply as a 2 minute dip for budwood and thoroughly treat with a drenching spray or dip to all the above ground parts of bare-rooted and potted plants.

New Florida Varieties April 2001

Phillip Wilk, District Horticulturist, Alstonville

This information is provided by ANFIC from fruit set data from the Gainesville area in Florida. No testing has been done in Australia as these trees although planted at Bangalow, are less than 2 years old as of April 2001

Peaches

Fla 88-22c A non melting flesh peach variety, 225CU, with 70% blush and deep yellow to orange ground colour. Ripens 103 days from full bloom near to Flordagold and Sunwright (mid Oct). 120-140g or 23-28 tray count. Medium tip.

Fla 92-11c (UF Charm) A melting flesh peach variety, 250CU, with 30-40% red blush with bright orange yellow ground colour. Ripens 12 days before Flordagold or early October. 110-120g or tray size 25-30, some suture bulge.

Fla. 92-15c (UF2000) Is about 95 days FDP, 300cu, ripening near Flordagold season at Gainesville. Fruit size is about 140-150g, small tip. Flesh yellow, non-melting with 50-70% red skin and greenish yellow ground colour at ripe. A small amount of red occurs in the flesh in some years.

Fla 92-22c A melting flesh peach variety 250 CU, 30% red blush with orange yellow ground colour, ripens 100days after full bloom or 5 days after Flordagold or Sunwright (mid Oct). 130-150, or 23 – 28 tray count.

Fla 93-13c A non melting flesh peach variety, 350 CU, with 50% bright red blush and yellow ground colour, 100 days from full bloom ripens at same time as Sunwright or Flordagold. (mid Oct).

Fla 93-14c (Gulfprince) A non melting flesh peach variety, 375 chill units, with 80% red blush with orange ground colour, 94 days from full bloom, ripens near flordagold.120-130g, 25-28 tray count.

Fla 94-42cw A white non melting flesh peach variety, 425CU, 50% med red blush with creamy white ground colour. Ripens 96 days from full bloom or 10 days after Sunwright or Flordagold (late Oct). 90-110g or 28-30 tray count. Some suture bulge.

Nectarines

Fla 94-28cn (UF Queen) A non melting flesh nectarine variety, 250 CU, 100% bright red blush with light orange ground colour. Ripens 97 days from full bloom or one week before Sunwright or Flordagold (early Oct). 100-120g or 25-28 tray size.

Fla 94-30cn

A yellow non melting flesh nectarine variety, 275CU, 100% bright red blush with light orange ground colour. Ripens one week before Sunwright (early Oct) or Flordagold, 100-115g or 25-28 tray count.

Fla 96-18c Is about 80 days FDP, 400cu, ripening with or 3 days after Flordagold at Gainesville with about 115g fruit weight, nearly round, non-melting and attractive yellow flesh, with no red in flesh. About 70% red blush, attractive.

Fla. 96-23c Is about 85 days FDP, 425cu, ripening about 2-4 days before UFQueen nectarine at Gainesville with 125g fruit weight, small tip, non melting yellow flesh fruit. Skin colour is only 50-70% red blush, but very attractive deep yellow ground colour.

Fla. 97-8c Is about 85 days FDP, 250-300 cu ripening with Sunraycer nectarine at Gainesville with about 110g fruit weight, round, non-melting and yellow flesh fruit with near 100% somewhat dull red skin.

Fla. 97-35c Is about 90 days FDP, 300cu, ripening about with UFQueen nectarine at Gainesville with 135g fruit weight, good shape – nearly round, nonmelting, yellow flesh fruit. Skin is short pubescence, colour is 80-90% red with dark red stripes, very attractive with deep yellow ground colour.

Fla. 97-42c Is about 110 days FDP, 125cu (very low), ripening with UF2000 or nearly a month after Flordaprince, at Gainesville. Fruit size about 115g, very round fruit with yellow, non-melting flesh with some red in flesh, and short pubescence. Skin is near 100% red and very attractive.

Fla. 98-1c Is about 80-85 days FDP, 200cu, ripening with Flordaprince and UFGold at Gainesville, Florida, with about 110g weight, round but recessed tip, non-melting flesh fruit, with yellow flesh and near 100% red skin with no stripes.

Fla. 98-3c Is about 95 days FDP, 225cu, ripening 3-5 days after Tropic Beauty at Gainesville with about 130g fruit weight, nearly round and 100% dark red skin.

Fla. 98-10c Is about 92-94 days FDP, 200cu, ripening with or 2-3 days before TropicBeauty and Sunraycer at Gainesville with about 130g fruit weight, nearly round with small dull tip, nonmelting and yellow flesh with some red in flesh. Near 100% red skin, very attractive, moderate sweetness.



The Pesticides Act 1999 - what's new?

Anna Ernst, Pesticide Unit, EPA, Sydney

The *Pesticides Act 1999* (replacing the older *Pesticides Act 1978*) became fully operational on 1 July 2000 and is administered by the NSW Environment Protection Authority (EPA).

The EPA enforces the proper use of all pesticides in NSW, after the point of sale. This includes pesticides used in agriculture, on public lands and on domestic and commercial premises.

What is important about this new law?

Everyone who makes decisions about using a pesticide needs to make sure it is used properly. All people involved in making decisions may share legal responsibility and can be fined if the pesticide is misused. This includes the owner of the land, the person using the land and contractors as well as the person applying the pesticide.

One of the reasons for introducing this provision was to ensure that a land occupier tells the person applying the pesticide all the information they need to know, such as whether there are surrounding sensitive areas or crops. This provision also tries to stop people from making someone apply a pesticide when the weather conditions are not right.

How can you make sure you are doing the right thing?

Carefully read and follow the instructions on the label for the pesticide's correct use, storage and disposal. Also, think about each application thoroughly before using the pesticide and do everything you reasonably can to ensure that there are no non-target impacts. For example you must make sure that you:

- use only registered pesticides
- only use the pesticide as directed on the label (unless you have a permit from the National Registration Authority to allow specific off-label use)
- identify nearby houses, crops or livestock to make sure they are not exposed to the pesticide. If you are the farmer or manager and you have asked someone else to apply a pesticide, provide that person with the information about nearby houses or items that must not be harmed.
- spray in suitable weather conditions so that spray does not drift outside the target area. Don't spray in high winds or when there is no wind. A light steady wind blowing away from houses and other sensitive areas is best. Don't spray just before rain.
- check for people downwind of the application site and make sure they will not be exposed to the pesticide.

- use the right equipment and make sure it is well maintained, calibrated and operated
- provide adequate instructions and training to all employees or family members who use pesticides on the farm or property.
- do not store pesticides in containers which do not bear an approved label.

Other key points about the Act:

Maximum penalties for most offences have increased to \$60,000 for individuals and \$120,000 for corporations. Fines for offences committed wilfully or negligently are \$120,000 and \$250,000 respectively.

- There are also Penalty Infringement Notices (like on-the-spot fines) rather than prosecution for minor offences.
- Lower application rates are permitted unless they are specifically disallowed on the label.

Pesticides Implementation Committee

The Act established the Pesticides Implementation Committee (PIC) which provides advice to the Minister for the Environment and the EPA on how to put the new *Pesticides Act* into practice. The committee has broad community representation and is addressing as a priority the following key areas:

Proposed record keeping regulation

A draft regulation and Regulatory Impact Statement (an assessment of the costs and benefits of the proposal) detailing proposals for mandatory record keeping for all commercial pesticide users (including fruit growers and other farmers, pest controllers, weed sprayers, government agencies and local councils) were released for public comment in early February 2001. The EPA is currently reviewing the approximately 300 responses to the proposal and the Pesticides Implementation Committee will discuss responses. When the regulation is finalised, the EPA will prepare and publicise guidance material to assist pesticide users understand what is required for record keeping.

Proposed training regulation

Proposals for mandatory training of commercial pesticides users, including farmers (and others as for the record keeping proposal) are being considered by the PIC.

While the proposals are still being developed, it is intended that the training would be competency based and that people who have already done training under the Chemcert (or former Farmcare) or SMARTtrain programs would be accepted as meeting the training requirements for 5 years after the date of their training.

It is also intended that there would be a 2-year phase-in period to allow people to have their experience and skills formally assessed and recognised or to undertake any training they may need. A draft regulation and associated Regulatory Impact Statement are likely to be released in the second half of 2001 and the EPA will then be seeking your comments on the proposal.

Location of EPA pesticides officers

Pesticide officers can advise you on your legal responsibilities and other pesticide issues. Pesticide officers can be contacted by calling the EPA Pollution Line on 131 555. Alternately, EPA pesticide officers are located at the following EPA offices.

Sydney 02 9995 5789; Newcastle 02 4926 9971; Parramatta 02 9995 6823; Queanbeyan 02 6122 3100; Dubbo 02 6884 9757; Tamworth 02 6766 7871; Grafton 02 6640 2500; Moree 02 6751 1519; Griffith 02 6964 1880;

Want more information?


Information sheets about the Act are available from the EPA's Pollution Line on 131 555 (for the cost of a local call from anywhere in NSW).

These information sheets and other information about pesticides are also available on the EPA's website at www.epa.nsw.gov.au.

Free collection for unwanted farm chemicals

Storage of chemicals is an important issue for the farming community. While it's not unusual for drums of unwanted chemicals to sit in sheds, there are risks to farming communities, trade and the environment if these chemicals escape.

This problem is being addressed by the ChemCollect program, which is a once-only free farm chemical waste collection, jointly funded by the Commonwealth and the NSW Government. The program will assist farmers to get rid of old, deregistered or unwanted chemicals and the environmental and health risks they represent.

Waste Service NSW is coordinating collections progressively through the State. The collections will largely take place over 2001 and 2002. Farmers will be informed well in advance about the locations and dates for these collections. For information about collections call 1800 507 654 or visit the website www.chemcollect.nsw.gov.au. 

What's on

- 20-21 July 2001 - Mudgee Small Farm Field Days**
Contact: Dallas Rheinberger
Phone: 02 6372 3380
- 21-23 Aug 2001 - Ag-Quip Field Days, Gunnedah**
Contact: Terry Hill
Phone: 02 6762 2399
- Aug 27-28th 2001 National Organics Conference**
Darling Harbour Sydney. Contact
Marryn Jones 02 6272 4205

What's new

RIRDC has just launched its AgFact directory, a one-stop shop for fact sheets on rural industries. Go to: www.rirdc.gov.au/agfacts
RIRDC's research reports are also available for download from: www.rirdc.gov.au/reports

Chemcert Course Dates Autumn 2001

Chemcert basic (2 days)	26-27 June
	24-25 July
	8-9 August
	28-29 August
Chemcert refresher (1 day)	21 June
	19 July
	16 August

These Courses are run by Mike Barrett (Horticultural & Crop Protection Consultant). The courses are being held at Rouse Hill in Sydney. Phone Mike on 02 9875 3087 or 0407 062494 for more information and bookings.
email: mikebarrhort@one.net.au

7th Australian Fresh Stone Fruit Industry Conference

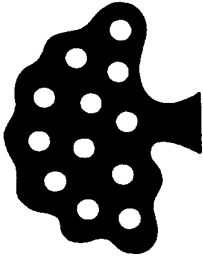
24-27 July 2001
Wrest Point Hotel & Conference Centre
Hobart, Tasmania

- Tues 24 July* Registration, welcome reception and trade display
5.30pm
- Wed 25 July* Research & Development forum and workshop sessions
- Thurs 26 July* Breakfast sessions followed by Field trip visiting 3 progressive stone fruit orchards in Coal River Valley.
- Fri 27 July* 7th Annual General Meeting

Full registration before 30-06-01 \$180
after 30-06-01 \$230

Contact: Conference Secretariat,
PO Box 342 Sandy Bay, Tas 7006
phone 03 6224 3773 fax: 03 6224 3774
e-mail mail@cdesign.com.au

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COASTAL FRUITGROWERS' NEWSLETTER

The Coastal Fruitgrowers' Newsletter is a quarterly publication distributed in Spring, Summer, Autumn & Winter. It is available free to all commercial fruit growers in the Sydney Basin, Central Coast, Hunter Valley, South Coast & North Coast areas.

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Sandra Hardy - District Horticulturist
Mobile 0412 - 425 730

Maitland - Tocal 02 4939 8888

Tony Summers - District Horticulturist
Norm Cross - Irrigation Officer
Alan Richards - Irrigation Officer
Graeme Brown - Agricultural Inspector
Mobile: 0427 007354 Fax: 02 4939 8961

Windsor 02 4577 0600

Peter Malcolm - District Horticulturist
Bill Yiasoumi - Irrigation Officer
John Gillett - Irrigation Officer
WaterWise Officer -Matt Plunkett
Rob Bowman -Senior Inspector
(Sydney & South Coast) 04111 39579

ALWAYS READ THE LABEL

Users of agricultural chemical products must always read the label and any Permit, before using the product, and strictly comply with the directions on the label and the conditions of any Permit. Users are not absolved from compliance with the directions on the label or the conditions of the Permit by reason of any statement made or omitted to be made in this publication.

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