



# COASTAL FRUITGROWERS' NEWSLETTER

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Dear Growers

Welcome to the Spring edition of the Fruitgrowers Newsletter. Let's hope that the season starts with some good falls of rain in all those regions that desperately need it.

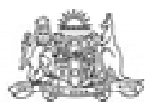
This issue contains a selection of recent field days reports and some conference reports in the News in Brief section. Inside you'll also find the annual update on product registrations for use in both commercial citrus and avocado crops in NSW.

There are also two important events coming up in October. The first event for the new Central Coast Avocado Study Group will be a field day on the 17 October, focusing on phytophthora management.

The second event is the next Central Coast Citigroup meeting which will host board members of the Australian Citrus Growers (ACG) who will speak about the Citrus 2015 project, including options for the new industry organisation structure. Andrew Beattie will also be in attendance speaking about the impact of the exotic disease Huanglongbing (citrus greening) on citrus growing countries around the world. See page 27 for details.

Happy reading

Sandra Hardy



NSW DEPARTMENT OF  
PRIMARY INDUSTRIES

Coastal Fruitgrowers' Newsletter  
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# Tilt and brown rot of stone fruit

## Is there a problem?

**Shane Hetherington, Industry Leader-Temperate Fruits  
NSW DPI Orange.**

Propiconazole is the active ingredient in the fungicide Tilt®. Tilt® became available on the Australian market in 1984 and has become a popular choice for the control of brown rot in stone fruit. Tilt® belongs to a group of fungicides known as the demethylation inhibitors (or DMIs) which control fungal pathogens by inhibiting the synthesis of their cell walls.

This fungicide has been used successfully by stone fruit industries across the world for more than 20 years. Orchardists in the Southern USA recently noticed that brown rot was becoming difficult to control with Tilt®. Closer investigation revealed that populations of the pathogen had developed resistance. In Australia, growers began to express similar concerns several seasons ago as brown rot outbreaks limited production in some coastal orchards despite Tilt® application. So is brown rot developing resistance to Tilt® in Australia?

In some cases resistance develops quickly and a pesticide rapidly loses its effectiveness. For the DMIs this is not the case. Resistance builds slowly over a long period of time and the loss of effectiveness compared to previous seasons is difficult to notice. This makes detection of resistance a difficult proposition which involves collection and testing of large numbers of samples. Our team collected several hundred samples from the Mangrove Mountain and Glenorie regions.

We then tested the tolerance of the samples by growing them on agar media which had been treated with propiconazole at a range of concentrations. Samples which had a greater tolerance to propiconazole grew better on media which was treated with higher rates, than those samples which were susceptible to propiconazole.

As we expected the samples showed a range of tolerances to the Tilt®. Interestingly samples collected from orchards which had reported difficulty in controlling brown rot did not stand out from samples collected from other orchards.



During the late 1980s plant pathologists from the Yanco Agricultural Institute had made a collection of brown rot samples from around the Murrumbidgee Irrigation Area (MIA). Many of these samples had died in storage but enough survived to allow us to compare them to our coastal collection. Because the MIA collection had only been exposed to DMIs for a maximum of four or five years, these samples should not have developed tolerance. A comparison between the MIA and coastal populations should provide some interesting information on whether Australian brown rot has developed tolerance to propiconazole.

Before we could begin work with the MIA samples we had to make sure that each one was genetically pure, could grow at a reasonable rate on agar and was able to cause disease. Many of the samples were rejected at this stage leaving us with a final population of 40 samples. These samples were tested for propiconazole tolerance using the same procedure as the coastal samples. Our first series of experiments failed; the propiconazole concentrations we had used for the coastal samples was simply too high to allow the MIA samples to grow. It seemed highly likely that MIA samples were susceptible to lower concentrations or doses of propiconazole. We re-designed the experiment and found that on average, samples collected from coastal regions over the last 3 seasons were 1.5 to 2 times more tolerant of propiconazole than the MIA isolates.

More analysis still needs to be completed on this work. We also want to collect and test some samples from the MIA during the next season. This will provide final confirmation that propiconazole tolerance has developed slowly in Australia.

So what are the implications of this work? Most orchardists are not noticing any reduction in the effectiveness of Tilt® in controlling brown rot. It is still a very effective control option. However, our work (and experience from overseas) has shown that it must be managed wisely. We recently conducted a survey of the Australian stone fruit industry's fungicide use. Tilt® is a very popular choice for brown rot control but other options should also be considered including Cyprodinil (during blossom) and saprol (pre-harvest). Implementation of an IPM strategy also reduces dependence on fungicides, slowing resistance and prolonging their useful life.

### Acknowledgements

This work was carried out using funding obtained from the Australian Centre for International Agricultural Research. I would also like to acknowledge the contribution of staff from the Gosford Agricultural Institute including Sandra Hardy, Suzie Newman, Vivian Ku and Elena Lazar in the planning and sample collection phases of this work.



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# Hail netting bus tour to Batlow

**Peter Morrish, Executive Officer, Riverina Citrus.**

Batlow Apple Co-operative has developed a netting system for use in their orchards, specifically for the protection of fruit from hail damage. The tour of the first demonstration site was undertaken in early August in conjunction with 25 apple and cherry growers from Orange. Ron Gordon, Technical & Production Manager, provided an overview of the netting structure.

Growing apples in the Batlow region is susceptible to hail that causes downgrading of fruit and returns to growers. One of the main impediments to the erection of hail netting over orchards has been the cost. Batlow have developed their own structure after reviewing structures around the world, particularly in Europe.

They have established their system based on the following criteria:

- Steel construction to avoid using copper chrome arsenic (CCA) treated posts.
- Sustainable.
- A controlled release system to drop the hail in the middle of the rows, not onto trees. This will reduce the stretching of the net from the weight of the hail.
- Growers can erect the structure themselves but will require some initial supervision.



*Three kilogram weights used to show how the net opens up*

- Combined tree support with the hail net structure.
- Cheap, but scientifically designed and engineered.
- Incorporates bungy straps – for release of netting to drop the hail and return to position. Other structures have used clips designed to fail at a certain load but the clips have to be manually reset. Currently a 3 year guarantee on the bungy straps, but investigating a new supplier offering a 10 year guarantee. Two points of release, the bungy stretch and the bungy snap (for snow conditions).
- Poles and screw anchors. A pilot model was trialled in Adelaide and utilised cranes to test pole pull strength. A bobcat utilised to screw in poles (contractor). A pneumatic driver for poles using a power ladder (11 seconds to drive in). Importing a vibrator from Canada to put poles in, in 4 seconds. Internal poles to a depth of 500mm, outside 800mm. Will replace all wooden posts in the orchard. 12m apart (10m in Europe). Distance will depend on potential crop load. Currently 4m high, but can design for greater height.
- Can release the bungy and roll the net up during the snow season.
- Net is from New Zealand and is knitted. In Europe they utilise woven net. Some concern on possibility of runs in the weave from a slight tear (will be trialling this, as the knitted net is cheaper). A 10 year guarantee for netting and poles. Manufactured to order. Flat or gable. Only minor tension on the netting. White colour at this stage (Europe does not allow white netting). Will be trialling other colours and the affect on both trees and fruit.
- Labour is still the major cost of the structure. Our aim is to allow growers to erect some of the structure themselves.
- Currently using on 4.5m rows with 5m wide netting. Minimum 3.5m rows to allow access for the power ladder.

- Wire is 6mm for the apex woven through the net by a machine. Hoping to get manufacturers to incorporate it when making the net.
- Cost of the structure varies with block size and shape, but estimates are from \$26,000 to \$29,000 based on the demonstration block.

The process incorporates the surveying of the block utilising GPS. This information is then put into a drawing program to design the structure. This component is charged for separately in case people do not go ahead with erecting the structure. Whilst it is preferable to have growers erect most of the structure themselves, at this stage most growers prefer that Batlow Co-operative undertake the full erection.

Other advantages of the net include exclusion of birds, reduced sunburn and wind rub. They are not sure about the effect on frost, but suspect there maybe some advantage against frost. Structure does not have sides on at this stage, but can be designed for that purpose - this will also help reduce the wind load on the structure. There is also the possibility of putting a rain cover over the top of the net to protect the fruit. In Europe the rain cover is actually hung underneath the net. This would need to be incorporated into the design.

An Adelaide based company is designing the structure after a tender process established by Batlow Co-operative.



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# Online variety information for low chill growers



Source: *Low chill Stonefruit Grower*, Issue No 3/07, July 2007.

**Dougal Russell, Senior Experimentalist – DPI&F, Applethorpe.**

A new 2 year project that will provide growers with web based information on low chill peach, nectarine and plum varieties is about to commence.

The project will describe new and current low chill stonefruit varieties and how they perform in different regions around Australia. Stonefruit with a low chill requirement are at the mercy of the environment and performance can vary from year to year depending on seasonal temperatures. Similarly a variety grown in different locations with varying micro-climates can also exhibit variation in fruit quality and tree performance across the sites.

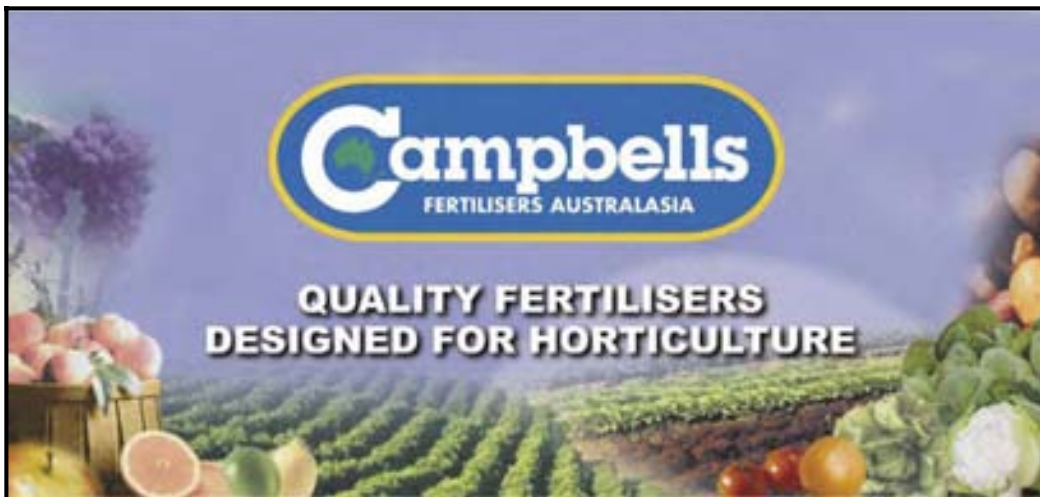
High chill peaches grown in temperate regions show less variable performance than their low chill counterparts in the sub-tropics. This is because there is an abundance of chill accumulation that doesn't critically affect fruit quality.



*Poor fruit shape from insufficient chilling*

This project will fit low chill varieties to the environments where they perform best. We aim survey growers to learn what varieties they are growing, or have grown, and how they perform. Over the next 2 years our project team will build up a store of information from the various low chill stonefruit regions around Australia and catalogue this information.

The project will also investigate the effects of climate change on chill accumulation.



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## Soil health in citrus production systems

**Nerida Donovan, Citrus Pathologist, NSW DPI Camden and Sandra Hardy, Industry Leader-Citrus, NSW DPI, Gosford.**

In July, a CITTgroup field day was held in Wollongbar on the NSW north coast. The day focused on soil health and included presentations from Nerida Donovan (Citrus Pathologist, Camden), Abby Jenkins (Soils Advisory Officer, Wollongbar) and Justine Cox (Soil Health Scientist, Alstonville).

Healthy soils are important for maintaining the productivity of an orchard. The health of a soil is governed by a number of physical, chemical and biological properties. A healthy soil is one that holds and supplies water and nutrients to plants, contains organic matter, resists degradation and supports plant growth and soil organisms.

### **Take a closer look at your soil with Abby Jenkins**

Digging a soil pit allows you to take a good look at the properties of the soil in your orchard. You can closely see the different layers of the soil and what's happening in the root zone.

Soil structure is the arrangement of soil particles and aggregates, and the pores or spaces between them. Water, nutrients and soil organisms move along the pathways created by this network of pores. Over time, areas of the orchard can become



*Soil pits are great for examining the properties of the soil in your orchard*

compacted with the use of farm machinery.

Compacted layers usually occur below the soil surface and are not readily seen. It is more of a problem on heavier clay soils, particularly when heavy machinery is used when the soil is too wet.

A quick test for assessing if the soil is too wet to carry heavy machinery is to squeeze a lump of soil into a ball and try to roll it into a rod. If you can roll your soil easily into a tight rod then it is too wet for machinery and will compact if it is worked. If you can only make a crumbly rod, the water content is suitable for working and traffic. If you are unable to make a rod then a sandy or loamy soil may be too dry for tillage.



*Assessing soil texture using the ribbon test*

Soil texture is defined by the proportion of sand, silt and clay particles in the soil and can be determined using a soil ribbon test. This involves wetting up a small handful of soil, forming a ball, then gently stretching the soil between your thumb and forefinger and trying to make a ribbon. Generally, the longer the ribbon, the higher the clay content.

Soil organic matter is important because it helps to hold water and nutrients in the soil. A quick field test for soil organic matter is the 'slaking test' which involves placing a clump of soil into a bowl of water. Organic matter helps glue the soil together so if the clump disintegrates quickly then the organic matter content of the soil is low.



*A quick field test for soil organic matter is the slaking test*

### **The soil habitat with Justine Cox**

The soil is home to many organisms, some cause disease but most are actually important for plant growth. Soil organisms can be divided into groups.

Soil engineers, like worms and beetles, break up the soil by moving it around and taking surface litter down into the soil profile. This improves soil structure and water movement and reduces soil compaction.

Primary decomposers (bacteria and fungi) break down organic matter, converting organic substances into their mineral form e.g. organic nitrogen and phosphorous to nitrates and phosphates. They also produce sticky substances that hold soil particles together.

Secondary decomposers (springtails, slaters, mites, millipedes) break up organic matter into smaller particles.



*Examining the leaf litter for soil organisms*

Soil organisms need food, water and air, and prefer their habitat not to be disturbed. You can measure the level of activity of organisms in your soil using a 'calico strip test'. Bury a strip of unbleached calico in the soil, leave it for 3 weeks then dig it up. The greater the biological activity, the greater the decay rate of the calico strip.

You can also look at the diversity or abundance of organisms in leaf litter by placing a few handfuls into a container and observing the activity using a magnifying glass.

### **Soil health card**

A soil health card was developed for the Northern Rivers area with local farmers. The card outlines 10 simple measurements that growers agreed would provide them with useful information about their soil. The tests need to be undertaken periodically and can help determine if management practices are having an effect on soil health. The soil health card can be found on the internet at [www.tuckombillandcare.org.au/shc.htm](http://www.tuckombillandcare.org.au/shc.htm)

### **Soil health issues in coastal citrus orchards with Nerida Donovan**

#### **Compaction**

Soil compaction can reduce the growth of citrus trees and roots once the proportion of air space in the soil (air filled porosity) is less than 15%. These conditions can also increase problems with phytophthora root rot and other root rotting fungi.

Cover crops can help to increase soil organic matter, reduce the impact of compaction, improve soil aeration and enhance root development. Deep ripping is also used to break up compacted layers further down in the soil profile.

#### **Sudden death**

Sudden death causes productive trees to suddenly wilt and die. Affected trees show several black rotting structural roots at depth, with a dry brown discolouration that extends into and across the tree butt.

Sudden death can affect all citrus varieties on *Poncirus trifoliata* and Carrizo and Troyer citrange rootstocks and has been diagnosed in trees of all ages, although it is more common in 7 to 15 year old trees. It often occurs on heavy soils but can affect trees on all soil types. Sudden death is generally associated with soil drainage problems that cause temporary water logging and poor soil

aeration. These intermittent periods of waterlogging and poor aeration weaken or kill parts of the root system which leads to the eventual collapse of the tree.

Careful site selection, good drainage, and planting trees on ridges / mounds can reduce future problems with sudden death.

### **Phytophthora root and collar rot**

The phytophthora fungus can attack either the roots (root rot) or the tissue at the base of the trunk (collar rot).

To reduce the incidence of phytophthora root rot, ensure trees are well drained and have good irrigation management. Set up sprinklers so that they do not spray directly onto the trunk and skirt trees to improve air flow. It is important to buy healthy nursery trees and ensure the bud union is at least 20 cm above the soil level. Some rootstocks are resistant or have a degree of tolerance to phytophthora, such as *Poncirus trifoliata*, the citranges and Swingle citrumelo.

### **Adding organic matter**

Organic amendments such as animal manures and compost help improve soil structure and fertility. The increase in organic matter helps to improve soil water holding capacity and infiltration.

Nutrients in organic matter (especially nitrogen) are released to plants slowly over time as they are broken down into usable forms. Some organic materials can release high amounts of ammonia during decomposition which can damage plant roots.

There can be great variability in compost stability, maturity and quality. Trials have shown that phytophthora root rots of avocado and citrus can be reduced by the addition of organic materials to the soil due to enhanced tree health and suppression of the phytophthora fungus. Organic amendments have also shown potential for reducing nematode problems.

### **Using cover crops**

Growing cover crops between the tree rows is another way of adding organic matter to the soil. Cover crops provide nutrients, increase soil organic matter, improve aeration and provide food for the soil organisms. They also help to reduce compaction and soil erosion.

Cover crops reduce orchard temperatures in summer by 1-2°C. Unfortunately in winter this may also increase the threat of frost damage.

### **Mycorrhizal fungi**

Mycorrhizal fungi form a mutually beneficial association with plant roots. The fungus obtains energy (carbon) from the root and in return brings nutrients and water back to the root for the plant to use. Citrus have coarse roots and are highly dependent on vesicular-arbuscular mycorrhizal (VAM) fungi to help nutrient uptake.

Growth and productivity of citrus seedlings and trees can be enhanced by mycorrhizal fungi due to greater nutrient and water uptake, drought tolerance, root longevity and disease tolerance. The fungal strands and sticky materials produced by the fungus also help hold soil aggregates together, improving soil structure.

Long fallows and soil tillage break up the network of roots and fungal strands, affecting soil structure and slowing the rate at which the fungus can later infect plants. The growing of cover crops in citrus orchards helps to maintain the population of mycorrhizae in the soil as well as improving soil structure and increasing soil organic matter levels.

### **Citrus replant disorder**

Citrus trees often grow poorly when replanted straight back into soil that has been under citrus cultivation for ten years or more. The cause of this 'citrus replant disorder' is not known but there are a number of theories including the accumulation of soil toxins, development of nutritional imbalances, and a build up of organisms that damage feeder roots like phytophthora root rot and nematodes. To reduce problems with replant disorder old citrus ground should be fallowed and planted with cover crops for at least 12-18 months before replanting citrus.

### **For more information:**

*Soil biology basics* is an information series produced by NSW DPI on a range of topics including 'How to build organic matter in your soil', 'How to encourage soil organisms' and 'How to conduct your own field trials'. The fact sheets are available on the internet at [www.dpi.nsw.gov.au/aboutus/resources/factsheets/soil-biology-basics](http://www.dpi.nsw.gov.au/aboutus/resources/factsheets/soil-biology-basics)

A fact sheet on 'Sudden death of citrus' can be found at [www.dpi.nsw.gov.au/agriculture/horticulture/citrus/health](http://www.dpi.nsw.gov.au/agriculture/horticulture/citrus/health)



# Natural disaster relief assistance for primary producers affected by the recent floods in June 2007



## Recovery grants for primary producers TIER one and TIER two grant information

### TIER 1 grant information

#### Purpose

To provide grants to primary producers who have suffered direct damage as a result of flooding in the Hunter and Central Coast on the 7th and 8th June 2007, for clean-up, removal of debris, disposal of dead livestock and further restoration.

This grant is not intended to replace the need for insurance, and is not intended to provide compensation for losses.

All claims for assistance will be assessed on a case by case basis.

#### Assistance available

A one-off lump sum payment of up to \$5,000 to all eligible primary producers for clean-up and immediate restoration costs, without assessment of damage. A primary producers is able to lodge partial claims.

The recovery grant is designed to provide short term targeted assistance for clean-up, removal of debris, disposal of dead livestock and further restoration, and for those who have suffered direct damage to their premises and/or tools of trade (equipment/plant). The essential cost of repair or replacement of these items remain your responsibility.

If you have sustained damage above \$5,000 you may be eligible for a Tier two grant. You will be required to complete an additional application form for the Tier two grant.

#### Who is eligible?

Eligible primary producers who have suffered direct damage and which:

- Have a right or interest in the land used for the purpose of a farm enterprise,

- Contribute a significant part of your labour and capital to the farm enterprise,
- Derive more than 50% of your individual income from the farm enterprise,
- are registered with the Australian Taxation Office as a primary producer, and have an Australian Business Number (ABN),
- have suffered direct damage as a result of flooding in the Hunter and Central Coast in June 2007. This may be damage to farm buildings, crops, pasture, stock, fencing and/or tools of trade (e.g. equipment/plant) and the essential cost of repair or replacement are the applicant's responsibility,
- were conducting business in the specified area prior to and including the date of the event,
- are intending to re-establish the primary production enterprise.

Eligible primary producers can be individuals, partnerships, trusts or companies, operating commercially.

#### Who is NOT eligible?

Farm enterprises which have not incurred clean-up, removal of debris or restoration costs but have suffered a loss of income as a result of the event.

'Hobby farmers' are not eligible for assistance.

#### What costs ARE covered?

Eligible costs include damage to:

- farm buildings
- crops and/or pastures
- livestock
- fencing
- equipment and/or plant

#### What is not covered?

Damage to dwellings. Owners may be able to claim other assistance for this (eg. personal hardship and distress payments under the Natural Disaster Relief and Recovery Arrangements).

### **To access Tier one grant funds**

- you must lodge an application within six months from the date of the event occurring (by 7–8 December 2007),
- you may need to provide quotes or receipts for this grant. You will need to provide these if you make a further claim for assistance under tier two,
- your primary production business must be located within the specified area.

### **TIER Two (subsequent) grant information**

#### **Purpose**

To be eligible for additional assistance primary producers who have suffered direct damage as a result of flooding in the Hunter and Central Coast in June 2007 above \$5,000 (tier one payment) and be able to demonstrate that costs have been incurred.

Additional grants are based on an assessment of impact and/or production of quotes or receipts/tax invoices up to a maximum combined total of \$15,000. All claims for assistance will be assessed on a case by case basis.

#### **Assistance available**

An additional grant up-to \$10,000. If you apply for and receive a grant, less than \$10,000, and the further damage becomes apparent, then an additional payment can be made, on application, to the maximum of \$10,000.

#### **Who is eligible?**

Only primary producers who have lodged an application for Tier one (initial) grant are eligible for Tier two grants

#### **What costs ARE covered?**

To be considered as having suffered direct damage you must have incurred some or all of the following costs:

##### *Clean-up*

- additional labour costs (above and beyond normal wage expenditure)
- equipment and materials to undertake clean-up

##### *Removal of debris*

- disposing of damaged goods and injured or dead stock
- cost of disposal

##### *Restoration*

- repairs to buildings (other than housing)

- fencing not covered by any other assistance
- salvaging crops, grain and feeds
- health maintenance for livestock and poultry
- purchase of fodder (not covered by other assistance)
- reconditioning/repairing essential plant and equipment
- purchase/hire/lease costs for equipment essential to immediate resumption of farming
- replacement of essential water used by fire fighting
- water cartage

#### **What is Not Covered?**

Damage to dwellings. Owners may be able to claim other assistance for this (eg. personal hardship and distress payments under the Natural Disaster Relief and Recovery Arrangements).

#### **To access Tier two grant funds**

- you must have lodged an application for Tier one grant
- you must lodge an application within six months from the date of the event occurring
- you will be required to provide quotes/estimates and/or receipts for this additional grant
- for re-imbursment claims you will need to provide the receipts/tax invoices. These need to show the providers name, address, ABN and should be itemised
- you will be required to produce written evidence from your insurance company regarding the result of your claim. OR certify that your business is ineligible to claim insurance or that the insurance has been refused, or that the insurance will not cover all the costs
- your business must be located within the specified area.

#### **How do I apply?**

Application forms are available from the NSW Rural Assistance Authority by telephoning: toll free 1800 678 593 or (02 ) 6391 3000.

Send completed application forms to NSW Rural Assistance Authority, Locked Bag 23, Orange NSW 2800.

For more information log onto the website at [www.raa.nsw.gov.au/reader/primary-producers](http://www.raa.nsw.gov.au/reader/primary-producers)



# Registered chemicals for use in commercial citrus crops in NSW

Prepared by Sandra Hardy, NSW DPI, Gosford.

The following tables on pages 13–16 list the current registered chemicals for use in *commercial citrus orchards* for post-harvest treatment (Table 1); to enhance fruit quality (Table 2); control pests (Table 3); and control diseases (Table 4). Chemical names have been used because there are too many products to list. This information has been sourced from Infopest, July 2007.

The tables are not comprehensive in that they do not list chemicals or use patterns for grapefruit or general categories such as orchards or fruit trees.

These tables do not contain all the information which appears on a product label. **ALWAYS READ THE PRODUCT LABEL.**

In Australian citrus orchards an integrated approach to pest and disease control is well established. Integrated Pest Management or IPM relies on using a range of control options to keep pests below economically damaging levels. These control options include biological, cultural and chemical control strategies. Managing pests or diseases in your orchard involves:

- correct identification of the pest/disease;
- some understanding of the life cycle of and conditions favouring the pest/disease;
- regular monitoring of the trees (leaves, fruits etc) for both pests and predators;

- correct choice and timing of the control.

By the early strategic use of a control measure, be it chemical or biological, a potential major pest problem may be avoided.

In order to maintain a healthy balance of beneficial insects in your orchard avoid the use of broad spectrum chemicals that can be toxic to these good insects.

For a complete reference on Citrus pests, their identification and management, purchase a copy of "*Citrus Pests and their natural enemies*" (1997). Contact QLD Government Publications <http://www.publications.qld.gov.au/home.aspx>

## Key to Abbreviations in Tables

- NA = Not Applicable
- NS = Not Stated
- ✓ = Registered for use on this crop
- Bolded entries are new since the Spring 2006 edition of this newsletter.
- Australian Pesticides & Veterinary Medicines Authority (APVMA) permits are normally issued for only a limited time. Therefore persons wishing to use a chemical in a manner approved under permit must obtain a copy of the relevant permit from the APVMA and must read and comply with all the details, conditions and limitations on the permit. Go to the APVMA website at [www.apvma.gov.au](http://www.apvma.gov.au)

## Infopest

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**Table 1: Registered products for postharvest treatment of citrus**

Pest/Disease/Other	Active Constituent in Product	Withholding Period (WHP) days	Citrus	Oranges	Mandarins	Lemons
Bactericide	iodine	NA	✓	✓	✓	✓ and limes
Blue/Green Mould	carbendazim	NA	✓			
Blue Mould	guazatine	NA	✓			
	imazalil	NA	✓			
	imazalil sulfate	NA	✓			
	SOPP	NA	✓			
	thiabendazole	NA	✓			
Colour Retention	2,4-D-dma	NA	✓			
Fungi	iodine	NA	✓	✓	✓	✓ and limes
Green Mould	guazatine	NA	✓			
	imazalil	NA	✓			
	imazalil sulfate	NA	✓			
	thiabendazole	NA	✓			
Qld Fruit Fly	dimethoate	APVMA Permit No. 9799	✓			
Sour Rot	guazatine	NA	✓			
Stem-end rot	thiabendazole	NA	✓			

**Table 2: Registered products for improving fruit quality in citrus**

	Active Constituent in Product	Withholding Period (WHP) days	Citrus	Oranges	Mandarins	Lemons
Adhesion control	lauryl alcohol ethoxylate	NS		✓	✓	✓ + limes
Colour Improvement	2,4-D as dma + GA	NA		✓	✓	
Creasing reduction	gibberellic acid	NA		✓		
Drop Prevention/Reduction	2,4-D-dma	NA		✓	✓	
Quality Improvement	gibberellic acid (GA)	56		✓		✓
Rind quality maintenance	2,4-D-dma + GA	NA		✓	✓	
	gibberellic acid	NA		✓	✓	✓
Thinning	ethephon	NA		✓	✓	
	giberellic acid (Ralex®)	NA		✓	✓	
<b>Other</b>						
Spray additive	vegetable oil	NA	✓			
	alkyl polyglycol ether	NA	✓			
	lauryl alcohol ethoxylate	NA		✓	✓	✓ + limes
Spreader	lauryl alcohol ethoxylate	NA		✓	✓	✓ + limes
	alkyl polyglycol ether	NA	✓			

**Table 3: Registered products for pest control in citrus**

Pest	Active Ingredient	Withholding Period (WHP) days	Citrus	Oranges	Mandarins	Lemons	Limes
Aphids	Azinphos-methyl dimethoate	14 7	✓ ✓	✓	✓	✓	✓
Black (Brown Olive) Scale	Azinphos-methyl petroleum oil <b>paraffinic oil</b>	14 1 1	✓ ✓ ✓				
Black Citrus aphid	maldison pirimicarb parathion-methyl imidacloprid	3 2 14 140 days	✓ ✓ ✓ ✓	✓		✓	
Broad Mite	abamectin petroleum oil	7 1	✓ ✓				
Bronze Orange Bug	dimethoate maldison	7 3	✓ ✓	✓	✓	✓	✓
Brown Citrus Rust Mite	abamectin sulfur wetable sulfur zineb mancozeb petroleum oil	7 0-1 on some products 1 7 NA 1	✓ ✓ ✓ ✓ ✓ ✓				
Budworms (Heliothis)	spinosad	NA	✓	✓	✓	✓	✓
Bugs	dimethoate	7	✓	✓	✓	✓	✓
Citrophilous Mealybug	aldicarb buprofezin	182 28	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
Citrus Bud Mite	sulfur mancozeb wetable sulfur	0-1 on some products NA 1	✓ ✓ ✓				
Citrus Butterflies (leafeating caterpillars)	maldison carbaryl	3 3	✓ ✓				
Citrus Flat Mite	abamectin	7	✓				
Citrus Leafeating weevil	bifenthrin	NA	✓				
Citrus Leafminer	diazinon permethrin petroleum oil aldicarb paraffinic oil spinosad imidacloprid	14 NA non bearing trees only 1 NA non bearing trees only 1 NA 140 days	✓ ✓ ✓ ✓ ✓ ✓ ✓	✓		✓	✓
Citrus Mealybug	buprofezin	28	✓	✓	✓	✓	✓
Citrus Nematode	aldicarb cadusafos	182 NA	✓ ✓	✓	✓		
Citrus Red Mite	abamectine + clofentezine or amitraz (minor use permit <b>8704</b> ) petroleum oil	NA 1	✓ ✓	Quarantine treatment only for the movement of trees and budwood outside the counties of Northumberland and Cumberland			
Citrus Rust (Maori) Mite	abamectin lime sulfur propineb sulfur wetable sulfur zineb mancozeb petroleum oil	7 NA 7 0-1 on some products 1 7 NA 1	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	✓	✓	✓	
Common garden snail	iron-EDTA complex	NA	✓				
Corn earworm	spinosad	NA	✓	✓	✓	✓	✓
Fruit Flies	maldison	3	✓				
Fullers Rose Weevil	carbaryl gamma-cyhalothrin <b>lambda-cyhalothrin</b>	3 28 28	✓	✓ ✓		✓ ✓	
<b>Greenhouse thrips</b>	<b>pyrethrin</b>	<b>NA</b>	✓				
Jassids	buprofezin	28	✓	✓	✓	✓	✓

**Table 3: Registered products for pest control in citrus (continued)**

Pest	Active Ingredient	Withholding Period (WHP) days	Citrus	Oranges	Mandarins	Lemons	Limes
Leafroller caterpillars	azinphos-methyl	14	✓				
Lesser Qld Fruit Fly	fipronil & acetoxyphehyl butanone (bait spray)	NA	✓				
Lightbrown Apple Moth	tebufenozide	1	✓				
	carbaryl	3	✓				
	methomyl	2	✓				
	parathion-methyl	14	✓				
	spinosad	NA	✓	✓	✓	✓	✓
	<b>tetradecenyl acetate + tetradeca dienyl acetate</b>	<b>NA</b>	✓				
Longtailed Mealybug	parathion-methyl	14	✓				
	aldicarb	182		✓ non trifoliata rootstock	✓ non trifoliata rootstock		
	buprofezin	28	✓	✓	✓	✓	✓
Mediterranean Fruit Fly	dimethoate	7	✓	✓	✓	✓	✓
Native Budworm	spinosad	NA	✓	✓	✓	✓	✓
Nematodes	fenamiphos	NA	✓				
Orange Fruit Borer	carbaryl	3	✓				
Pink Wax Scale	carbaryl	3	✓				
	maldison	3	✓				
	petroleum oil	1	✓				
	paraffinic oil	1	✓				
	imidacloprid	140 days	✓				
Pointed (conical) snail	iron-EDTA complex	NA	✓				
Purple Scale	maldison	3	✓				
	paraffinic petroleum oil	1	✓				
Qld Fruit Fly	chlorpyrifos + yeast hydrolysate or yeast autolysate	14 (Bait spray only)	✓	✓	✓	✓	✓
	dimethoate (don't use on Meyer lemons, sevelle oranges, cumquats)	7	✓	✓	✓	✓	✓
	fenthion	7	✓				
	fipronil+	NA	✓				
	acetoxyphehylbutanose	(bait spray)	✓				
Red Scale	azinphos methyl	14	✓				
	buprofezin	28	✓	✓	✓	✓	✓
	chlorpyrifos	14	✓				
	maldison	3	✓				
	methidathion	21	✓				
	omethoate	7	✓				
	paraffinic oil	1	✓				
	parathion-methyl	14	✓				
	petroleum oil	1	✓				
	<b>imidacloprid</b>	140 days	✓				
Rutherglen Bug	maldison	3	✓				
Scale insects	paraffin oil	1	✓				
	parathion-methyl	14		✓	✓	✓	
Small citrus butterfly	parathion-methyl	14	✓				
Snails	copper complex	1	✓				
	silicate salts + copper complex	NA	✓				
Soft Brown Scale	azinphos-methyl	14	✓				
	maldison	3	✓				
	paraffinic petroleum oil	1	✓				
	aldicarb	182		✓ non trifoliata rootstocks only	✓ non trifoliata rootstocks only		
	parathion-methyl	14	✓				
Spined Citrus Bug	carbaryl	3	✓				
	diazinon	14	✓				
	maldison	3	✓				
	<b>endosulfan</b>	3	✓	✓	✓	✓	
Stubby Root Nematode	cadusafos	NA	✓				
Thrips	dimethoate	7	✓	✓	✓	✓	✓
	maldison	3	✓				
Treehoppers	maldison	3					

**Table 3: Registered products for pest control in citrus (continued)**

Pest	Active Ingredient	Withholding Period (WHP) days	Citrus	Oranges	Mandarins	Lemons	Limes
Vineyard Snail	iron-EDTA complex	NA	✓				
White Italian Snail	iron-EDTA complex	NA	✓				
White Louse Scale	buprofezin lime sulfur sulfur wetttable sulfur	28 NS 0-1 on some products 1	✓ ✓ ✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓
White Wax Scale	aziphos methyl carbaryl methidathion paraffinic petroleum oil petroleum oil	14 3 21 1 1	✓ ✓ ✓ ✓ ✓				
Wingless Grasshopper	chlorpyrifos dimethoate	14 7	✓ ✓	✓	✓	✓	✓
Yellow Peach Moth	carbaryl	3	✓				
Yellow Scale	paraffinic petroleum oil	1	✓				

**Table 4: Registered products for disease control in citrus**

Disease	Active Constituent in Product	Withholding period (WHP) days	Citrus	Oranges	Mandarins	Lemons
Black Spot	copper sulfate (tribasic) copper ammonium acetate copper hydroxide copper oxychloride cuprous oxide mancozeb propineb zineb copper hydroxide + mancozeb paraffinic petroleum oil + benlate <b>petroleum oil</b>	1 1 1 1 1 0-14 7 7 NA 1 1	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	✓		
Brown spot	copper oxychloride	1			✓	
Melanose	copper ammonium acetate copper oxychloride copper hydroxide cuprous oxide sulfur copper sulfate (tribasic) <b>petroleum oil</b>	1 1 1 1 0 1 1	✓ ✓ ✓ ✓ ✓ ✓ ✓	✓ ✓		
Phytophthora Brown rot	copper oxychloride cuprous oxide	1 1	✓ ✓			
Phytophthora Collar rot	copper hydroxide phosphorus acid copper sulfate (tribasic)	1 0 1	✓ ✓ ✓			
Phytophthora Stem Rot	<b>cuprous oxide</b>	1	✓			
Root/Collar rot	phosphorous acid copper hydroxide	NA 1	✓ ✓			
Scab	copper sulfate (tribasic) copper oxychloride cuprous oxide copper hydroxide copper ammonium acetate	1 1 1 1 1	✓ ✓ ✓ ✓ ✓			✓ ✓
Septoria Spot	copper oxychloride cuprous oxide	1 1	✓ ✓			
Sooty Blotch	copper ammonium acetate copper oxychloride copper sulfate (tribasic) copper hydroxide cuprous oxide	1 1 1 1 1	✓ ✓ ✓ ✓ ✓	✓		

# Registered Chemicals for use in Commercial Avocado Crops in NSW

Prepared by Sandra Hardy, NSW Department of Primary Industries, Gosford.

Source: Infopest, July 2007.

These tables are not comprehensive as they do not list chemicals or use patterns for general categories such as orchards or fruit trees. Chemical Registrations change continually. Always read and follow the directions on the product label. (NA = Not Applicable). Bolded entries are new since the Summer 2005/06 edition of this newsletter

<b>DISEASES</b>		
<b>Use</b>	<b>Active Ingredient</b>	<b>Withholding period (WHP)</b>
Anthracnose	Azoxystrobin	7
	Copper oxychloride	1
	Copper hydroxide	1
	Cuprous oxide Cu <sub>2</sub> O	1
	Copper as Ammonium acetate	1
	Copper Sulfate (tribasic)	1
Cercospora leaf and fruit spot	Copper as ammonium acetate	1
Phytophthora root rot	Phosphorous acid	NA
	Fosetyl as aluminium salt	1
	Metalaxyl-M	7
Phytophthora stem rot	Copper as cuprous oxide	1
Sooty blotch	Copper as ammonium acetate	1
Stem end rot	Azoxystrobin	7
Trunk and stem canker	Copper hydroxide	1
	Copper as ammonium acetate	1
	Copper as cuprous oxide	1
	<b>Copper sulfate (tribasic)</b>	<b>1</b>

<b>POSTHARVEST</b>		
<b>Use</b>	<b>Active Ingredient</b>	<b>Withholding period (WHP)</b>
Acidity maintenance	1-methylcyclopropene	NA
Ageing/ripening delay	1-methylcyclopropene	NA
Anthracnose	Prochloraz	NA
Bactericide	Iodine	NA
Chilling injury control	1-methylcyclopropene	NA
Ethylene (protection from)	1-methylcyclopropene	NA
Firmness quality improvement/ maintenance freshness retention	1-methylcyclopropene	NA
Fungi	Iodine	NA
Mealiness reduction	1-methylcyclopropene	NA
Mediterranean fruit fly	Dimethoate	NA
Qld fruit fly	Dimethoate	NA
Stem end rot	Prochloraz	NA

<b>PESTS</b>		
<b>Use</b>	<b>Active Ingredient</b>	<b>Withholding period (WHP)</b>
Avocado leafroller	Dichlorvos Spinosad	7 NA
Banana spotting bug	Endosulfan	14
Ectropis looper	Spinosad	NA
Flower eating caterpillars	Spinosad	NA
Fruit flies	Fenthion	7
Fruit spotting bug	Endosulfan Beta-cyfluthrin Trichlorfon	14 7 2
<b>Greenhouse thrips</b>	<b>Pyrethrin</b>	<b>NA</b>
Hairy leaf-eating caterpillar	Chlorpyrifos	7
Ivy leafroller caterpillar	Chlorpyrifos Dichlorvos Spinosad	7 7 NA
Lantania scale	Chlorpyrifos	7
Leafroller caterpillars	Tebufenoxide	14
Leafroller moths	Spinosad	NA
Light brown apple moth	Chlorpyrifos Spinosad	7 NA
Loopers	Spinosad	NA
Qld fruit fly	Chlorpyrifos	7
Red banded thrips	Spinosad	NA
Red shouldered leaf beetle	Endosulfan Carbaryl Chlorpyrifos Trichlorfon	14 3 7 2
Scale insects	Petroleum oil Paraffinic oil	1 1
Six spotted mite	Fenbutafin oxide	14
Sorghum head caterpillar	Spinosad	NA
Tea red spider mite	Fenbutafin oxide	14
Yellow peach moth	Endosulfan Spinosad	14 NA

<b>OTHER</b>		
<b>Use</b>	<b>Active Ingredient</b>	<b>Withholding period (WHP)</b>
Fruit shape improvement	Uniconazole-P	14
Size increase	Uniconazole-P	14
Vegetative growth control	Uniconazole-P	14



*Source: Plant Health Australia newsletter, July 2007.*

In 2004, an outbreak of Citrus canker was discovered in the Emerald district in central Queensland, Australia.

Citrus canker is a serious disease affecting plants in the Rutaceae family, including Citrus, Fortunella and Poncirus. The disease most likely originated in south-east Asia and has spread worldwide, primarily to warm, moist, coastal regions. Over short distances, wind-driven rain, air currents, insects, and human movement can spread the canker pathogen. Over longer distances, it spreads through movement of infected plants, seedlings, propagation material, and fruit. Contaminated clothing, tools, harvest and post-harvest equipment are also potential infection sources.

The National Citrus Canker Eradication Program (NCCEP) was put in place to fight the 2004 outbreak.

In June 2007, the NCCEP completed its sixth quarterly round of host plant regrowth and native citrus surveys in the Emerald Pest Quarantine Area (PQA). No citrus canker was detected and the disease has not been detected in the PQA since May 2005. The NCCEP recommended to the Consultative Committee on Emergency Plant Pests (CCEPP) and National Management Group (NMG) that citrus be allowed to be replanted in the area from 1 July 2007. This recommendation was endorsed.

The NCCEP reached a much-anticipated milestone on July 1 2007, with commercial citrus trees being planted back into the Emerald district for the first time in three years. However, there is still a lot of hard work to be done.

The program is a co-operative effort of the Australian Government, the governments of Australia's citrus-producing states, and Australian Citrus Growers' the peak body for the citrus industry. Queensland's Department of Primary Industries and Fisheries (QDPI&F) is responsible for the management and operation of the program.

PHA is involved as a participant on the CCEPP and as an observer on the NMG. PHA has also chaired the Scientific Advisory Panel a group tasked at addressing specific technical issues surrounding the eradication program.

There has also been a review of citrus canker emergency preparedness and the national response which were presented to the NMG for consideration. PHA's Chairman Andrew Inglis was a member of the review team and PHA has been working to implement and influence action on recommendations. Some of the changes have already been incorporated into PLANTPLAN and approved by Emergency Plant Pest Response Deed signatories.

All 'high-risk' host plants of citrus canker, including nearly 500,000 commercial citrus trees, over 4,300 non-commercial (domestic) host plants and extensive areas of native citrus (*Citrus glauca*), were removed from the PQA prior to 1 January 2006 in order to achieve eradication of this serious exotic disease. This action was taken because the bacteria that causes citrus canker, *Xanthomonas axonopodis* pv. *citri* (Hasse) Vauterin, is unable to survive for extended periods outside of a living host.

On 30 June 2007, the program completed an 18-month 'host-free' period in the PQA, during which the disease is expected to have died out due to the absence of live hosts in the area.

Surveys have been conducted every 90-days during this host-free period for host plant regrowth in the destroyed commercial citrus orchards and at sites where domestic citrus trees were removed within the PQA. Any regrowth that was detected was inspected for symptoms of citrus canker and then destroyed.

Also during the host free period, the NCCEP conducted targeted surveys of native citrus in specified high-risk zones around the destroyed commercial citrus orchards in the PQA to ensure the disease had not been transmitted to the remaining native citrus population.

As there have been no detections of citrus canker between May 2005 and the completion of the host-free period in June 2007, Emerald's commercial citrus growers are now being permitted (after QDPI&F approval) to commence replanting their orchards.

From July 1 2007, some growers will be bringing approved planting material into the Emerald PQA as part of starting to replant Emerald's commercial citrus orchards. Australia is expected to be declared canker-free in early 2009 once the final phase of surveillance is complete.

The first intended consignments of trees have undergone stringent inspections by QDPI&F inspectors at their source nurseries outside the PQA to confirm they are free of the disease before they come into the area. This process will continue with

approximately 180,000 trees planned to enter the area for planting during the remainder of this year.

Replanted orchards will be subject to a further 18 months of intensive surveillance, with orchards subject to 100% surveillance every 90 days, leading up to the planned declaration of eradication in early 2009.

During this period, the NCCEP will maintain quarantine restrictions to prevent the unauthorised movement of host plants or other vectors of the disease into, within or out of the PQA. Replanting of domestic (residential) citrus or other ornamental host plants will not be permitted in the PQA until after eradication is declared.

Following the declaration of eradication by the NMG, the PQA will be lifted and all citrus canker-related market access restrictions will be removed.



## Australian persimmon conference report

**John Golding, Research Horticulturist –  
Post harvest, NSW DPI, Gosford.**



The theme for the 2007 Australian Persimmon conference was "Growing for Love or Money". This is an apt theme for many growers who are passionate about their orchard and growing quality fruit, but also the need to be profitable. The conference was held on the Queensland Sunshine Coast from 19-21 July 2007 in association with the Australian custard apple conference

The Horticulture Code of Conduct was a hot issue of debate during the conference. An industry forum of traders, growers and agents discussed the current situation and how it could all work to everyone's satisfaction – a very lively debate.

A feature of the conference was the potential for new technologies to improve the market and storage life of persimmons. A strong New Zealand delegation briefed the conference on their experiences in improving fruit quality and shelf life. Several Australian researchers reported on the use of new postharvest technologies to improve the marketing of persimmons. Dr. John Golding from NSW DPI reported on the results of two seasons

storage data from two different states. He trialed the new postharvest treatment, SmartFreshSM and special storage bags on persimmon quality following cold storage. The results showed that SmartFreshSM treatment was effective in maintaining flesh firmness and slowed internal gelling to retain fruit quality during cold storage for up to 9 weeks. The special storage bags also maintained the quality of persimmons and had an additive effect to the SmartFreshSM treatment. These treatments offer the Australian industry an opportunity to extend the season with quality fruit and further open export opportunities for Australian persimmons.

A presentation from researchers from the University of Queensland discussed the potential of collaboratively working with China in a cross-hemisphere alliance to supply persimmons around the world. Tim Sun and Ray Collins showed that pilot scale results to date have indicated that this approach is feasible, however the ability to fund commercial scale application of this concept by all partners may provide a limitation.

The conference was well attended by growers and industry.





# News in Brief

Australian avocados are now in plentiful supply. Over the past 5 years, Australia has gone from producing 28,000 tonnes to 40,000 tonnes of fruit.

## ◆ **Supermarkets apply 590% mark up on avocados at retail**

*Source: Avocados Australia, media release, 27 August 2007.*

Australian growers are having their biggest season ever this year, which has meant wholesale prices have been the lowest in the last 10 years.

The Australian industry this year has produced 20% more avocados than ever before.

Growers have been receiving on average just 50 cents per avocado. At 50 cents each, avocado growers are just able to pay the cost of producing their fruit.

“Coles and Woolworths are charging consumers up to \$2.95 per avocado at retail, explained Mr Antony Allen, Chief Executive Officer of Avocados Australia. That equates to a mark up of up to 590% on the average wholesale price”.

The two main supermarket chains have been applying “see saw” pricing in their stores. One week the “special” price will be around 80 cents per avocado in one State, the next week the price goes up and depending on the store it can be as much as \$2.95 per avocado. The wholesale price remains unchanged during the retail “see saw” cycle.

“The industry needs to work with the supermarket chains to ensure consumers receive good quality, market priced avocados which will ensure all parts of the avocado supply chain remain viable and sustainable into the future”, said Mr Allen.

Market forces are just not working when 50% of avocados are sold through just two large supermarket chains and they control the price setting at both wholesale and retail level.

Consumers will be thinking avocados are expensive due to drought conditions in parts of Australia, when in reality they are in plentiful supply. Australian growers just want consumers to have

access to what is the most nutritious fruit in the world at a fair and reasonable price.

When the market is not working in a transparent way, the flow on effect is enormous and has long term impacts on both consumers and growers.

## **Australia to defend position on NZ apple imports**

*Source: Media release, DAFF, 20 August 2007.*

Australia will vigorously defend its position in the World Trade Organisation (WTO) after New Zealand decided to lodge a complaint over the importation of New Zealand apples. The Australian Government will strongly defend its actions and policy determination on the basis of science.

New Zealand has complained of delays in finalising a quarantine and inspection workplan that will govern the importation of apples to Australia. New Zealand’s orchards contain the bacterial disease fire blight, which is not present in Australia.

The workplan being finalised by the Australian Quarantine and Inspection Service (AQIS) will involve orchard inspections, pre-export treatment of the fruit, further inspection on arrival and continual auditing of the system.

The first step in the WTO dispute process was a consultation stage, which required Australia and New Zealand to try to settle their differences out of court. It is Australia’s strong preference to settle WTO disputes bilaterally.

Australia will continue to work with New Zealand towards this end, but any resolution must be within the context of our science-based quarantine regime and very low-risk setting.

AQIS’s workplan for the importation of New Zealand apples would be completed before the case was heard by the WTO.

In accordance with usual practice, the Australian Government will be consulting regularly with relevant stakeholders, including representatives of the Australian apple and pear industries, in relation to this dispute.

# News in Brief



## ◆ Industry invited to nominate for horticulture awards

Source: HAL media release, 31 August 2007.

Nominations have opened for the 2007 Graham Gregory Award for excellence in horticulture and for the 2007 Young Leader Award.

Since its inception in 1993, the Graham Gregory Award has been the horticulture industry's most prestigious accolade, recognising outstanding achievements from all sectors in horticulture throughout the whole supply chain.

The award is named in honour of the late Graham Gregory AO who was the first chairman of Horticulture Australia Limited's predecessor the Horticultural Research and Development Corporation. Throughout his life, Graham Gregory made an exceptional contribution to research and development in Australia's wine and horticulture industries.

Horticulture Australia Limited (HAL) is inviting nominations for individuals who have demonstrated excellence in an area that has enhanced the horticulture industry in research and development, marketing, technology transfer or education and training.

The prize includes \$10,000 cash, travel costs to the value of \$2000 and a commemorative bronze medal.

The Young Leader Award is open to nominees under 35 and who are able to demonstrate leadership in any discipline related to the horticulture industry. Up to five young leaders can be recognised by this award each year.

The winners(s) will receive a prize valued at up to \$2000 that includes travel to the award presentation in Sydney with one night's accommodation, a free registration at a HAL-funded conference and a certificate of recognition.

**Nominations for both awards close on 15 October 2007.** Nomination forms are available on HAL's website <http://www.horticulture.com.au>



## National program to coordinate fruit fly fight

Source: PHA media release, 20 July 2007.

Plant Health Australia (PHA) is currently facilitating a major national initiative with Australia's horticultural industries, state and territory governments and the Australian Government to enhance the management and eradication of the number one horticultural pest – fruit fly. Sustainable management of fruit fly is of central concern to Australia's \$6.9 billion horticultural industries in capitalising on domestic and international trade.

PHA has responded to government and industry requests to develop a National Fruit Fly Strategy because of the need for a national approach by industry, government and research and development organisations to ensure a more effective and sustained approach to fruit fly market access, biosecurity, policy, operations, regulations and research and development. This is critical to securing and expanding valuable domestic and international markets for our horticultural industries.

Australia has 30 horticultural industries, a number of which trade in major international markets. These markets are placing more emphasis on phytosanitary requirements, which has seen the closure of market access for Australian produce in some countries such as Taiwan. Industry expansion is dependent on international market access, with increased demands for proof of fruit fly free product. Consistent national regulations and practices are required to provide a common position to facilitate international trade negotiations.

Other relevant issues facing Australia's horticultural industries are the threat of withdrawal of fenthion and dimethoate as post harvest disinfection treatments, and the potential in the longer term of climate change to affect the distribution and impact of fruit fly.

A recent stocktake undertaken by the Australian Government's Office of the Chief Plant Protection

# News in Brief

Officer estimates expenditure on fruit fly related activities and projects as being over AUD\$128 million over the five years from 2003 to 2008. This is in addition to the on-farm costs to growers in controlling fruit fly in endemic areas. The overall vision for the strategy is to ensure that fruit fly is no longer a constraint to sustainable production and a significant barrier to national and international market access.

The draft strategy will be discussed with PHA members at a fruit fly open forum scheduled for 24 October 2007. The feedback will be incorporated into the final strategy prior to its submission to the Primary Industries Standing Committee in early 2008.

The National Fruit Fly Strategy is being led by a Steering Committee, chaired by Professor Mal Nairn, with management by PHA. Sub-groups are examining the four key areas within the strategy and are formulating recommendations and priorities for the future. The Sub-groups are: Market Access and Biosecurity; Operations; Research and Development; and Legislation and Regulation.


## ◆ Levy on imported horticultural products

*Source: ACG members newsletter, 7 September 2007.*

A horticultural steering committee chaired by Avocados Australia, including Australian Citrus Growers, held a teleconference recently to finalise the Horticultural Policy position of levies on imported products. A final document was put together by the group which will form the basis for the ongoing discussion with Canberra.

The model proposes the following:

- Horticultural industries undertaking joint investment in the Australian market with the countries exporting to Australia.
- A compulsory levy to be effective with multiple countries entering the Australian market.
- All participants contribute to promotion to ensure increased demand and growth.

- The overarching position to leverage the current HAL system of levy management. 


## ◆ Expert group to help grow horticulture sector

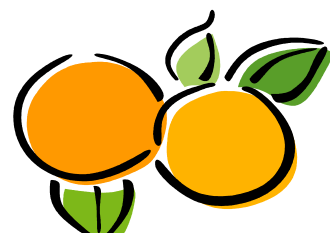
*Source: Media release, DAFF, 25 June 2007.*

A new leadership group has been formed to help steer Australia's \$7 billion horticulture sector towards a strategic vision for its future. The leadership group, comprising industry representatives from growers through to buyers, will provide expert guidance for the industry's Horticulture Strategic Plan.

The Australian Government has matched the horticulture sector's \$900,000 investment in the strategic plan under the Industry Partnerships Programme. The industry leaders will represent the views of more than 40 horticulture industries, including producers, processors and retailers, addressing the challenging issues faced by a sector that employs over 100,000 people.

The strategic plan is an important initiative given the horticulture sector's current situation of substantial production growth in some industries, the severe effects of the drought and increased global competition. With the farm gate value of horticulture production expected to top \$7.2 billion this year, the plan will improve the sector's ability to manage its challenges and shape its long-term decision making and funding priorities.

Respected agribusiness director and economic consultant, David Trebeck, has been appointed the Chairman of the 26-member Leadership Group. Industry research and development body, Horticulture Australia Ltd, will provide secretariat support for the Leadership Group which will meet regularly throughout the project. 






## ◆ **Facilitating implementation of the citrus strategic plan and the alignment the industry organisational structure.**

*Source: ACG members newsletter, August 2007.*

The project has been made possible through major funding from the Department of Agriculture, Fisheries and Forestry and will include a thorough consultation period (grower member meetings and road shows) to growers and key stakeholders. A discussion paper outlining alternate models will be released towards the end of September - 'Green Paper'.

Extensive consultation will continue, in order to develop a recommended model in a 'White Paper' by February 2008.

Then, at ACG's Annual General Meeting in early April next year, your grower representatives will tell their peak body, how to proceed. 

## ◆ **Citrus 2015 Update**

*Source: ACG members newsletter, 7 September 2007.*

ACG President Mark Chown, Vice President Kevin Cock, and CEO Judith Damiani last night finalised consultation meetings with members within the Sunraysia, Riverina, South Australia, Western Australia and Queensland regions to discuss the alignment of the industry organisational structure. All feedback and discussions will be incorporated into the upcoming 'Green Paper'.

At these meetings, the trio explained in person the restructure process and the importance of industry contribution to the upcoming Green Paper. This was also a forum for parties to ask questions about the process first hand.

The Paper, which is currently in the final stages of production, will be released in October, prior to a further round of consultation. Further to this:

- A 'special edition' of the Australian Citrus News has been distributed to growers, outlining the Citrus 2015 project.

- A four page brochure was included with this edition, which summarises the industry plan developed in 2006.
- Road shows are currently being organised, with dates locked for some national grower organisations (refer to diary below).
- Production of the DVD to explain this process is underway, with key industry interviews now finalised.

## **2015 Road show meetings to date:**

18 Oct – Queensland

23 Oct – Gosford, NSW

31 Oct – Riverina, NSW

16 Nov – Western Australia



## ◆ **\$1.33 million for citrus industry**

*Source: Media release, DAFF, 24 July 2007.*

New research funding to control pests including Fuller's Rose Weevil will boost the prospects of Australian citrus growers in global export markets.

Minister for Agriculture, Fisheries and Forestry, Peter McGauran, announced the \$1.33 million research and development project in July.

The project will involve research into post-harvest disinfestation and examine orchard control regimes for a range of pests, including Fuller's Rose Weevil. Fuller's Rose Weevil is a pest that can potentially affect Australian citrus exports.


The project will involve extensive research into disinfestation and control methods, including the trialling of new post-harvest fumigant gasses and of tree trunk barriers to stop the weevil entering citrus trees. Researchers will also evaluate the costs and benefits of each treatment method to identify the best management options for growers to use.

Fuller's Rose Weevil is found widely in many citrus-growing regions of Australia, particularly the Sunraysia area.

The Chinese citrus market could be worth \$20 million a year, with the potential for that to be

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doubled if packing facilities are further developed. China requires that orchards on which citrus is grown to be certified as being free of Fuller's Rose Weevil before it will allow in the fruit.

The funding will be managed by Horticulture Australia Limited. 

## ◆ **Stone fruit grower aims to reduce labour costs**

**Lawrence Ullio, District Horticulturist, Camden.**

Stone fruit growers face ever increasing labour costs which now account for the majority of production costs in growing peaches or nectarines.

According to Colin Nicolson, a stone fruit grower from Forest Glen in the Sydney Hill's District, farm labour has increased by 30% over the last 5 years. The cost of growing and packing fruit is getting up around \$10.00 per 5 kg tray and labour accounts for over 50% of the cost. Colin employs up to 30 people on-and-off throughout the season and most are casuals. This can start from winter pruning through to fruit thinning, harvesting and packing.

The Nicolson family have been growing fresh peaches and nectarines in the Hills district for four generations. They grow 30 different varieties of stone fruit that are sold at the Sydney markets from late October to the end of December.

Like most growers, fruit growers have mechanised as much as possible to reduce labour costs but some of the more detailed work such as fruit thinning and harvesting is still dependent on farm labour. "Anything to reduce labour costs, we'll look at," says Colin Nicolson.


One of the most labour intensive activities with stone fruit is fruit thinning. This can account for up to 10% of total costs.

Research has shown that early fruit thinning, around blossom time, can increase both fruit size and earliness. "A week later in marketing fruit on the Sydney market, can be a difference of several dollars per tray, earliness is everything for coastal growers." said Lawrence Ullio.

Colin has been trialling a new product, ammonium thiosulphate<sup>1</sup>, which he hopes may help reduce his fruit thinning costs. Applied at full blossom this product works by desiccating (burning off) most of the newly opened flowers preventing excess fruit set and reducing the need to blossom thin.

Several growers have trialled this product last season but feel there is more work needed to get it right before adopting it as part of their production system.

<sup>1</sup> Registered products containing ammonium thiosulfate include Prothin®, Thin-it®, Culminate® and Biothin®. These products are currently only registered for selected varieties of peaches and plums.

**N.B.** Users of agricultural chemical products must always read the label before using the product. 

## ◆ **"Meeting the Challenge" 2007 National Apple and Pear Conference**



**John Golding, Research Horticulturist – Post harvest, NSW DPI, Gosford.**

A very full and informative APAL (Apple and Pear Australia Ltd) conference was held in Sydney in late August. On the announcement of New Zealand's intention to take Australia to the World Trade Organisation's disputes tribunal, the Federal Minister for Agriculture, Fisheries and Forestry, Peter McGauran opened the conference. Mr. McGauran reiterated the government's commitment to a science based biosecurity plan, and their support for the local Australian apple industry.

A range of interesting speakers outlined the updates and successes of the 'Future Orchards 2012' program. Ross Wilson of AGFIRST detailed the opportunities and results to date of this valuable industry initiative. The program is monitoring 108 of Australia's top apple and pear blocks. The results have shown that many Australian orchards are producing world class yields and packouts, and Ross encouraged growers to look at the data and monitoring of these results on the APAL website.


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This information will help farmers improve profitability by reducing poor crop performance.

The results of the 2006-7 Apple and Pear chemical residue monitoring program were also outlined.

These results showed that of the 546 samples of apples (455) and pears (91) there was 98.2% compliance with Australian Food Standards. The most commonly detected chemicals were the scald inhibitor, diphenylamine, the miticide propargite, and the postharvest fungicides carbendazim, dithiocarbamates and iprodione.

Advances in pest and disease management were discussed by leading researchers in Victoria and New South Wales. Dr. Shane Hetherington (NSW DPI) outlined the many reasons to improve disease management and gave examples of successful management in Australian orchards.

The final day of the conference was a tour of the Bilpin apple district, where all had a very informative and good time. 

## ◆ Chemical reviews

*Source: Kevin Bodnaruk, AKC Consulting Pty Ltd, AgChemical Update, August 2007.*

### Priorities

The APVMA is currently revisiting its list of chemicals nominated for review. The intent is to re-prioritize the list which should provide industry with a clearer indication of when chemicals are likely to be reviewed and what issues will need addressing.

### Consultation

The APVMA are trying to develop a mechanism for greater stakeholder involvement in the review process. The concept is for people with interest in a particular review to register so that they can be kept updated on any developments concerning that review.

The first review where this service is available, of interest to horticulture, is carbendazim. Registration can be done at the following address: <http://www.apvma.gov.au/listserv/carbendaziminfo.shtml>


**Dip disposal:** An APVMA working group has recently been formed to explore the issue of dip disposal. The main issue to be addressed is the development of science-based national guidelines for safe and effective land based dip disposal. The first step will involve the APVMA assessing the range of chemicals currently approved for use in dips and identifying what information will be needed to allow assessments to be undertaken.

**Fenthion & Dimethoate:** These reviews are beginning to gather momentum. It is understood that the residue data review for fenthion has commenced and that a report should be available by the end of the year. For dimethoate a significantly larger data set was provided by industry and the manufacturers and will take longer to assess. A report on dimethoate is anticipated in early 2009.

A substantial residue trial program is about to be initiated to generate data that is relevant to Australian crops and uses. The results of which, it is hoped, will help address potential areas of concern and help maintain access to these much needed fruit fly control products.

**Carbendazim:** Bavistin, Spin Flo, Howzat etc, Thiophanate methyl (Banrot). The APVMA indicated that the review of these two chemicals was initiated over potential public health and occupational health and safety concerns.

Information was sought from potentially affected industries to clarify the extent to which the products are used and how they are being used. This information was collated and formed the basis of a horticulture industry response.

**Diuron:** Following on from the first stage of the review it is understood that revised recommendations are under development and that they should be available for public comment early next year. 



## What's on

### ◆ 16 – 18 October Australian National Field Days Borenore, near Orange

More information at [www.anfd.com.au](http://www.anfd.com.au) or phone (02) 6362 1588.

### ◆ 17 October 1st Central Coast Avocado Study Group field day

The focus of the day will be 'Integrated phytophthora control' hosted by Simon Newitt from Qld DPIF, Maroochy Research Station.

When: 10.30 am Wednesday 17 October

Where: Alf Sparacino's farm, 559 Peats Ridge Road, Peats Ridge

All avocado growers welcome. *A separate event notice will be sent to Central Coast avocado growers.*

For more information contact Sandra Hardy (02) 4348 1916.

### ◆ 23 October Central Coast CITTgroup seminar

Guest speakers include:

- Dr Andrew Beattie speaking on the impact of Huanglongbing (citrus greening) on citrus producing countries around the world.
- Members of the ACG board outlining the Citrus 2015 project including options for a new industry organisational structure.

When: 12.00 Tuesday 23 October

Where: Somersby Research Station, Lackersteins Road, Somersby.

*A separate event notice will be sent to Central Coast citrus growers.*

For more information contact Sandra Hardy (02) 4348 1916.

## What's new in publications

### ◆ Climate change in the Hawkesbury Nepean

A new CSIRO publication online at: [www.greenhouse.nsw.gov.au/climate\\_change\\_in\\_nsw/climate\\_change\\_in\\_nsw\\_links/climate\\_change\\_in\\_the\\_hawkesbury\\_nepean\\_catchment](http://www.greenhouse.nsw.gov.au/climate_change_in_nsw/climate_change_in_nsw_links/climate_change_in_the_hawkesbury_nepean_catchment).

### ◆ Illegal aquatic plants: a guide to their status in Australia

*New poster*

View at [www.dpi.nsw.gov.au/agriculture/farm/pest-weeds-management/weeds/publications/posters/aquatic](http://www.dpi.nsw.gov.au/agriculture/farm/pest-weeds-management/weeds/publications/posters/aquatic)

### ◆ NSW weed biological control programs

*New poster*

View at [www.dpi.nsw.gov.au/agriculture/farm/pest-weeds-management/weeds/publications/posters/biological](http://www.dpi.nsw.gov.au/agriculture/farm/pest-weeds-management/weeds/publications/posters/biological)

Printed copies can be ordered through the NSW DPI Bookshop by calling 1800 028 374 during business hours.

## For sale and wanted

### Lightning Fruit Grader

NSW DPI is calling for expressions of interest to purchase and remove a Lightning fruit grader located at our Somersby research station on the Central Coast.

The grader includes scales and electronic counters. The grader was last used in 2005.

For more information contact David Halliday (Farm Supervisor) on (02) 4348 1900 during office hours.

### WANTED

Second-hand grader for small citrus orchard.

Please phone Bill Whitbourne on (02) 4997 4976.

Print Post Approved  
PP255003/00759



# 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.

**NSW Department of Primary  
Industries Staff - Who to contact  
for commercial fruit enquiries**

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**Camden 02 4640 6408**  
Lawrence Ullio - District Horticulturist  
Mobile 0412 436 871

**Gosford 02 4348 1900**  
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Mobile 0411 109 159  
David Deane - Agricultural Inspector

**Richmond 02 4588 2100**  
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Bill Yiasoumi - Irrigation Officer  
Rob Bowman - Senior Inspector  
(Sydney & South Coast) 0411 139 579

**SURFACE  
MAIL**



NSW DEPARTMENT OF  
PRIMARY INDUSTRIES

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**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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