COASTAL FRUITGROWERS' NEWSLETTER

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INSIDE

Dear Growers

Welcome to the Winter edition of the Newsletter.

Inside you find a very interesting report on a field day held recently with long-time biodynamic citrus grower, John Priestly. John's natural systems approach to farming will be of interest to all growers.

There's also an extract from a presentation made at the recent ABARE Outlook conference giving us an insight into the characteristics of the most productive and successful Australian farming enterprises.

Plus you'll find all the regular features and a whole lot more inside.

Happy reading.

Sandra Hardy

The 2007 - 08 edition of the Orchard Plant Protection Guide for deciduous fruits in NSW.
To get your copy contact your local District Horticulturist.

This newsletter is also available at:
www.dpi.nsw.gov.au/aboutus/news/newsletters/coastal-fruitgrowers

NSW DEPARTMENT OF PRIMARY INDUSTRIES

Coastal Fruitgrowers' Newsletter
Edited by Sandra Hardy
Design & Layout - Cathryn McMaster

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 NSW Department of Primary Industries 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 Department of Primary Industries

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Acadian

A day in the citrus orchard with John Priestly, Biodynamic citrus and beef producer

Sandra Hardy reports on the Cittgroup farm walk held on the 1st May 2007 at Peats Ridge.

Background

John's father started the citrus property at Paterson, near Maitland on the NSW Coast in 1936. John manages both his citrus and beef cattle enterprises using biodynamic growing principles. The property comprises Washington navels (a very old block and a newly planted young block), Lane's late navels (1000 trees) and 4000 mandarin trees. The mandarin varieties include Ellendale, Emperor (seedling trees), Imperial and Murcott.

Imperial mandarins on John's property

John believes you can produce good quality fruit with good flavour and shelf life using more natural production systems.

"We are 25 years behind in supplying the demand for organically grown fruit. Last year there was a 13% increase in demand but only a 9% increase in supply, so we need to take advantage of this gap. The Gosford area has the added benefit of being even closer to the Sydney market. Consumers like having a relationship with the person who produces the product, and this relationship has diminished over the years and has been taken over by the supermarkets. Consumers like to be connected with the producer".

Depending on weather conditions, the Murcott and Emperor mandarins do suffer from Brown spot which can result in fruit drop of up to 25% and 5%

Ellendale mandarins on John's property

respectively in those varieties. Harvest extends over a 4 month period stating in May. After harvest fruit are washed and coated with ½ strength carnauba wax. Brushes are used for small quantities of fruit. John pre-sells all his citrus fruit before harvest, apart from a small amount sold at the Farm gate. John's produce is brought and distributed by EcoFarms. He now packs his fruit into bulk hat bins (210kg) rather than cartons which has reduced costs. Fruit is on the market shelf within 2 days of harvest.

The biodynamic or natural systems approach to farming

Farmers play a very important role in looking after the land for future generations and citrus seems to respond well to natural growing systems.

One of the main differences in the biodynamic approach to farming compared to more traditional farming systems is that it relies on treating the cause of a problem and not the symptoms. This is done by looking for the underlying causes of a problem rather than just continually treating the symptoms.

For example, weeds and pests occur because there are underlying problems in the growing system. Biodynamic farmers look at the living system in

which they are operating and try and work within that system and not against it. Farmers need to re-establish the balance back into their farming system. Underlying this is the need to put more organic matter back into the soil. Recycling is a major component of the natural growing system – and nothing is considered as a waste. The inputs for production need to be generated as much as possible on-farm.

Elements of John's citrus orchard

Soil Management

Soil flora and fauna are an important component of the growing system and these tend to diminish in bare soils and those treated with artificial inputs. Conditions which are too wet, dry, hot or cold reduce the number of good organisms in the soil. Soil aeration is also important and John uses a spiking machine to aerate the soil. It is critical to put carbon back into the soil and not into the atmosphere. John also applies a diatomaceous earth compound to the soil in his orchard. An information leaflet on diatomaceous earth can be found at http://www.mtsylviadiatomite.com.au

When you use herbicides you should try and buffer their impact on the soil by adding carbon sources such a molasses and humic acid. For example some formulations of Roundup® can be mixed with these carbon sources prior to application. John recommends about 3 gallons to the acre (33.7L/ha) to negate the sterilization effect of herbicides on the soil.

- Organic matter is applied to the soil in early autumn so the trees don't get too much nitrogen close to harvest. The use of compost is an important part of their orchard management and animal manures are composted before being applied. The compost needs to reach temperatures of 59–60°C for 3 weeks. The compost is not used for at least 4 months. The compost heap shouldn't be kept too hot, for too long. As more oxygen is added to the heap the higher the temperature, and with less oxygen the lower the temperature of the heap.

- Basalt dust, purchased from a local blue metal quarry has been used in the orchard since 1949. Three 36T truckloads are used annually. The basalt dust is used to re-mineralise the soil. The basalt dust also contains some silica and potassium. It can also be purchased as a product called Rock dust costing about $7/tonne. The impact from using this product won't be seen for about 2-3 years. The size of the particles is important (about 125 microns, which is the same size as sand) because if the particles are too fine they are like talcum powder and too difficult and hazardous to handle.
- Any tree prunings are mulched and spread in the orchard. This equates to about 25% of the trees (foliage and branches) being put back into the soil annually.

Beneficial Insects

John closely monitors his trees for the presence of both pest and predator insects. Monitoring is done weekly, early in the morning around sunrise. He purchases predatory insects and introduces them into the orchard when needed. Beneficial insects such as lady beetles, wasps and mite predators do not like high temperatures above 36°C. John grows mulberry trees around the orchard, providing a cool place to harbour the predatory aphytis wasp. Rhodes grass is also used as a food source for mite predators.

Pruning

Pruning is an important part of John's citrus management plan. Pruning reduces dead wood (eliminating fungal disease sources), promotes new growth (helping with the production of larger, better quality fruit) and improves the light and air penetration into trees. John takes the centres out of the trees and makes his cuts low down in the canopy. The dead wood in trees is removed

annually. There is no real time for pruning as John prefers to prune out unwanted wood when he sees it.

Other plants in the orchard

Another underlying philosophy is that no plant grows successfully in isolation and plants naturally compliment each other. Casuarina trees are used as windbreaks in the orchard.

- Wandering dew (both the blue and white flowering species are used as a ground cover underneath the citrus trees. Wandering dew doesn't like growing in full sun and therefore only survives underneath the mature trees. It appears to be a good way to help store water in the soil and has helped reduce irrigation applications by up to 75%. John does not appear to have a problem with the wandering dew becoming invasive and growing up the tree butts. **NB.** It is important to note that frosts are common on the property, and these frosts tend to keep the wandering dew in check by killing it back during winter.
- The inter-row area between the trees is planted with Caloona peas in summer and then Prairie grass takes over during winter.
- Farmers Friends are not considered as weeds but are tolerated. They are a pioneer plant and prefer to grow in full sun, so as soon as the tree canopy develops they tend to die out. They are also used by worms to lay their eggs.
- During winter John also grows Rhodes grass down the middle of the tree rows as a food (pollen) source for mite predators.

Some pest and disease control strategies

A lot of John's control strategies and remedies have come from spending quite a bit of time carefully observing the things going on in the orchard, coming up with a possible solution and then testing it.

- Olive trees are also grown on the property as a food source for Bower birds. John discovered that Bower birds prefer olives to citrus and now they leave his citrus alone.
- For possum control, John picks some fruit and places it on the ground for them to feed. He uses the same feeding spot in order to train the possums. This deters them from feeding on the fruit on the trees and has reduced losses.

- For cockatoos John has set up a wire to which he has attached all sorts of dangling objects. John observed that the cockatoos were tending to pick fruit, drop it and then watch it roll, once it stopped they then picked another fruit and did the same thing. He deduced that the cockatoos seemed to be more interested in just playing a game with the fruit – so he gave them something better to play with rather than his fruit!
- For snails and slugs a product called "purasil" made from diatomaceous earth can be applied around the trees. Snails are also controlled by Blue Tongue lizards. He places pieces of polypipe up against the tree butt as a home for the lizards. An alternative food source for snails during autumn and winter are sunflowers and a late planting of sunflowers can be made in broad acre crops.
- For control of Silvereye birds John places water bottles in the orchard as a water source for the birds. It appears the silvereyes were eating the fruit just to get moisture.
- For control of insect pests on the fruit and trees, John uses an oil spray made from 1 part canola oil to 1 part boiling water. This is mixed in a bucket for a few minutes and stored in a 20L drum. He uses the oil mixture at a rate of 1 part in 40 parts of water. A ½ teaspoon of detergent is added to the oil spray as a spreader.
- Hydrated lime is also used in winter for pest and disease control.

- For fungal control John uses a mixture of diluted lemon myrtle which strengthens the cell walls of the plant, making it harder for the fungus to penetrate the plant cells. However this is a preventative treatment and will not control the fungus once it has invaded the plant tissue.

  The lemon myrtle mixture is made by putting the leaves and small branches of lemon myrtle into 205L drums filled with water. The mixture is then oxygenated using a simple aerator for 2-3 hours daily. He then mixes 1 part of this liquid with 40 parts of water and sprays it on the trees. He changes the lemon myrtle leaves twice a year. He also prepares another brew using the same process with the foliage of *Casuarina cunninghamii* (used as a windbreak tree) which is also diluted down for use (1 part in 40 parts of water).

John's annual production plan

John's annual program for his citrus can be summarised as follows:

- After harvest the prairie grass sod is mulched and a ground application of 500 and fish emulsion is made.

  The biodynamic product 500 is made from cow manure, which has been buried in the soil (in cow horns) for about 7 months. This process enriches the mixture with nutrients and micro-organisms. The 500 is then stored in bottles in the dark. The 500 is then applied with a dedicated spreader to the soil twice a year, in the late afternoon and not in the heat of the day.
- After winter when the soil temperature reaches 16°C Caloona peas are spread in the inter-row sod and run over with the mulcher.
- After petal fall (usually after the 20th October) if conditions are cloudy and overcast trees are sprayed with hydrated lime (9kg lime to 1460L water).
- Irrigation is critical during the December to mid February period when the fruit cells are actively dividing. Trees are not put under any water stress at this time.
- The mandarins are hand thinned by the end of January because undertaking thinning after this time has little effect.
- At the end of January the Caloona peas are mulched into the sod and another ground application of 500 and fish emulsion is made.
- In autumn the sod is re-mulched and the condition and species mixture of the sod is checked.
- When the fruit turns from dark green to light green John applies a light foliar spray of silica* to the trees (just enough to wet the tops of the leaves). *John uses the Biodynamic Product 501- which is made from washed quartz crystal.
- When fruit turn from light green to light yellow another foliar application of 501 is made.
- Two weeks before harvest a third foliar spray of 501 is made to the trees.

NB. The foliar sprays of 501 are applied so as to wet the top of the leaf surface only and not form droplets on the undersides of leaves.

Making changes to your farming system

If you are thinking of changing your growing system then it is best to introduce any changes steadily. It is important not to just stop one practice and start another. Changes should be made slowly. Start by replacing just a few of the synthetic inputs over a period of time.

Below is one example of how to start moving to a more natural growing system.

1. Reduce and remove the use of insecticides. Introduce natural predators and beneficial insects and focus on providing them with suitable habitats in the orchard. For example ladybirds will overwinter on geraniums so John has planted these in his orchard.
2. Reduce and gradually eliminate the use of chemicals (start with herbicides) and don't cultivate the soil. Buffer the effects of herbicides on the soil with a carbon source. This will lead to an improvement in the soil system.
3. Ease off the use of artificial fertilisers and add good fungi and bacteria back into the soil. For example single super phosphate (SSP) can be buffered (or neutralised) by mixing with superfine lime. Mix 1 bag of SSP and 1 bag of super fine lime together and let stand overnight. Break it up and apply to the soil.

What is Biodymanics?

This following information has been extracted from the Biodynamic Agriculture Australia website (www.biodynamics.net.au).

Biodynamic practitioners seek to understand and work with the life processes as well as enhance their understanding of the mineral processes used in conventional agriculture. Healthy soil is a prime basis for healthy plants, animals and people. BD farming practices are of an organic nature, not relying on bringing artificial fertilisers on to the farm, although some organic or natural mineral fertiliser may be necessary during the establishment phase. On Biodynamic farms we seek instead to enhance the soils structure and nutrient cycles as well as plant growth and development with the use of specific Preparations which are made from farm-sourced materials.

These are the Biodynamic Preparations numbered 500 to 507 used in conjunction with established agricultural practices such as composting and manuring, crop and pasture rotations and tree planting. These Preparations are designed to work directly with the dynamic biological processes and cycles which are the basis of soil fertility.

Horn Manure Preparation (500) is used to enliven the soil, increasing the microflora and availability of nutrients and trace elements. Through it the root growth, in particular, is strengthened in a balanced way, especially the fine root hairs. Develops humus formation, soil structure and water holding capacity.

Horn Silica Preparation (501) enhances the light and warmth assimilation of the plant, leading to better fruit and seed development with improved flavour, aroma, colour and nutritional quality.

Compost Preparations (502 to 507), known collectively as the compost preparations, help the dynamic cycles of the macro- and micro-nutrients, via biological processes in the soil and in material breakdown.

More information:

Biodynamic Agriculture Australia (BAA) can be contacted on 02 6655 0566 or go to http://www.biodynamics.net.au. A Bio-dynamic Farmers Handbook (1993) is available from BAA.

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New law for notifying the community when public authorities use pesticides in public places

Extracted from the DEC website (www.environment.nsw.gov.au)

From 1 February 2007 changes to the Pesticides Regulation 1995 will require public authorities, such as local councils and government agencies, to notify the community, in accordance with a notification plan, when they use or allow the use of pesticides in public places that are owned or controlled by the public authority.

The changes are based on the principle that people who live and work in an area have a basic right to know when public places in the area are treated with pesticides. Notifying people about pesticide applications means they can make informed decisions, for example, parents with young children may choose to delay a visit to the playground if they know pesticides have been applied that day.

Notifying members of the public about pesticide use before it happens will not mean that they can prevent the use of pesticides in the area. The aim of notification is to allow people to choose to reduce their exposure to pesticides if they wish. Notifying the community is now internationally recognised as best practice in pesticides management.

This information sheet explains what public authorities need to do to comply with the new requirements. It explains how to consult with the community when developing a pesticide use notification plan to suit local needs.

What is a pesticide use notification plan?

A pesticide use notification plan describes where a public authority uses pesticides and the steps it will take to notify people about its pesticide use in those places. It must be prepared by a public authority (including a local council) in consultation with the local community. Many public authorities already notify their communities when they use pesticides in the area, for example, through advertising or letterbox drops.

What does the new law say?

From 1 February 2007 public authorities, including local councils, must not use pesticides in prescribed public places unless a notification plan has been prepared and notice has been given in accordance with the plan.

A public authority's notification plan must describe:

- the categories of prescribed public places where it uses pesticides or allows other people to use pesticides (for example, contractors or lessees)
- how it will notify the community before it uses pesticides in prescribed public places
- what special steps it will take to notify the community before pesticides are applied in prescribed public places that are located next to sensitive places such as schools, kindergartens, childcare centres, nursing homes or hospitals.

From 1 February 2007, public authorities cannot use or allow the use of pesticides unless a notification plan has been:

- developed in consultation with the community
- finalised, advertised and made publicly available.

The community must be notified of pesticide use in the way the finalised plan describes.

What is a prescribed public place?

In summary, prescribed public places are any of the following places that the public is entitled to have access to (with or without paying a fee):

- public gardens
- picnic areas
- playgrounds
- parks, sporting fields, or ovals
- national parks and other lands reserved under the National Parks and Wildlife Act 1974, State forests or Crown land
- any public land owned or controlled by a public authority, for example, road verges, and rail and electricity easements.

A prescribed public place also includes school and TAFE grounds, but does not include the inside of

any buildings or structures. All prescribed public places must be considered in the notification plan.

The full definition of a prescribed public place is in Part 4B clause 11J of the Pesticides Regulation. The full definition should be read before a notification plan is prepared.

What is a sensitive place?

In summary, a sensitive place is any:

- school or pre-school
- kindergarten
- childcare centre
- hospital
- community health centre
- nursing home.

The full definition of a sensitive place is in clause 11J(1) of the Pesticides Regulation.

The full definition should be read before a notification plan is prepared.

The Department of Environment and Conservation (DEC) can declare additional places to be sensitive places by publication of a notice in the Government Gazette.

Citrus project in Pakistan

Extracted from the July 2007 edition of Agriculture Today.

Tahir Khurshid, Research Horticulturist, NSW DPI Dareton.

Australian knowledge and expertise is being used to increase citrus production in Pakistan, with direct benefits for Australian growers. NSW Department of Primary Industries is the lead agency in a three-year Australia-Pakistan program managed by the Australian Centre for International Agricultural Research (ACIAR).

Focusing on oranges and mandarins, a skilled team of specialists from Dareton, Griffith and Menangle aims to increase production by providing greater variety choice, improved orchard management techniques and more efficient use of inputs.

Citrus is one of the major fruit crops of Pakistan, where production has exceeded 167,000 tonnes. Around 80 per cent of Pakistan's production is mandarins, predominantly Kinnow; Pakistan generates 95% of the world's Kinnow production. The country is an important global producer and increasingly, exporter of Kinnow mandarins and the general industry knowledge from Pakistan will be valuable to Australian growers.

Most of Australia's citrus industry is based on the production of sweet oranges, so mandarin plantings currently represent only seven per cent of total citrus plantings, the majority in Queensland. In the past 10 years the majority of new citrus cultivars introduced into Australia have been mandarin selections, and a national breeding program is already working on developing new mandarin cultivars for Australian conditions.

While there is widespread industry support and grower interest in the potential to diversify their current plantings to include more mandarins, the industry is also aiming to expand the production of blood orange. Therefore, the citrus work in Australia under the project will be the identification of potential blood orange production areas and development of facts sheets for mandarin and blood orange production.

Using the latest infrared camera technology, scientists at Dareton will also quality test for sugar content and dry matter in mandarin and oranges, including fruit from superior rootstocks and other varieties. They will collect phenology information for mandarins, navel and blood orange which will directly benefit the citrus industry in Australia.

Citrus is one of the largest horticultural industries in Australia, supplying both domestic and export markets, with an estimated production of 722,000 tonnes in the 2006/07 season. This total includes the production of 102,000 tonnes of mandarin and 571,000 tonnes of oranges.

For more information contact Tahir Khurshid, on (03) 5019 8433.

Insuring the nations citrus 'mother' trees

Source: Auscitrus Newsletter, Autumn 2007

Nerida Donovan and Grant Chambers, NSW DPI, Camden.

The foundation of a productive orchard comes from the use of high quality propagation material that is true to type and of a high health status. The Citrus industry is fortunate enough to have a state-of-the-art program that manages the national citrus repository. The repository is a collection of 'mother' trees of the industry's commercial citrus clones, managed by Auscitrus for the citrus industry.

The program is vital to the industry remaining globally competitive on both a domestic and international scale by ensuring healthy propagation material is available to growers and nurserymen of new citrus varieties and clone selections.

The national repositories are the insurance policy for the health status of the Australian citrus industry. If an exotic disease outbreak occurs in Australia, disease-free budwood can be obtained from the mother trees to re-establish the citrus industry in affected areas.

The Program is funded by a Horticulture Australia Limited (HAL) grant to Auscitrus, and the work is contracted to the New South Wales Department of Primary Industries (NSW DPI) .

The first part of the program is the introduction of new citrus varieties and the selection of local clones. New varieties are needed to ensure the Australian industry remains competitive and is able to adapt to changing market needs on both a domestic and international scale.

As there is always a risk of introducing diseases when introducing budwood and seed from overseas, newly imported varieties remain at the Australian Quarantine Inspection Service (AQIS) Plant Quarantine Station at Eastern Creek in NSW for an extended period.

The risk of introducing a new disease varies with the country or area from which the propagation material is sourced. Where possible, material is imported from reliable propagation schemes, such as the Spanish Citrus Variety Improvement Program or the Californian Citrus Clonal Protection Program. Once released from quarantine, mother trees of newly imported varieties are placed in the national repository for virus-free citrus clones located at EMAI. Locally selected new citrus clones undergo disease testing and, where necessary, elimination at EMAI before being placed in the repository. The repository for virus-free clones currently houses more than 300 trees comprising more than 140 varieties. The health status of these trees is checked on a regular basis for graft transmissible diseases like citrus tristeza virus (CTV) and citrus exocortis viroid.

The program funds the maintenance and disease testing of the public access varieties imported by Auscitrus.

Private importers can organise with Auscitrus for their varieties to be included in the program on a fee-for service basis.

The mother trees are the source of buds to produce trees for the Auscitrus budwood multiplication blocks and for rapid nursery multiplication of material in the Auscitrus multiplication scheme.

Some varieties are pre-immunised with a mild strain of CTV to protect against more severe strains of the virus. Pre-immunisation has been used successfully for several years in Australia to protect white grapefruit trees against field infection by severe grapefruit stem pitting strains of CTV. The pre-immunised trees are placed in a separate repository located at EMAI currently housing more than 70 varieties.

Auscitrus ensures the health status of all budwood and rootstock seed supply trees is checked by pathologists at EMAI on a regular basis as dictated by a planned schedule. A full time NSW DPI pathologist and part time technical assistant are funded by Auscitrus for this specific purpose.

Update on new citrus varieties

Source: Auscitrus Newsletter, Autumn 2007

Graham Sanderson, Research Horticulturalist, NSW DPI.

Evaluation sites in Sunraysia, the Riverina, South Australia, Western Australia and Queensland are now planted with 19 of the 30 new citrus varieties recently introduced to Australia. The Sunraysia site also has the new varieties established as grafts onto Valencia understock. Each variety has been grafted to 12 Valencia trees to generate a volume of fruit for preliminary market testing.

Planted - October 2005 (Stage 1)

Variety	Fruit type	Origin	Comment	Importer
Mor	tangor	Israel	Low seeded Murcott	ANFIC
Pomelit	pummelo	S Africa	Pink fleshed, low acid	ANFIC
Nectar	mandarin	Israel	Low seed	ANFIC
Nouvelle	mandarin	S Africa	Low seed	ANFIC
Eureka SL	lemon	S Africa	Seedless, from irradiation	ANFIC
Cami	mandarin	Italy	Seedless in solid blocks	ANFIC
Tacle	tangor	Italy	Seedless	ANFIC
C 1829	tangor	Italy	Seedless triploid	ANFIC
C 1867	tangor	Italy	Seedless triploid	ANFIC
Alkantara	tangor	Italy	Seedless triploid	ANFIC
Mandalate	mandarin	Italy	Seedless triploid	ANFIC
Sidi Aissa	clementine	Morocco	Superior to Nules?	Auscitrus
Orogrande	clementine	Spain	Nules mutation, more juice	Auscitrus

Planted - October 2006 (Stage 2)

Primosole	mandarin	Italy	Satsuma hybrid	Auscitrus
Nour	clementine	Spain	Late maturing A	Auscitrus
IRM1	tangor	Australia	Low seeded Murcott	QDPI&F
IRM2	tangor	Australia	Low seeded Murcott	QDPI&F
Or	tangor	Israel	Low seeded	ANFIC
Gold Nugget	mandarin	California	Seedless mandarin	Jempi

Propagated - December 2006 (Stage 3)

Budwood of 6 more varieties was received from Australian quarantine in late November 2006 and propagated onto rootstocks for spring/summer planting and grafting in 2007.

The varieties released were:

Shasta Gold mandarin, (**T**emple x **D**ancy x **E**ncore hybrid) (USA) - Jempi
Tahoe Gold mandarin, **TDE** hybrid (USA) - Jempi
Yosemite Gold mandarin, TDE hybrid (USA) - Jempi
Earlygold, juice orange. (USA) - ANFIC
Bintangchen orange No 2, early maturing juice orange. (China) - Auscitrus
Jinchen Bei Bei 447 orange, later maturing juice orange. (China) –Auscitrus

ABARE Outlook Conference – March 2007

Extracted from a presentation made at the recent ABARE Outlook Conference 2007

Wayne Carlson, NAB Agribusiness.

Characteristics of Australian farms

There are around 130,000 farms in Australia. The word "farming" encompasses a wide variety of industries, of varying sizes, intensities and landscapes. A developed trend that has been evident in agriculture for many years is the reduction in farm numbers, resulting in declining agricultural clients for the finance sector. Farmers exiting the sector, industry restructure and consolidation have driven this trend. Generally speaking, the farming sector can be categorised into the following five segments:

1. Lifestyle farms
Farmers whose primary source of income is from off-farm sources. They are often high in equity and debt free. As the name suggests, the farm is for lifestyle purposes and they are not entirely focused on productivity, preferring capital growth and a "slice of country living".

2. Small farms
Those who farm to provide a good standard of living, relying on off-farm income to assist with farm returns. They will often have off-farm investments and be more likely to diversify to supplement farm income.

3. Medium farms
Farmers who concentrate on expansion to facilitate succession of the next generation. They have the capability to maintain long-term viability due to a large focus on productivity gains.

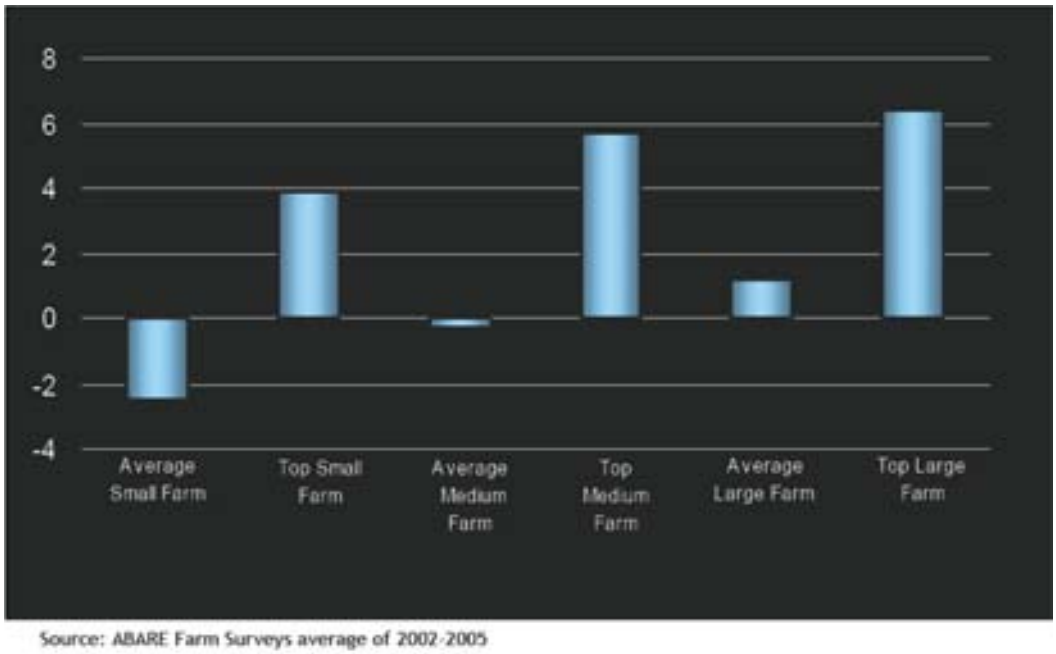
4. Large farms
Farms that are bordering on corporate entities. They are largely focused on productivity gains, financial returns and further expansion to maintain economies of scale.

5. Corporate farms
Characterised by the consolidation of farms over the years. They are largely focused on further expansion, productivity gains and financial returns to shareholders and directors.

Current environment and drought

During 2006 Australian Agriculture has experienced one of the worst drought events on record. The impacts of this drought are far reaching and are not limited to environmental impacts – they include the financial, emotional and social impacts on affected primary producers. Drought has implications far

Figure 1. Farm return on assets



Source: ABARE Farm Surveys average of 2002-2005

broader than the agricultural sector, in particular small business in rural towns, farm employees and large suppliers of farm inputs such as fertiliser, chemicals and fuel. Government policy in more recent times has recognised this factor with its inclusion in the current Federal Government package.

Affect of drought on farming clients

With continuing drought conditions providing no relief, there will be disparate outcomes for farm cash income across broadacre farmers in 2006/07. Smaller broadacre farms are expected to record a small cash loss, which will be covered by liquid assets and non-farm income. A majority of middle/ large farms are forecast to generate positive cash income albeit somewhat reduced.

Whilst there will be significant on farm incomes, average equity levels are expected to remain high – especially relative to debt – across all farm categories, following rises in land prices during recent years

Characteristics of the most productive and successful farms

NAB Agribusiness has been working with the farm sector for the last 148 years, and our specialist Agribusiness division was created 6 years ago. We have a geographical footprint that encompasses over 550 dedicated agribusiness staff working from 115 rural locations right across Australia. This experience and interaction with a client base of around 1 in 3 Australian primary producers forms the basis of our perspective of what characteristics are displayed by the best performing farms.

1. They are on average larger and often stretching their resources to grow
2. They seek new ideas and outside advice from a wide range of sources
3. They embrace new technology but do so judiciously
4. They don't do things out of habit or tradition
5. They understand the key value drivers of their business
6. They take calculated risks

It is our view that the higher end medium farmers and higher end large farmers are the future of agriculture in Australia, and are in a better position to manage the inherent risks that are involved in farming, particularly in years of drought.

Data depicted in Figure 1 supports this opinion reflecting that small farms struggle to generate a positive return, and that on average, the larger the asset base the greater the return. However just as importantly, the better mid sized farms generate returns of 5.7%, which is greater than the average of their larger peers at 1.2%.

So what are the top medium and large farmers doing differently to achieve such success?

NAB Agribusiness in conjunction with the Australian Farm Journal recently undertook a survey of Australian farmers. The survey results are not surprising, generally confirming our perception of the factors in play.

- **Financial management**

They utilise all available information that will assist with their farm business, including the use of financial software packages and tools such as the Internet to assist with business management needs and market intelligence. They also play an active part in doing their own business plans, farm cash flow budgets and crop and finance forecasting.

- **Use of professional advice**

To be successful, both productivity growth and financial growth must go hand in hand. To obtain success in both areas, above average farmers utilise the expertise of external services such as accountants, farm consultants, and farmer groups and also attend events such as agricultural field days and seminars. The specialist Agribusiness Bank Manager and Agribusiness Wealth Planner also play and essential role in providing financial advice and guidance, particularly on sensitive issues such as succession planning.

Around 75% of farmers utilise their accountants when creating farm financial strategies. The print media follows this at around 60% and the Internet at around 40%. It is also worth noting that 76% of all survey respondents who utilise the Internet do so for weather information, followed by business management needs at 60%.

- **Risk management**

Risk management is particularly important in an ever changing and volatile agricultural market.

Popular risk management tools include Commodity Swap products, to manage commodity price risk, Insurance, Farm Management Deposits and Interest Rate Protection. At NAB we have seen a notable increase in clients utilising Commodity Swap products. Favourable futures prices certainly influence uptake, but increased awareness and understanding of the benefits are also major factors. Bill facility products with "bolt ons" such as Fixed, Capped and Range components to manage interest rate risk have seen strong uptake. We now have around 70 % of our exposure to agriculture with interest rate risk protection.

Another important risk management tool that successful farmers utilise is investment off farm. About 71% of respondent farmers have shares or managed funds. This is followed by superannuation at 60%, Farm Management Deposits at 43% and residential property at 40%.

Off farm investment, as well as providing additional revenue streams provide a diversified asset base and often forms part of a family and business succession plan. It is also an observation that the strong growth in rural land values has forced some to consider other forms of investment, as expansion through acquisition has grown beyond their reach. In some cases the off farm investment strategy is used as a stepping-stone to their acquisition/ growth strategy.

Opportunities

A successful farmer recognises opportunities and takes them. For both large and medium sized farmers, their top three plans for the future include:

1. Reinvest capital to increase production

2. Invest Off Farm

3. Reduce debt and consolidate current position

Gone are the days of seeing the purchase of the next-door neighbours property as the only viable option. Many farmers are now purchasing properties in different shires, or areas that have differing rainfall patterns to where they currently farm in order to spread their risk.

Economic reality combined with factors such as climate change will make the astute producer review their enterprise suitability, or even the location and make plans to manage the changes they need to make.

Conclusion

In the face of adversity, such as drought, it is encouraging and inspiring to see that agricultural enterprises still remain relatively positive about their future and still wanting to remain within primary production.

Basically, whatever sector of farming that an enterprise fits into, they can survive if the management of the enterprise truly understand the business, its capacity and drivers, and has a plan and makes management decisions based on good information – "Good Information is Power".

To view the full document or for more information on the Abare Outlook Conference go to www.abareconomics.com

Carpophilus beetle "Attract & Kill" system available commercially this season

The "Attract & Kill" system will be available to growers for purchase this coming stonefruit season.

The system is based on using traps which contain a co-attractant, a pheromone and a dichlorvos pest strip. Three traps are needed per hectare but less traps may be required for large areas. Traps need to be in place 5-6 weeks prior to harvest and left in the orchard for 1-2 weeks after harvest. The co-attractant needs to be changed every week and the pheromone button changed every 2 weeks throughout the season.

Traps will be sold in boxes of five. The initial trap kit includes the trap, a 500 ml container (into which the co-attractant is placed) and a metal ring which is used to secure the trap to a star picket. The trap kit also includes a quantiity of co-attractant and pheromone buttons. The trap kit price works out to about $235/ha. Refill packs of the co-attractant and pheromone buttons will cost about $147/ha. The pest strips will be sold seperately and a permit is currently with the APVMA for use of these pest strips.

At this stage Ace Ohlsson is the reseller to contact in the Sydney region for trap purchases.

Your citrus levies explained

Source: ACG website

Research and Development (R&D) levy

In 2004/05, $2.9 million dollars were invested in citrus research and development (R&D) projects. These projects are funded through the national citrus R&D levy which is matched by the Australian Government in a 50/50 agreement with Horticulture Australia Limited (HAL).

Commercial citrus growers pay the citrus R&D levy at a rate of $1.97 per tonne.

The funds are used to invest in R&D projects to find solutions for problems and develop innovative approaches to help Australian citrus remain competitive in a rapidly changing marketplace. The R&D technical advisory panel assists the citrus industry advisory committee (IAC) in technical R&D matters.

Marketing levy (oranges only)

In 2004/05, approximately $760,000 was invested in marketing projects, which support domestic and export sales of fresh oranges.

Commercial orange growers pay the citrus marketing levy at a rate of $0.75 per tonne for oranges only.

The marketing levy is not matched by the Australian Government. The domestic oranges marketing program is directed by the Domestic Oranges Promotion Committee, that has representation from Australian Citrus Growers (ACG) and the three state statutory citrus boards. The export orange marketing program is directed by the Export Marketing Advisory Panel, comprising of exporters and ACG.

Plant Health Australia

Commercial citrus growers pay the Plant Health Australia levy at a rate of $0.03 per tonne.

This levy contributes to the membership of Plant Health Australia (PHA), who co ordinates and develops initiatives at a national level that benefit members by increasing the future viability and sustainability of all plant industries. As PHA members include most major agricultural industries, the Australian Government and all state/territory governments, PHA provides plant industry with value by providing a unique, effective and coordinated means of contributing to policy making and direction setting on major plant health issues.

How the levy is collected and managed

The citrus R&D and marketing levies are collected at the first point of sale by the packer, agent or processor.

All collectors are legally required to pass on the levy to the Levies & Revenue Service of the Australian Government Department of Agriculture, Fisheries & Forestry (DAFF). A levy collection charge is applied on an industry-by-industry basis.

The Levies & Revenue Service then forwards the levy money to HAL who manage the citrus R&D and marketing programs in consultation with the Australian Citrus Growers (ACG), the citrus industry advisory committee (IAC) and two expert panels. Ross Skinner, HAL Industry Services Manager, is the primary contact for citrus in HAL. The HAL Board is ultimately responsible for approving expenditure from both the levy and Australian Government-matched funding and ensures that projects meet the priorities of both the industry and Government.

Biosecurity Levy

The citrus biosecurity was approved by the citrus industry in September 2005. Initially set at zero ($0), the levy is to be activated in the event of an exotic outbreak to which an eradication response is considered appropriate.

Plant health Australia (PHA) has developed an Emergency Plant Pest Response Deed (EPPRD) which delegates responsibilities and activities in the event of an incursion. Under the EPPRD, the biosecurity levy will provide a funding mechanism to cover the citrus industry's share of any exotic pest or disease eradication program, including reimbursement costs for citrus trees/crops destroyed.

Avocado fruit spotting bug and spray application field day

Sandra Hardy, Industry Leader - Citrus, NSW DPI, Gosford

A spray application field day was held for avocado growers on the Central Coast in May. The day was organised by Avocados Australia and lead by Dr Henry Drew. The information in this article is based on the field day presentation and from the book *"Improving the management of spotting bugs in avocados"* by Henry Drew.

Fruit spotting bugs

Fruit spotting bugs are a major pest of avocados and can cause significant fruit drop and damage. The number of spotting bugs varies from season to season and from location to location. Spotting bugs are a native pest and live in the undergrowth of native forests. However there are over 200 alternative host plants and citrus and lychee blossom are highly attractive to the bugs.

Spotting bugs move from food source to food source and will move into avocados if conditions inside the crop are better than that of alternative host sites. However weather conditions, particularly temperature are also critical for pest movement and reproduction rates. Spotting bugs are generally poor fliers and in cool conditions are less active and fly only short distances. This can explain why in some locations in cool conditions the edges of avocado blocks are more heavily attacked, as the bugs move only a short distance from alternative host sites into the crop. Bug movement and reproduction rates

Photo 1. Fruit spotting bug damage on avocado fruit. The fruit on the left has damage which is "woody". The fruit on the right has damage which is more recent, with a greasy halo around the sting mark.

increase as temperatures rise and in temperatures over 32^{o}C spotting bugs become very active.

Monitoring your trees regularly is critical to identifying when and where in the orchard the spotting bugs are occurring. To do this accurately you need to be able to identify spotting bug eggs, nymphs and adults, damage on fruit and other beneficial insects similar to the spotting bug. Good photos of all these stages are contained in the book *"Improving the management of spotting bug in Avocados"*. Contact Avocados Australia or Henry Drew for a copy of this book.

Fruit spotting bugs probably start moving into avocados from flowering onwards. A suggested monitoring program includes checking each tree every 2 weeks or alternatively checking every 2nd tree every week. Walk slowly past one side of the tree scanning fruit for bugs, stings or white exudate. Check any fruit damage closely. If a sting mark is woody then the damage is old (2-3 weeks) whereas recent damage has a greasy halo around the sting (see photo 1). Tag any trees that have damage or insects so that these trees can be checked thoroughly next time. The suggested threshold for spraying is if you find one bug in 200 trees.

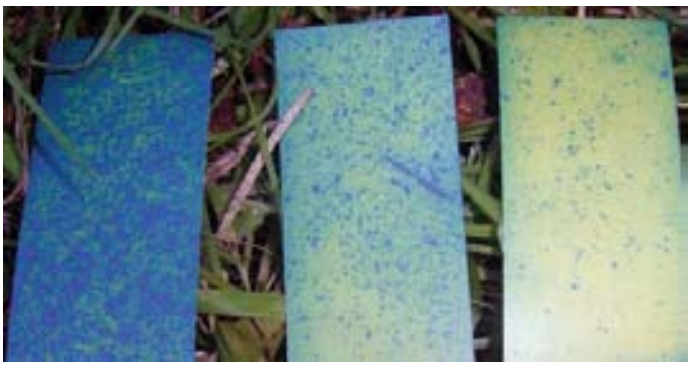
Regular monitoring of the boundary trees and rows of each block will help you identify where the spotting bugs are coming from - the alternative host sites. Adequate separation of your avocados trees from these alternative host sites can held reduce damage. A separation distance of 20 m is beneficial in reducing the edge effect in cool conditions (<20^{o}C) but a distance of at least 100 m is necessary to reduce damage when temperatures are higher.

Spray application

The application of pesticides is still the main method used to control fruit spotting bugs in avocados. Sprays need to be applied when the spotting bugs are present in the orchard and regular monitoring of your trees for the presence of bugs will help you determine when to spray. Good spray coverage of both the foliage and fruit is critical to achieving good control of fruit spotting bug.

A large part of the field day was spent on assessing and improving the spray coverage of an airblast sprayer.

Water sensitive paper or spraycards were used in trees to check spray coverage in the canopy. Modifications to the nozzle size, type and angle as well as adjustments to travel speed were all used to improve coverage of the avocado trees. In order to direct more spray into the tops of the tree canopy, hollow cone nozzels at the top of the rig were replaced with solid cone nozzles.



Water sensitive spray cards are used to assess spray coverage and are available from Spraying Systems Co Pty Ltd on (03) 9318 0511

The use of spraycards in trees to assess the spray coverage gave everyone an instantaneous view of where the spray was or wasn't going.

All-in-all the field day was a great success and enjoyed by all who participated.

Dr Henry Drew can be contacted at: hjdrew@ozemail.com.au or phone Avocados Australia (07) 3391 2344.

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News in Brief

Extracted from Horticulture Australia's 'What's Happening' newsletter.

♦ Landcare Australia develops carbon pool

Rural landholders are expected to benefit financially from Australia's first on-going carbon pool to support biodiversity, launched yesterday by Landcare Australia.

Landholders who have undertaken tree plantings since 1990 could secure an annual income through the project.

Through Landcare CarbonSMART, landholders can potentially earn money for managing trees and vegetation, with some landholders able to secure a regular income for up to 30 years.

Landcare says the carbon trading market is already climbing rapidly, with some estimates suggesting the market will be worth $US2.3 trillion in five years time.

Landcare CarbonSMART will help stabilise farmers' income by providing annual payments for carbon from eligible forests even in drought years.

Landholders can use areas as small as 0.2ha - provided it has been planted since 1990 and meets other eligibility criteria - to offset the emissions of willing payers.

Revegetated land that cannot yield crops or support viable grazing can also provide income to farmers and support biodiversity conservation.

It is estimated that a 10ha area of trees with mixed species could yield about $20,000 over a 30-year period.

For more information and eligibility requirements call **1800 151 105** to request an information pack or visit **www.carbonsmart.com.au**.

♦ Australian horticulture exports valued at $800m

Australian horticultural exports in 2006 were $800.2m, down $12m or 1.5% on the previous year according to HAL analysis of ABS data from the World Trade Atlas. The highlights of this analysis include:

- Fruit with a 52% share of all horticultural exports increased 1% to $413m with an 8% gain in table grape exports offsetting declines in other areas.
- Nuts (21% share) fell 10% to $169m ending a consistent 5 year growth. A large increase in the world supply of macadamias has had a major impact on Australian exporters in the only horticultural industry that exports more than 75% of production.
- Vegetable exports (20% share) dipped only 1% with declining asparagus exports offset by modest growth in carrot and onion lines. Dried fruit and vegetables gained 19% to $25m whilst the greenlife and cut flowers dipped 4% to $31m.

Australia's leading 5 export products are citrus ($164m), table grapes ($116m), macadamia nuts ($94.5m), almonds ($54.3m) and carrots / turnips ($41.7m) which contribute 60% of Australia's horticultural exports.

♦ Pesticide Residue Working Group formed

HAL has formed a Pesticide Residue Working Group to help coordinate the measures needed by industry to improve the response and prevention of pesticide residues exceeding MRLs in the market place. While this working group will deal with export MRL violations, HMAC have requested that this group also work on domestic MRLs and contaminants.

The working group presently consists of relevant representatives from industry, state chemical residue coordinators, FSANZ, APVMA, export, chemical industry, QA, communication, HMAC and HAL.

The aim of the working group is to increase the confidence the domestic and export markets have in Australian horticultural produce and should provide significant benefit on top of other HAL initiatives in food safety including minor use, pesticide regulation and Fresh Produce Watch.

News in Brief

Extracted from editions of the "Guacamole"

♦ Avocado levy changes finally in place

The avocado levy change process was undertaken during 2005 and is now completed. The rate of levy and export charge on avocados, other than avocados directed to processing, will increase to 7.5 cents per kilogram, comprising 4.5 cents per kilogram for marketing and 3.0 cents for research and development, on 1 April 2007. The new rate will apply to avocados sold or exported on or after 1 April 2007.

Also commencing on 1 April 2007 is a new research and development levy of 1.0 cent per kilogram for avocados directed to processing.

An administrative change exempting avocados sold by a producer by retail sale from levy if the producer would otherwise be liable for less than $100 in levy on retail sales in a levy year takes effect from 1 April 2007.

Details of the levy from 1 April 2007 are as follows:

Method of levy calculation	(1) Per kilogram of avocado sold or exported (levy and export charge) (2) Per kilogram of avocados directed to processing (levy)
Rate of levy	(1) From **1 April 2007** onwards: **7.5 cents per kilogram** (2) From **1 April 2007** onwards: **1.0 cent per kilogram** Note: Levy is GST exclusive.
Distribution of levy	(1) From **1 April 2007** onwards: 4.5 cents for marketing 3.0 cents for research & development (2) From **1 April 2007** onwards: 1.0 cent for research & development

For more information contact the Levy Revenue Service at www.daff.gov.au/levies

♦ Avocado R&D Road Show 2007

Avocados Australia is organising the four yearly regional Research and Development Road Show 2007. The Avocado R&D Road Show was successfully undertaken in 2003 with over 720 avocado industry attendees across the seven regional R&D Road Shows.

The R&D Road Show 2007 will be bigger and better than before, with a program that will look at research developments and horticultural techniques directly applicable to avocado growers.

The program will involve researchers working on current avocado levy funded projects as well as the industry leaders. The presenters will include: Dr Tony Whiley, Mr Ken Pegg, Dr John Leonardi, Dr Lindy Coats, Mr Henry Kwaczynski and Mr Antony Allen as well as others.

Each day's schedule will include presentations, lunch, networking time, a panel discussion period with the attendees where all presenters will participate, along with a farm/orchard/packing shed session which will include the presenters.

Road Show 2007

NSW regions	**Date**
North NSW	12 July
Tristate	30 August
Central NSW	25 September

For more details including registrations contact Avocados Australia, phone: (07) 3391 2344.

♦ Avocado canopy management field days 2007

Canopy management continues to be one of the most challenging on-farm issues for avocado growers. Once avocado trees grow past the easy to manage phase profitable production systems can be difficult to manage.

Avocados Australia is running a number of canopy management field days as a component of the

extension activities of project AV04008, *"National Canopy Management"*.

These field days will give growers an opportunity to observe a range of canopy management strategies and identify systems that may be suitable for their own production situations.

Participants must register with Avocados Australia.

NSW field day regions and dates are:

NSW Field Day regions	Dates
Alstonville Region	17 August
Mid North Coast (Stuarts Point)	21 August
Gosford Region (Peats Ridge)	23 August

♦ Avocado consumers know best: just ask them

During May Australian avocado consumers were asked how they like their avocados to taste.

The Australian avocado industry is undertaking a major project in the area of avocado quality improvement.

The industry is investing in a greater understanding of what drives consumers in the purchasing of avocados. The first ever consumer avocado sensory survey was undertaken in Brisbane in May.

HortResearch, Queensland Department of Primary Industry, HAL and Avocados Australia have teamed up to ensure this essential consumer work is expertly undertaken.

"We have improved the quality of avocados enormously over the last 5 years, explained Mr Antony Allen, Chief Executive Officer of Avocados Australia, but we still have room to improve and avocado growers have set a strategic goal to deliver continued quality improvement over the next 5 years."

Some of the areas that consumers were surveyed for include:

- their preferred fruit firmness levels,
- preferred ripeness,
- what techniques and senses consumers use to select a ripe avocado,
- how they use avocados at different ripeness stages,
- how internal damage affects future purchasing patterns,
- how much they like the taste of the fruit, along with other important insights to help the industry make improvements and deliver a preferred quality product.

Another very important result of this consumer survey is the development of measures and benchmarks to assess how effective our industry's quality improvement investments have performed, now and in the future.

For more information contact:

Antony Allen, Avocados Australia CEO on 0438 132 477 or 07 3391 2344.

♦ FarmBis News

FarmBis provides financial assistance to primary producers and land managers to attend approved education and training activities. There are a broad range of activities supported through FarmBis, aimed at improving the business management skills of primary producers. FarmBis is a joint initiative between the Australian Government and participating states and the Northern Territory.

In the 2007-08 Budget, Minister for Agriculture, Fisheries and Forestry, Peter McGauran, announced that a new national FarmBis programme, funded by the Australian Government, will commence in New South Wales, Victoria and the Australian Capital Territory from 1 July 2007. The programme will be extended to other states and Northern Territory from July 2008, after the completion of the current FarmBis programme.

To find out how to apply and more about the benefits of FarmBis supported training, visit www.farmbis.gov.au

News in Brief

♦ $200,000 to help citrus get to markets efficiently

Source: Media release, DAFF, 17 April 2007.

The Government will provide $200,000 to support a major citrus industry forum aimed at getting Australian fruit into key markets as efficiently as possible.

Minister for Agriculture, Fisheries and Forestry, Peter McGauran, said the forum would draw on the views of people from across the industry – including the growing, packing, processing, shipping and retail sectors – to identify ways to make the supply chain more efficient.

"Our citrus industry is a significant contributor to many regional communities, with production worth about $335 million a year, and exports in 2006 reaching $163 million," Mr McGauran said.

"It's vital that our produce gets to markets – both domestic and overseas – as quickly and cheaply as possible."

Speaking at the Australian Citrus Growers' 59th Annual Conference in Renmark, South Australia, Mr McGauran highlighted the opportunities presented by the forum to coordinate the industry's approach to selling into the domestic and international markets.

"This is an exciting opportunity for all the industry to get together and look at possible improvements that could benefit the industry as a whole," Mr McGauran said.

"The Government has been working in partnership with the citrus industry for a number of years now and we look forward to continuing that partnership with this new project.

"In an era when produce markets are becoming increasingly competitive, it is essential that all stakeholders work together to shore up the industry's long-term future."

The funding will be provided under the Government's Industry Partnerships Programme's Action Partnerships initiative, which aims to help industry sectors undertake practical projects of lasting benefit to industry.

♦ Soil Interpretation Ute guide – for the vegetable industry'

Source: Potatoes Australia newsletter.

The Soil Interpretation Ute Guide, which is supplied free to all levy-paying vegetable growers, allows growers to make soil-management decisions based on scientific evaluation rather than trial and error. Primarily a pictorial reference, the guide aims to assist growers to measure and record the health of their soil and then put into place practices which will encourage sustainability, productivity and profitability.

The guide, which is designed to be carried around in the car or tractor, will cover the soil types in each vegetable growing region nationally, with pictorial references to assist growers to determine if there is a problem in their soil, and how to address the problem. The guide will also provide information on interpreting data and soil readings so that growers can more easily understand and take the appropriate measures from soil test results. In conjunction with the guide, growers will also have access to an interactive CD/DVD.

A Soil Interpretation and Management Course, to be offered following the launch of the Ute Guide, will also assist vegetable growers in all states to learn about their soil profile, to identify and interpret soil structure and chemistry, to restore or improve the health of the soil and to select the appropriate crop types for the soil with the least impact on the broader environment.

For copies of this well designed soils manual contact Justine Cox at Alstonville on (02) 6626 2400. The guide costs $15.

Chemical News

♦ Carbendazim review - new warnings and safety directions for all carbendazim products

Carbendazim has a wide use pattern, including fruit and vegetables, post-harvest dips of fruit and vegetables, ornamentals, pastures and pulse crops.

The APVMA is currently reviewing carbendazim and evaluating data suggesting carbendazim can cause birth defects in experimental animals, similar to that reported for benomyl.

Consequently, while the product is under review, current registrations and labels have been suspended until 31 March 2009. Labels must now include the tetratogenicity warning, plus revised Safety Directions:

WARNING: Contains carbendazim which causes birth defects in laboratory animals. Women of child bearing age should avoid contact with carbendazim.

SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate the eyes and skin. Do not inhale vapour or spray mist. When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and **a half facepiece respirator**. After use and before eating, drinking or smoking, wash hands arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

♦ Permits for Methomyl on selected vegetable crops

The Autumn 2007 edition of this Newsletter (page 25) stated that the use of methomyl had been removed for lettuce and other leafy vegetables. There are now permits allowing the use on field grown lettuce and silverbeet. Details of the permits are as follows:

APVMA Permit (PER 9932) for the use of Methomyl on field grown lettuce

Products: Dupont Lannate-L Insecticide + Lannate-L Insecticide or any other products containing 225g/L methomyl.
Crop: Field grown head and leafy lettuce.
Pest: Cluster caterpillar, Western Flower Thrips, *Helicoverpa* sp.
WHP: 3 days
Permit dates: 23 March 2007 to 29 February 2008.

APVMA Permit (PER 7588) for the use of Methomyl on silverbeet

Products: Lannate-L insecticides and other products containing 225g/L methomyl.
Crop: Silverbeet
Pests: Heliothis, Looper, Thrips and Western Flower Thrips
WHP: 14 days
Permit dates: 4 February 2005 - 30 June 2009.

For other restraints and critical use comments refer to the permit document.

Persons who wish to prepare for use and/or use products for the purposes specified in these permits must read or have read to them the details and conditions of these permits.

What's on

- **21-23 August 2007**
  AgQuip Gunnedah
- **23 August 2007**
  Avocado Canopy Management Field Day, Peats Ridge.

  For registration and information contact Avocados Australia on (07) 3391 2344.
- **24-26 August 2007**
  Apple & Pear Conference, Sydney
  Phone (02) 8251 1838.
- **25 September 2007**
  Avocado Road Show 2007, Central Coast.

  For registration and information contact Avocados Australia on (07) 3391 2344.
- **16 and 18 October 2007**
  Australian National Field Days, Borenore, Orange

What's new in publications

- **NSW Weed Biological Control Programs Poster**

New edition

This poster provides a summary of all the current biocontrol programs; the principal agent for each weed; the status of the program; the availability, rearing potential and impact of the agent; and contact details for key NSW DPI staff involved with each program. It also includes a colour photograph of many of the agents. It is an essential resource for anyone involved in the Weed Warrior Program or considering integrating biocontrol into their weed management plans.

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

- **Navel Rind Colour Development Poster and Orange Rind Colour Development Field Guide**

NEW

Copies are available free to Coastal citrus growers from Sandra Hardy at Gosford, Phillip Wilk at Alstonville and Peter Newley at Coffs Harbour.

- **Primefact 359**
  Garden plants poisonous to people

http://www.dpi.nsw.gov.au/aboutus/resources/factsheets/primefacts/garden-plants-poisonous-to-people

Citrus trees available now

Finger lime trees variety "Rainforest Pearl"

Contact Eyles Citrus, Kenthurst, NSW, phone (02) 9654 9227.

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COASTAL FRUITGROWERS' NEWSLETTER

SURFACE MAIL

NSW DEPARTMENT OF PRIMARY INDUSTRIES

POSTAGE PAID AUSTRALIA

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

Alstonville **02 6628 0604**
Phillip Wilk - District Horticulturist
Mobile 0411 139 567

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

Coffs Harbour **02 6650 3111**
Peter Newley - District Horticulturist

Gosford **02 4348 1900**
Sandra Hardy - Industry Leader - Citrus
Mobile 0412 425 730

Maitland **02 4939 8888**
Tony Somers - District Horticulturist
Mobile 0411 109 159
David Deane - Agricultural Inspector

Richmond **02 4588 2100**
Peter Malcolm - District Horticulturist
Mobile 0412 424 628
Bill Yiasoumi - Irrigation Officer
Rob Bowman - Senior Inspector
(Sydney & South Coast) 0411 139 579

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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