

Citrep

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Newsletter of the Murray Valley Citrus Board

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Jan Denham

Chairman's Report

Sadly, the start of 2010 has not been a good one with the declaration of a fruit fly outbreak, which then saw the outbreak time extended with the detection of a single male fly. Most markets will see restrictions lifted in April as long as there are no more detections in the 15km exclusion zone.

Citrus has been more fortunate than other industries, such as table grapes, as the main export season was over with only minimal exporting in this period. There may be some impact on early, new season exports, although US exports for 2010 will require cold disinfestation as the US protocols require three generations before restrictions are lifted.

To date the seasonal window access for the Japanese market has not been affected and as long as there are no more detections, the market access protocols for Japan should not change.

This outbreak has highlighted the importance of area freedom for all horticulture products in the PFA. It also indicates the need to review how we manage these situations on a regular basis. Firstly, to ensure that everyone is aware of the requirements for the movement of product and then, ensuring that protocols include best practice and have the least impact possible on the movement of fruit.

Before the next edition of Citrep the Board will have drafted the Operational Plan which forms the basis of the Budget for the next financial year, and on which, you the growers have the opportunity to vote.

The Board has had feedback in past years from some growers that the process for approval of the Operational Plan and Budget does not allow them time to highlight some activities that they would like to see removed or changed.

This year, to allow for more grower input into the Operational Plan, the Board will send out a preliminary plan before finalising the Operational Plan for the consultation meetings, and the vote to accept the plan.

With agreement from industry organizations, Citrus Australia, as the body that makes recommendations for HAL grower levy funds, has come to the decision that CITTgroups are no longer a charter for HAL levies. If regional organizations wish to continue to fund these groups they will be promoted to HAL as VC funded programs i.e. the organization commits to 50% of the funding with HAL matching the funds.

The MVCB has committed to continue funding the IDO as a full-time position (previously CITTgroup funding was two days per week). In all the feedback from growers, this is an

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Murray Valley Citrus Board
 PO Box 1384 Mildura Victoria 3502
 Telephone (03) 5051 0500
 Facsimile (03) 5021 1905
 Email executive@mvcitrus.org.au
 Website www.mvcitrus.org.au



Hugh Flett

Chief Executive's Report

The past three months has brought forward three critical issues to be faced by the Murray Valley citrus industry.

- 1 Sustainable Diversion Limits (SDL)
- 2 Northern Region Sustainability Water Strategy (NRSWS)
- 3 Queensland Fruit Fly (QFF)

In late November, 2009, the Murray Darling Basin Authority (MDBA) released its paper on Sustainable Diversion Limits (SDL) and asked for submissions from interested industry groups. Submissions were required to be returned by mid December which, in itself, raised concerns that there would be insufficient time to adequately assess and make comment on a detailed paper, which has serious ramifications for anyone involved in permanent irrigated horticulture.

With this in mind, we joined with other horticultural industry groups to formulate a submission, given the considerable economic importance to both the region and nationally. These industries provide a reason for existing for many local businesses and their employees, not to mention those directly employed on farm. We face challenges unlike those seen in annual crop based irrigated agriculture.

The Board strongly argues that our industry is investment intensive and requires a significant period before a return on that investment is realised. We are not able to respond quickly to reduced water availability or changing market conditions. As such, the cost to industry of reducing water availability or reliability is much greater than for comparable reductions in most other industries.

The Board supports, in principle, the efforts to improve the sustainability of the Murray Darling river system. We strongly object to the overall method to achieve this as proposed in the MDBA paper. We insist on the adoption of a more rigorous and

balanced approach to the issue of consumptive versus environmental water requirements, including the provision of evidence of how environmental water can be used.

The MVCB believes the economic and social impacts of reduced horticultural output would substantially outweigh any benefits gained from diverting these water resources to environmental uses. The MVCB and other horticultural industries support the investigation of alternative methods such as investment in capital works, new technologies and practices which result in increased efficiencies. The voluntary sale of water should be pursued in these regions.

The MVCB insists on the provision of more detailed explanations of proposed processes as soon as possible, including data on the impacts of SDL on water availability and reliability, as well as practical examples of impacts using scenarios or historic data to provide an accessible reference for irrigators.

The MVCB does not have confidence that sufficient technical research has been conducted to produce dependable results on how much SDL should be reduced, particularly given the profound social and economic detriment to our industries and communities that potentially will be caused by reductions in SDL. This work needs to be based on direct community engagement rather than an approach based on remote socio-economic analysis. The Board will continue to work to protect grower rights.

Copies of the Board joint submission are available from the office.

The formalisation and release of the Northern Region Sustainable Water Strategy (NRSWS) and its implications for irrigators has also caused some concern. The major issue this year centres on the rules for carryover and spillable water accounts. The MVCB, in conjunction with other industry groups, has written to the Water Minister requesting that the provisions for spillable water accounts that would apply from season 2010-2011, be enacted for season 2009-2010, thus protecting irrigators who stand to lose entitlements now that allocations have exceeded 50%. The Board recognises that growers have purchased water at market prices following advice from water authorities

telling them to plan for the best case scenario of allocations reaching 20%-30% if low inflows continued.

The detection of a gravid female Queensland Fruit Fly (QFF) on the January 7, 2010 in the township of Mildura has caused much angst, not only in the citrus industry but also in the table grape and wine grape industry. Exacerbating this, a further outbreak was declared at Koondrook and Barham in late January.

What is most disappointing about any declared outbreak is the perceived risk, whether real or not, to our export markets along with the associated costs of further risk mitigation and treatment requirements for certain markets.

A great deal of work has gone into the establishment and formal recognition of our Pest Free Area status. This status has allowed access to a number of markets without the need for costly treatment and been of significant benefit to growers who produce export varieties.

As a member of the Tri State Fruit Fly Committee (TSFF), the Board has worked diligently and supported financially, the work of this Committee to further educate travellers entering the Fruit Fly Exclusion Zone. The potential risk of carrying fruit from outside the area, particularly if from an area where QFF is endemic, is both economically costly and inconvenient to our industry. As we move into a time when government is actively looking for industry to take more financial responsibility for the maintenance of programs, it is essential that industry groups maintain a unified approach. As a board we will continue to work in the best interests of growers to ensure that there is both real and perceived value in the actions and activities of the TSFF Committee.

We will also work with the various government bodies, including but not limited to state primary industry authorities, AQIS and DAFF at the conclusion of the outbreak to debrief on what worked and what didn't in order to streamline the processes that growers and packers must adhere to.

Hugh Flett
Chief Executive, MVCB



Neil Eagle

Notes from Neil Eagle

The AGM of Citrus Australia Ltd (CAL), held at Renmark South Australia on 2 March 2010, resulted in the re-appointment to the CAL Board, the two retiring directors Kevin Parr and Kevin Cock. Following this, the new Board appointed Tania Chapman Chairperson and Kevin Parr, Deputy Chair. We all wish the new Board every success in expanding the membership base and tackling the many challenges confronting our Citrus Industry.

The above meeting was followed by a well-attended Citrus Marketing Forum with the theme of 'The Future is Unity'.

Judith Damiani, CEO, Citrus Australia Ltd and Andrew Harty, General Manager, Market Development, CAL, gave excellent presentations on the 2010 crop forecasts, production trends and future national initiatives.

This was followed by a detailed presentation by Wayne Prowze, Export Development Manager of Horticultural Australia Ltd.

These presentations set the basis for the following forum discussions on the two key challenges facing our Industry:

- 1 Biosecurity risks, particularly those associated with Greening and Citrus Canker.
- 2 The imperative need to identify and promote the way forward for our Industry to market its' product with planning and co-ordination, that can be supported by effective promotion.

There was clear direction to CAL Board Members that if our industry is to grow and prosper, growers will have to receive profitable returns. This will only eventuate if a means is identified to curtail the current destructive marketing practices in all markets, except the USA; which is now under threat due to the possible fragmentation of Riversun's coordinating role.

I urge all growers to actively engage with Citrus Australia Ltd on this vital issue.

Australian Citrus Conference: 9 - 11 November 2009

Held in Mildura, the first two days saw a major focus on new varieties, looking to the future of the Industry and the property rights associated with these new varieties.

The morning of the 11th dealt with the General Meeting of CAL and presentations from Industry Services Manager, Ross Skinner from HAL, regarding the Annual Levy Payers Meeting and Plant Health Australia on biosecurity issues.

However, the open discussion forum concluding the conference highlighted the serious trend of continuing declining terms of trade for our growers in the industry, with escalating costs and, at best, static returns for some varieties. In general, grower gate returns fell below half of last year's returns. This reality is the immediate challenge to our industry.

Consequently, I welcome the resolution put forward by Riverina Citrus that CAL strives to achieve planned, co-ordinated marketing into our export markets; preferably somewhat of a similar model to that operating into the USA market through 'Riversun'.

This has been staunchly resisted in the past by our exporters. However, with the current depressed market situation not only hurting growers but also exporters, hopefully, our new national body, CAL, will be able to find a way through the maze of conflicting interests to achieve an outcome providing similar benefits to our industry as the USA marketing initiative has delivered over the years.

Chairman's Report *Cont'd...*

area they continue to value. In the context of the national program, the MVCB has therefore committed to the IDO program working to enhance the national priority programs.

Changes are ongoing within the citrus industry with both support and opposition from growers in the Murray Valley. The continued polarisation of members in the industry is one that can be detrimental to cohesion within our industry - an important factor if we are to overcome current issues and continue to be profitable.

It is pleasing to see that water allocations have continued to increase in Victoria and, hopefully, the good rains that fell at the beginning of the year will continue.

Jan Denham
Chairman, MVCB

However, important as export is to our industry our domestic market is, and will remain, our major market.

The fact is that grower returns are being driven down by the sheer dominance of our two major retail chains, which represent about 80% of the total market. The ability of commodity suppliers from any industry to be able to negotiate price and terms of trade is currently very limited.

Neil Eagle
Chairman, Mid-Murray Citrus
Growers Inc.

China's Potential?



A comprehensive report compiled by Ms Mary Cannard, Industry Development Officer, MVCB on the Asia Fruit Logistica and Asia Fruit Congress held in Hong Kong from August 31 to September 5, 2009 was published in the December 2009 edition of Citrep.

Ken Mansell, a Colignan grower, was one of the group of Murray Valley citrus producers who participated in the study tour.

The following are some of his frank observations, impressions and predictions that not only make interesting reading, but warrant informed consideration.

Hong Kong sounds like the place that everyone who's ever been overseas has visited at least briefly while transiting to somewhere in the world. However, it was not a place I'd been to before. Guangzhou on the other hand is a place the average Australian is unlikely to have visited nor one they would probably put on their must visit list. As a citrus grower wishing to find a profitable way to sell my product, the Asia Fruit Congress held in Hong Kong with the chance to also visit Guangzhou was an opportunity worth taking, so when it arose, I was keen to go and have a look for myself.

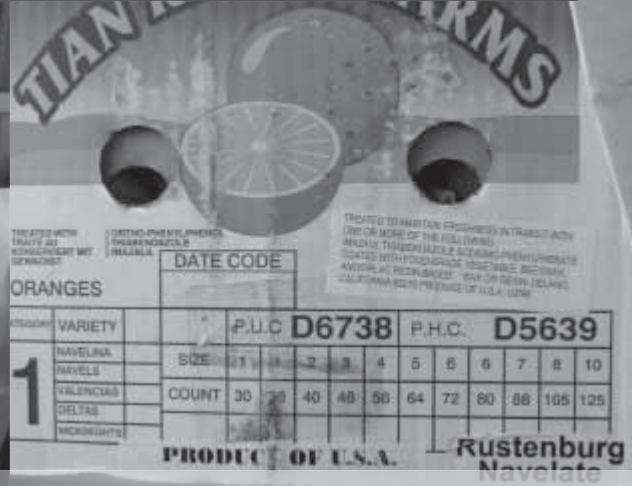
The Asia Fruit Congress and Fruit Logistica gave participants a chance to hear the views of marketers, researchers, and industry leaders of fruit producing nations and the challenges they face and the opportunities that are available in the various markets.

One of the major topics at the Conference addressed market access and bio-security barriers. The point was made that many countries are abusing the bio-security protocols to protect or manage supply to their markets. This was no surprise to the Australian growers in attendance.

It was pointed out by presenters that realistic bio-security issues were valid to protect various industries, but the over use of this tactic was widespread and unjustified in many instances. In the opinion of the Australian contingent, the use of Fuller's Rose Weevil as a barrier against our access to China is a case in point. Europe's protectionist policies were discussed, but there was no expectation that there would be a change based on deliberations at this level when exhaustive WTO talks had borne few, if any, results after years of debate.

A tour of the fruit and vegetable markets of Hong Kong and Kowloon revealed a fairly basic market system that lacked sophistication when compared to what we would later see in Guangzhou. There was plenty of Australian fruit for sale of varying quality and price, presented in a reasonable condition even though it was standing in a hot and humid street getting wet with condensation after coming out of a chilled container. Competition is strong from our usual competitors and there's plenty of regional product from other parts of Asia in various baskets and other packaging types.

While walking around the main Hong Kong market overlooking the Harbour, some members of our contingent were confronted by angry fruit merchants. When the merchants realised we were Australian



This spread left-right:
 1. Kowloon fresh fruit market in the street early in the morning.
 2. Guangzhou's new and impressive skyline. 3. Our guide discusses poor quality Australian fruit. 4. South African fruit re-consigned via USA to Guangzhou and labelled as Product of USA.

they became very animated at the poor quality they had been sent from a prominent Australian packer and we were shown boxes of fruit that should not have made the juice truck here in Australia let alone be exported. The fruit was hail damaged and would have tainted a batch of juice, yet here it was in an export market clearly labelled as produce of Australia and the recipients of the consignment clearly unimpressed.

It was also clear that there was consensus among those Australians present that this was not doing Australia any favours. Short term gains in an industry with the long lead times we deal with are clearly at odds with sustainable outcomes and those pursuing them are obviously acting out of selfish motives without consideration of their suppliers and the industry as a whole. This flies completely in the face of everything the industry has been encouraged to adopt regarding quality. There is little point in complying with costly Quality Assurance, which is pushed onto producers only to compete with our own countrymen bastardising our export markets.

Preconceived ideas are what we all formulate before we experience something new and I had a few about China. My first preconception was that China could be encapsulated in the singular. It is quite obvious to me now that China has many markets, presents many opportunities and also many challenges. While its economy is growing at rates the rest of the world

marvel at, there are still challenges for us that will need consideration if we are to be successful in marketing our fruit there.

A day and a half in a country is never going to make anyone an expert, but at first glance, and then only at one city, it is clear that China is a long way ahead of what the average Australian thinks it is. What we saw was a progressive city without the drab grey clothing and pushbikes we normally associate with China; rather, the inhabitants of Guangzhou were exhibiting all the trappings of modern people emulating a western lifestyle in every way they could.

There were signs and advertising written in English, and Caucasian models were used in advertising everywhere. All the brand names we know and are familiar with were emblazoned on walls and billboards, in shop windows and publications for all to see, and we were informed that soon there would be more speakers of English in China than in the rest of the world. This is an astounding thought.

The single child policy is having significant ramifications for marketers of all types of products including fruit. This policy is now at the next generation stage, meaning that the resources of two parents and four grandparents are now being poured into one child allowing that child to have opportunities that most Australians have never had. These kids are mollycoddled from birth and given lessons in everything from business and language, to sport and

music. With this undivided attention, they expect the best and are generally given what they want. These consumers offer us a market opportunity that we have never seen before. They will be wealthy, will know what they want and be willing to pay for quality. They love Gucci and BMW, Mercedes Benz and the latest in technological gadgetry. The number of consumers may start to fall but their wealth will have increased enormously, and their demands may be stronger than we are currently used to.

Guangzhou is a brand new city that is being re-built to emulate the great cities of the world. Unlike Hong Kong which is crowded onto an island, Guangzhou has been laid out to incorporate large public spaces that encourages a cosmopolitan lifestyle for an increasingly yuppie generation with the disposable income and desire to impress their peers that we have yet to fully understand or appreciate. It was apparent that there is a desire to emulate the west in every respect and I believe the Chinese will be similar to the Japanese in their desire for perfection and peerless quality in the goods they purchase; fruit included.

At this point, our fruit has no direct access to China due to loosely disguised trade barriers hiding behind the bio-security concerns of Fuller's Rose Weevil. However, there was citrus on the market from many suppliers including the USA and South

China's Potential? *Cont'd...*

Africa. The South African fruit had been consigned to the USA and had obviously been rejected for some reason, then re-consigned to China as USA fruit before being offered for sale at \$A20 equivalent. My guess is that the South African grower won't be profiting much from that consignment. Despite the round the world trip, the fruit didn't appear in bad condition and suggests to me that we will find it difficult to compete with this quality at a price that will give our growers a sustainable return.

While bio-security is working against our access to China, we are currently playing a part in denying access to their market by supplying sub-standard product as seen in Hong Kong on this trip.

When we obtain access to China we will need to supply fruit of a type that meets the needs of an ever-discerning consumer. Giving them substandard product will not be an option as this market is full of local produce and fruit sourced from other Asian countries with lower production and freight costs. There is an emerging upper-middle class in Guangzhou and other cities that appreciate quality and we will need to target that market. At this point however, the prices our competition is selling fruit for will keep us at arms' length for some time yet. If our production continues to increase and our currency continues to strengthen there will be more challenges for citrus producers to deal with. Therefore, it is imperative that we continue to lobby for access based on our quality standards. It is also imperative that we maintain our own standards and don't see China as a new place to dump sub-standard fruit.

China is the future; I hope we can be part of it. As citrus growers, maybe it's time we all learned to speak at least some Mandarin and understand what their market wants.

Ken Mansell
Citrus Grower



Jeremy Giddings

Tree Canopy Size Drives Irrigation Demand

Adoption of accurate soil moisture monitoring has greatly improved irrigators' knowledge of how water enters the soil and how trees use water. One aspect of irrigation management in citrus that has become obvious because of this, is the effect of tree size on irrigation requirement.

For citrus growers who have adopted accurate soil moisture monitoring equipment, a common response in the first season following adoption is that they were previously under-irrigating large mature trees, and significantly over-irrigating younger trees. Growers found that the irrigation interval of younger trees is usually able to be extended as high water demand for small sized trees simply does not exist. An example of this occurred on a four year old Navel patch which had soil moisture monitoring recently installed. The manager quickly discovered that the full soil profile only needed to be re-wet every 7-9 days instead of the current interval of 3-4 days. This represented a significant water saving.

All citrus growers are in a continual process of re-development and the low water use in these patches represents a relatively easy opportunity to save some water and re-allocate to other parts of the property. The additional benefit has been an improvement to tree health and growth as the trees irrigation demand is more closely met, and nutrient leaching minimised.

As a result, their irrigation layouts have been altered where the patches are deemed large and important enough, and the alterations are practical, relatively easy and inexpensive. Completely separating/isolating the patches is an ideal situation. If an existing submain is situated in a reasonable location, overlapping blind laterals can be run through one patch to the next. Another option may be to install taps on each lateral if the young patch is located downstream, so that irrigation events can be shortened or avoided. This is not ideal as irrigation timing is not able to be altered for the young patch. Reducing jet size is the least suitable option, but will result in some water savings and reduced nutrient leaching.

If the younger patch is a different variety to the mature patch, completely separating the patches will provide long-term benefits, as the manager is able to match individual water and fertigation requirements. Inevitably, as citrus production becomes more fine tuned, variable speed drives (VSD) are installed on pumping units and intensive fertigation practices are adopted, varietal and rootstock combinations will require their own specific management requirements. Growers should keep this flexibility in mind when they have the opportunity to design their systems.

Jeremy Giddings
Irrigation Officer, Industry & Investment NSW, Primary Industries

The Impact of Fruit Fly

The detection of a single gravid (mated) female Queensland fruit fly (QFF) in Mildura in January necessitated, under national guidelines, the declaration of a fruit fly outbreak and associated 15km suspension zone. In accordance with the guidelines, the suspension period for domestic trade would apply for a period equal to one QFF generation plus 28 days. The detection of a further single fly at Buronga (2.5km from the outbreak epicentre) on 3 February extended the outbreak suspension period until 27 April 2010. This is the first fruit fly outbreak in Mildura for nearly ten years, and certainly a first since the region was declared as the Greater Sunraysia Pest Free Area (PFA) in 2006.

DPI Response

Due to the importance of the PFA status to local fruit producers, the Secretary of the Department of Primary Industries (DPI) declared the response to this outbreak as being a number one priority for DPI and emergency response provisions were enacted.

Emergency response provisions enable local DPI managers to access resources across the State in order to support and relieve local staff involved in the management of the incident. Emergency response provisions also provide operational guidelines to enable stabilisation of the situation, implementation of business contingencies, commencement of the actual recovery process, and the return to normal business services.

Approximately 40% of the Mildura 15km suspension zone is located in New South Wales and encompasses significant host fruit plantings including eggplant, tomato and capsicum, as well as citrus, table and wine grapes. Staff from the NSW Department of Industry and Investment have committed to the eradication program and are working alongside their Victorian counterparts.

At the height of operations approximately 65 DPI staff and contractors were deployed to undertake pest eradication activities including larval searching, fruit stripping, chemical baiting and communications. Approximately 926 kilograms of fruit was stripped from 754 sites within 1.5km of the outbreak epicentre. Thirty-nine further insect specimens have been collected and sent to the Department's reference entomologist for identification. None of these have been identified as QFF.

The management of fruit fly within Victoria is undertaken in accordance with the requirements of the Code of Practice for Management of Queensland Fruit Fly, which is an internationally-recognised standard for the management of this pest in Australia's PFAs.

Zones

Under Victorian and NSW legislation a 15km suspension zone is declared, restricting the movement of all locally-produced host fruit from the zone. Restrictions are applied to ensure that the integrity of the 'area free' PFA outside of 15 kilometres is maintained.

An 80km suspension zone is in place to satisfy markets with more stringent import conditions, such as Tasmania.

Reinstatement

The current impact of the Mildura outbreak on the citrus industry is significant for the United States market. Reinstatement to an area free situation for the US market will occur on 13 November 2010, as the criterion is a three-generation suspension period for this market. For some other markets, including New Zealand, the reinstatement date is 27 April 2010, as the criterion is for one generation plus 28 days or 12 weeks, whichever is longest. The reinstatement date for the domestic market is 27 April 2010, providing no further flies are detected.

A further QFF outbreak was declared on February 10 at Barham which is on the most southern boundary of the PFA. Being in NSW, this outbreak is under NSW management with additional resourcing

and assistance provided by DPI Victoria. At the time of writing, the reinstatement date for the US market is 30 November 2010, providing no further flies are detected, while the reinstatement date for some other markets including New Zealand and the domestic market is 29 April 2010, providing no further flies are detected.

The AQIS website provides detailed and current information and can be found by visiting www.aqis.gov.au/phyto/asp/ex_DocumentList.asp.

Lyn Jacka
Senior Pest Free Area Coordinator
DPI Mildura



HLB, Asian Citrus Psyllid and Canker

Research and Development initiatives and opportunities remain a key component of the MVCB's Strategic Plan. In line with this philosophy, Ms Mary Cannard, Industry Development Officer, MVCB departed Wednesday, 20 January 2010 for a sixteen day, Horticulture Australia funded, USA Study Tour.

The group comprised fourteen members nominated from all parts of Australia. Overall, the Tour was extensive both in terms of the intensity of purpose and the variety of activities undertaken.

These involved visits to research stations and extension centres, relevant Citrus Research Boards, multi-purpose packinghouses, nurseries, diagnostic laboratories, orchards and processing plants and mechanical harvesting and attendance at the Florida Citrus Show in Ft. Pierce, Florida.

At the Florida Citrus Show held in Fort Pierce, in-depth education sessions were held on the state of the industry covering a wide array of timely topics that are important to citrus growers and their operations. As well, there were intensive indoor and outdoor exhibit areas for 'hands-on, in-person' previews of the latest products, equipment and services.

Some of the more significant issues were developed under the major sub-headings of:

- Preparing for the future
- Living with citrus canker
- Greening and psyllid control programs

The following is a summary of Mary's observations, perspectives and outcomes of what was a valuable theory and practical study tour that will provide wide-ranging and relevant information which can be made available to growers at the appropriate time through a number of communication channels.

"I've decided to write this article focusing on the state of the citrus industry in Florida as what I observed there shocked me. It also got me thinking about what the socio-economic effects would be to the Sunraysia community if a Huanglongbing (HLB) incursion occurred here.

Florida has a long history of citrus growing in the US; they focus mainly on Valencia oranges for the juice industry, however, some fresh fruit is produced. Grapefruit (both red and white) is also grown for juice as well as export and domestic consumption. The citrus industry contributed \$8.9 billion to Florida's economy, provided 27,425



This spread left-right:
 1. Mary Cannard looking at an HLB infected tree in a Florida orchard. 2. Comparison of Grapefruit. This shows a fairly normal sized grapefruit from a healthy tree in comparison with two grapefruit from a HLB infected tree. 3. Abandoned HLB infected orchard in Florida.

Study Tour of California and Florida

direct jobs and indirectly supported another 48,403 jobs during the 2007/08 season. The citrus industry in Florida has decreased from 900,000 acres in 2005 to 570,000 acres in 2009. Most of this is due to hurricanes, urbanisation and citrus canker. However, last year the majority of citrus acres lost were due to removal of trees and abandonment of orchards infected with HLB or sold for real estate.

HLB or citrus greening is a very serious disease of citrus. It affects all citrus cultivars and causes lower fruit yields and subsequent tree decline. The disease is associated with the bacterium, '*Candidatus*' *Liberibacter asiaticus* and vectored by the Asian citrus psyllid (ACP) *Diaphorina citri* in Florida.

Symptoms of HLB vary during the year, between varieties and with disease progression. Part of the tree may show symptoms while other sectors may remain healthy in appearance. Visual leaf symptoms include asymmetrical chlorosis or blotchy

mottle, yellow veins, vein corking, small upright leaves with chlorotic patterns and/or yellow leaves with small islands of green colouring.

Fruit symptoms include smaller than normal size; reduced fruit numbers; lopsided fruit; aborted seeds; irregular peel colour; off-flavour juice; staining of the calyx and increased fruit drop. Once the tree is infected, there is no known cure for the diseased tree.

HLB was detected in Southern Florida in 2005, however it is thought to have been present in Florida through the illegal importation of citrus propagation material years before ACP was found. Once the psyllid found its way into Florida in 1998 it was only a matter of time before the disease spread throughout all citrus growing areas.

The overall incidence of HLB in Florida is hard to define due to latency of symptoms but is thought to be as high as 5%. Many

groves in South Florida are now severely affected, with groves around Immokalee being 100% infected.

Best practice guidelines have been developed and include rigorous monitoring activities, removal of all trees testing positive to HLB infection, as well as an intensive spray program of broad spectrum insecticides to control ACP numbers. Regional management is essential to prevent spread from neighbouring orchards.

Monitoring for infected trees consists of teams of scouts riding high above the canopy on raised platforms spotting branches of yellow leaves. Trees are marked with coloured tape, re-examined to confirm initial diagnosis and leaf samples collected and sent for testing. Trees confirmed as positive by real time PCR testing are cut down and the butts immediately treated with herbicide to stop regrowth.

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HLB, Asian Citrus Psyllid and Canker Study Tour of California and Florida *Cont'd...*



1. Asian Citrus Psyllid. 2. Asian Citrus Psyllid feeding Damage on Leaves - The curled leaf margins are typical feeding damage from ACP. The yellow corky midrib is typical of HLB infected leaves. 3. Aborted seed - Valencia fruit from a HLB infested tree. Note the small odd shaped fruit, staining on the central pith area and the aborted seed - all symptoms of HLB infected fruit.

Monitoring for the presence of ACP is also part of most growers' schedule with many scouting more than three times a year. This is usually done by inspecting new flushes, placement of yellow sticky traps and the tap method. The tap method consists of the scout giving three sharp taps on a branch while holding a clipboard underneath the branch. The scout then examines insects which fall out of the branch onto the clipboard.

Four to six applications per year of broad spectrum insecticides such as imidacloprid, spirotetramat, fenpropathrin, chlorpyrifos, formethanate, spinetoram and diflubenzuron are being used. Low volume aerial applications are being used by approximately 40% of the growers. They are, however, reporting increased problems with secondary pests including leafminers, scales and mites.

Researchers are now recommending two dormant sprays to control adult ACP which may reduce the need for additional insecticidal sprays to control juvenile ACP during the growing season. ACP depends on new flushes to lay eggs and reproduce. Over winter, adults feed on mature leaves until the spring flush. Therefore, targeting the adult population during the dormant season has the potential to minimise ACP populations in one or two applications.

It was suggested that approximately 85% of Florida citrus producers are not following best practice guidelines to manage the disease. Instead of an aggressive tree removal program one Florida grower we visited has implemented a rigorous program of spraying foliar nutrients in an effort to keep his trees 'healthy' and productive. While his trees certainly looked healthier than most others we saw, his property is 100% infected with HLB. He reasons that: (a) trees are infected with the disease long before symptoms start to show, therefore he will never completely rid his orchard of inoculum; and (b) infected fruit fall to the ground so only healthy fruit are being harvested.

This may only be a 'selfish' short term solution to enable him to stay productive longer. Long term, however, may be a different story. Replanting of young trees will never be possible, for him or his neighbours, under the pressure of 100% infection, as young trees are hardest hit by the disease.

In fact many Florida growers are putting their faith in a 'silver bullet' being found in the plethora of HLB research projects being funded.

For example:

- Genetically modified resistant or tolerant varieties and rootstocks;
- Antibiotics for injection into trees;
- Use of citrus tristeza virus to introduce antimicrobial peptides into infected trees;
- Mapping the HLB genome;
- Repellents and attractants of ACP; and
- All facets of HLB and ACP interaction

Recently 76% of growers voted to triple the 18 year old citrus research box tax from one cent to three cents to fund this research. The three cent tax will become effective on August 1, 2010 and is expected to raise more than \$5 million each season for HLB research. However, the current greening research effort will need \$15 to \$20 million annually during the next three years to be sustained. Growers are hoping state and federal government contributions will make up the difference. To help contribute to the research dollars Florida Citrus Mutual are lobbying for a 'levy' on all imported citrus (fresh fruit and juice) coming into the United States.

In my opinion there will be no 'silver bullet' for Florida growers, in fact there may be many growers disillusioned by the amount of money spent on expensive long term research projects which will return little in the way of information or products able to be used in the field by growers to combat HLB. If there is a 'silver bullet' found it will be an expensive one for us to purchase as underpinning all this HLB research is the thought of what IP can be gained from it.

The recommended program of clean nursery stock, aggressive psyllid control with inspection and removal of affected trees seems to be minimising the effects of the disease for those that began early; and don't have a lot of neighbours ignoring the problem and therefore adding to the level of inoculum in orchards. But many growers either didn't realise how serious the problem was, didn't discover they had a problem until it was too late, or didn't want to spend the money. In addition, many Central Florida growers who have low disease incidence still don't fully appreciate how aggressive the tree removal and psyllid control needs to be.

Abandoned groves are also a growing problem in Florida, with many owners walking away from their orchards. The US Department of Agriculture reported in 2009 that Florida has 140,089 acres of abandoned groves. Without legislation to enforce removal of HLB infected trees in abandoned groves the amount of inoculum will only increase despite the best efforts of conscientious growers battling this insidious disease. In my mind it looked like they are fighting a losing battle.

Huanglongbing is the disease from hell and it is imperative to keep it out of our region at all costs, if we are to have a productive and profitable citrus industry in the future. When HLB becomes established in an area, fruit yield and the life span of citrus trees decreases over time; in Asia where HLB is endemic the life span of a citrus tree is 5 to 7 years. The costs associated with HLB management are significant, not only in increased production costs, i.e. monitoring and psyllid control sprays; but also in lost revenue from greater tree and yield losses. Add to this the cost of constantly replanting and we will have a situation where growing citrus in Australia will be cost prohibitive.

Cont'd on page 13...

Unique Citrus Partnership Presents to CAL Conference



Left-Right:
1. Pupils from Nangiloc/Colignan Primary School, presenters at the CAL Conference. 2. Nicole Minter presenting at the Conference.

The partnership between the MVCB and the Nangiloc/Colignan Primary School gained an expanded profile when pupils from the school made a presentation to the Australian Citrus Conference held 9–11 November, 2009 in Mildura.

Ms Mary Cannard, Industry Development Officer, MVCB instigated the initiative and ensured that it was included in the 2009 program.

Both Mary Cannard and Tony Bothroyd (Field Officer, MVCB) have worked very closely throughout the partnership and know first hand the fine work the children have done in promoting the citrus industry and could think of no better forum to outline the development of the Enterprise Learning and the Citrus Industry program.

The presentation comprised seven pupils presenting a slide show by way of an accompanying speech and a static slide display.

Their successful attempt at telling a very complex story to an audience that had no idea of the project was outlined in the following format:

- Fundzinc: The Company
- Skills used in Fundzinc
- Fundzinc Products
- Fundzinc Highlights
- The Journey of the Orange

- Working with the media and the industry
- Tour of the Murray River Cycling Classic involvement
- Orange Drive
- Future Directions. Here the pupils explained that their future goal was to explore the export market and see what happens to the fruit that is sent overseas.

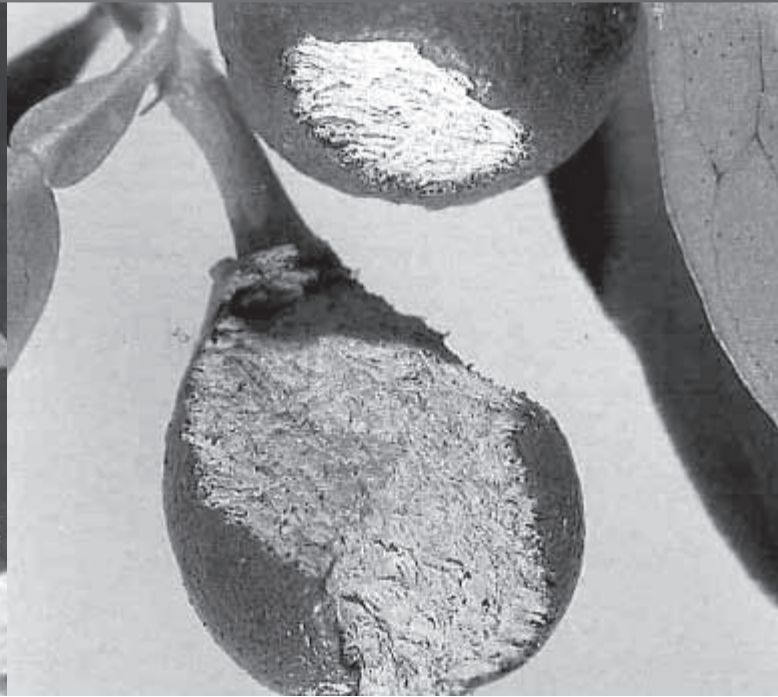
Mr Eric Wright, Principal, Nangiloc/Colignan Primary School made the following points after observing the CAL presentation

Every year, I have the opportunity to observe our Grade 6 pupils develop into the most competent and confident public speakers. This year's group has been no exception. On Monday, they made me so proud as they stood in front of 300 adults, in a massive room, on a huge stage, with lights and two projector screens to deliver a most impressive public address. They told the story of Fundzinc and its relationship with the citrus industry. The crowd was deadly silent as the children engaged them in our tale. Each child was genuinely applauded as they left the stage and many delegates rated it as the best part of the Citrus Conference.

At the conclusion, Mr Bothroyd and I were approached by a representative from Sunkist, USA (a million \$ company) which supplies automatic packers to local packing sheds and the sectionizers our children have been using and promoting in local schools. He was so impressed by the concept (Enterprise Learning) and that the children were able to run their own business and conduct learning outside the classroom that he wants to engage in deeper conversation with our school and is keen to help us continue the development of our program. We also had expressions of interest from delegates in SA and WA who were as equally impressed and wish to adopt our model and run an orange drive in their own state. It would be fabulous if we were able to continue our efforts and run a National Orange Drive. Riversun Export Pty Ltd who export Australian citrus to the US also requested a meeting with us in January 2010. (Nicole hinted that we would like to see what happens in the export industry.) All of this and more because we had seven most impressive speakers tell a genuine story to an influential audience.

Cont'd on page 14...

Katydid Management in Citrus



Katydid are 'longhorned' grasshoppers, ie grasshoppers with long antennae. Adult citrus katydids are green, about 40mm long with strong hind legs for jumping and fat rounded abdomens with a purplish underside. The katydid gets its name from the way the male and female songs sound. They create sounds by rubbing a scraper on one forewing against another forewing. It has hearing organs located inside a slit on its front legs. Male song organs are located on their front wings and females chirp in response to the males song that sounds like "Katy did, Katy didn't." The song is usually used for courtship during the late summer.

Damage

The adults and nymphs feed on young foliage, flowers and young fruit. They eat large pieces out of young fruit; moving from fruit to fruit so small populations can cause a large amount of damage in a small area. Older nymphs and adults make deep gouges, with resulting chalk-white scars on the sides and bases of fruit, particularly navel oranges. This scar tissue also distorts the fruit shape which becomes more evident as the fruit expands.

Slightly damaged fruit heal and tend to stay on the tree, but half-eaten fruitlets may drop. Katydid usually cause only minor damage to citrus, however, occasionally the numbers build up and economic damage is caused. Katydid numbers have increased since the use of broad spectrum organophosphates has decreased.

Hosts

Not much is known about hosts other than they feed on citrus. It has been noted that properties with large numbers of katydids usually border on native bushland. This suggests that native plants are an important host. Blackberries are also a host of citrus katydids. Katydid are more common on oranges, especially Navels. Damage is rarely seen on lemons, grapefruit and mandarins.

Life Cycle

Katydid usually lay their eggs from January to April. The eggs are disc shaped and 5mm long. Eggs are deposited on limbs or tree trunks, and cemented together in parallel rows of about a dozen. The nymphs which are wingless hatch in early spring and begin feeding on the newly set fruit in October

to November. Nymphs develop through five stages with the adult stage being reached during December/January. There is only one generation per year, however as the adult insects can fly, katydids can move in from surrounding blocks.

Natural Enemies

Citrus katydid eggs are parasitised by an unidentified species of tachinid fly and unidentified species of wasps, however they are usually not effective enough to prevent economically damaging levels from occurring. The assassin bug, praying mantises, sphecid wasps, birds and snakes all prey on citrus katydids.

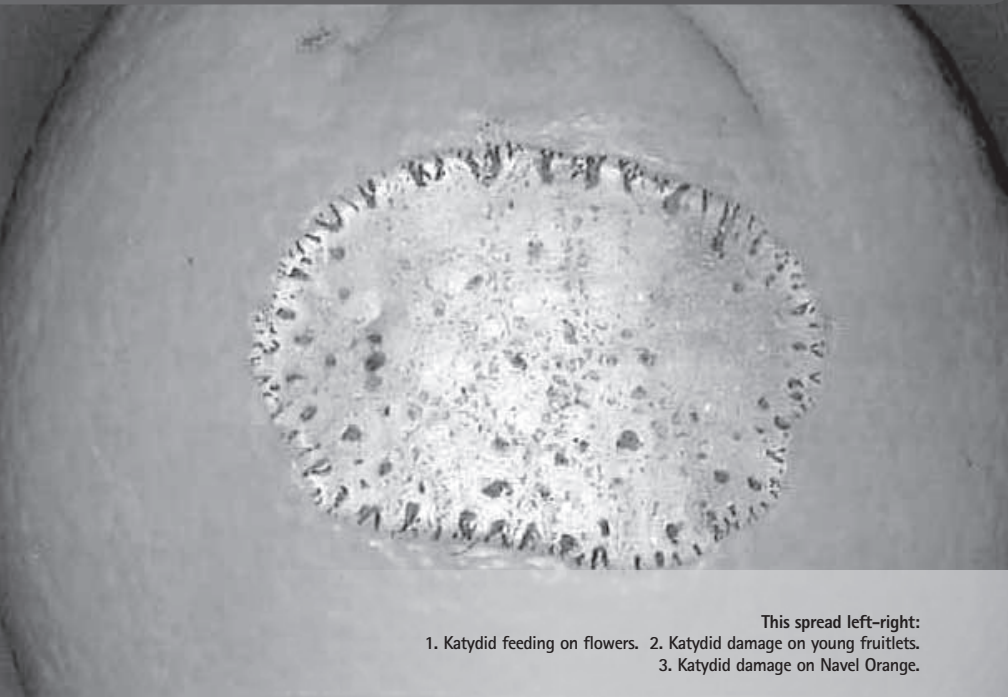
HLB, Asian Citrus Psyllid and Canker Study Tour of California and Florida

Cont'd from page 10...

Both ACP and HLB are endemic to the islands of the Indonesian Archipelago and East Timor and both have now been found in north-eastern Papua New Guinea. The proximity of Australia to these areas poses a very serious biosecurity threat to the Australian citrus industry.

My best advice after seeing the devastation caused by HLB in Florida is to keep the psyllid out or eradicate it if it arrives in Australia at any cost. It's conceivable that there could already be one or more HLB infected trees in Australia by illegally imported plant material. So it will only take the introduction of the psyllid to spread the disease."

Mary Cannard
Industry Development Officer,
MVCB



This spread left-right:
1. Katydid feeding on flowers. 2. Katydid damage on young fruitlets.
3. Katydid damage on Navel Orange.

Management

Katydid infestations are usually patchy, and spraying whole orchards is rarely warranted. Sampling needs to be quite extensive through the orchard as damage can be isolated to small areas. Monitoring should occur frequently from bloom to early December as damage can occur in a short period of time.

Approach the tree slowly, because katydids have excellent eyesight and will hide behind leaves if they see you coming. Look for damaged leaves, and search the foliage around the damaged area for katydids. In early spring, look for nymphs (smaller wingless versions of the adult) who tend to skeletonise the leaves of suckers and low branches.

Check five randomly selected young fruit per tree every two weeks. The number of trees in the sample will depend on the block size. In general, 10 trees per two hectares will be sufficient. Sticky trunk bands are an additional tool for monitoring the numbers of emerging nymphs.

In general, sprays should be implemented when thresholds of 5% or more fruits sampled are showing fresh injury. Control is best carried out early in the season before the nymphs develop wings. Chlorpyrifos will control katydid, but will also disrupt orchard IPM programs by killing any

beneficials present. USA citrus growers have reported Spinosad useful for controlling katydid nymphs, however it is not as effective on the adults.

Mary Cannard
Industry Development Officer, MVCB

Farmers and 2009 (Some Financial Considerations)

For farmers in irrigated horticulture, 2009 has been another challenging year across most markets and many were confronted with decisions of opportunity and disappointment.

The overarching influences in accessing acceptable prices in the markets were certainly influenced by events in the Global Financial Market. Consumers just decided to reduce spending across all markets. This interruption to spending put pressure on demand to buy the produce. Food items in the main food groups were still sought after, but market prices were under a lot of pressure. Throughout the year, when the Government's stimulus packages were delivered, consumers gained in confidence that they would still have jobs and therefore spending began to flow.

We cannot discount the continued debate on Climate Change and the impending government policy that may or may not come into play. Many large companies have been preparing for such a policy to be implemented and are prudently holding back on capital to be spent. They are waiting to take advantage of the incentives to be offered. This retention of capital means there is less money invested back into our financial system through lower dividend returns to the investor and less capital invested in our manufacturing and building sectors.

The Global Financial Crisis also saw our financial sector tighten. Australia does stand tall in the overall performance of countries through this crisis. Our regulated financial system is the envy of the world. However, it has not changed the conservative nature of our lending institutions. Lending has tightened and this has put pressure on the ability to borrow to invest. A new relationship is emerging for the farmer and the financier. We are seeing more and more demand for cash flows, business planning and a real commitment to seeing a future in farming. It is fair to say that highly geared farming enterprises are under new pressures to quit some debt. With low market returns, water rationalisation and a rising Australian dollar farming requires some new thinking in management of the enterprise. New ideas are emerging in both farming practices and management.

Pest and disease is another ongoing challenge the farming sector is dealing with continually. The threat of a fruit fly outbreak restricts access to valuable

export markets. The early part of 2010 saw such a threat enter Sunraysia. Production within the exclusion zone has been dealt a nasty blow.

Water is an issue across all sectors of irrigated horticulture. The challenges in a volatile water market have highlighted the need to manage this liquid asset differently. Previously, where water rights were attached to the land, we saw both land and water assets as stable in holding their value, and one could have considered irrigated horticulture land as a conservative investment risk.

The opening up of the water market and separation of this asset from the land gave the entrepreneur great opportunity. It added volatility to both land and water values. Management in educating the permanent water owner is evolving. With the need for new tactics in management, land and water assets have become a whole new market. We are seeing farmers selling-off their permanent water entitlements and managing to provide the resource by accessing temporary water.

During 2009, we saw permanent water sales to interested buyers. The prices achieved were as high as mid \$2,000 per megalitre. (Higher within small water authorities.)

Early 2010 has seen this permanent value fall to around \$1,100. (Waterfind website) The concern is with the volatility of the market from the water-owners point of view. However the opportunities which evolve for the new investors are of great interest to many. Overseas investors have shown interest in our water market.

Water trading in 2009 saw a maturing of the water market. Rules and policy are evolving and are working towards some stability in the market. For example in June 2009, NSW Deputy Director General, David Harris, announced new temporary trading rules that restricted trade from the Lower Darling River to the Murray Valley and Murrumbidgee Valley to the Murray Valley, including interstate trades. Temporary trade was allowed from upstream of the Barmah Choke to downstream in the Murray Valley. Mr Harris said at that time these rules were necessary to ensure that any water traded could be delivered.

This policy is practical considering the promise to deliver water that is traded for irrigation purposes.

Water restrictions during the year have gone from the 0% at the start of every season to the current 63% in early 2010.

Opening water allocations to the season were:

Region	High Security/Reliability Allocation 1/7/2009	High Security/Reliability Allocation 1/2/2010
NSW Murray	0%	63%
NSW Lower Darling	100%	100%
NSW Murrumbidgee	0%	20%
SA Murray	2%	55%
VIC Greater Goulburn HR	0%	58%
VIC Murray	0%	11%

Unique Citrus Partnership Presents to CAL Conference

Cont'd from page 11...

'The entire school watched a video presentation the next morning, and many staff had tears in their eyes as they watched and appreciated how much these children had developed and become ambassadors for our school. I offer my highest praise to our young presenters, Gemma, Laura, Shaun, Liam, Jol, Tayla and Nicole. You made me so proud. Well done to Brodie, our technician, who was equally professional, ensuring we had the correct slides on screen.'

Footnote

Fundzinc's next commitment was to present an annual report to the MVCB on November 24, 2009. This involved the Grade 6 students, and parents were encouraged to attend. Clearly, the Partnership is going from strength to strength as it promotes the regional citrus industry in a very positive manner.

The MVCB is to be commended on its constructive involvement and support.

E. Warhurst
Compiler

Of course allocations relied on availability of water. Below are the storage levels of three of our storage facilities.

The following table shows Murray Valley storage levels as at 13 July 2009.

Storage @ 13 July 2009	Volume (GL)	Percent of Capacity
Hume Dam	416	14%
Dartmouth Dam	860	22%
Menindee Lakes	239	14%

The following table shows Murray Valley storage levels at February 2010.

Storage @ Feb 2010	Volume (GL)	Percent of Capacity
Hume Dam	566	19%
Dartmouth Dam	1188	30%
Menindee Lakes	376	22%

Farmers have increased water efficient delivery systems on farm at a rapid rate. The past four years of water restrictions has shown how adaptable to change our farmers continue to be.

Over the past year we saw implementation of the Small Block Irrigators Exit Grant and Exceptional Circumstances exit packages. There has been great interest in these grants from a variety of farming families, such as those who have reached retirement age and those who find the challenges of the future in farming outside their comfort zone in carrying on the enterprise.

To date, we still do not have any idea of just how many farmers will be granted the Small Block Irrigators Exit Grant or the Exceptional Circumstances Exit Grant. In the states of NSW, VIC and SA there has been keen interest in applying for them.

Farmers have also opted to leave farming on their own terms without government assistance. They have done so because of their property size and large water holding. Commercially they were able to exit by selling down assets. Farmers remaining in irrigated horticulture have shown some signs of investing in growth. Purchasing neighbouring properties has occurred in some cases, usually with the permanent water allocation sold off separately.

There is great concern with the very low demand for irrigated horticultural

properties by new farming entrants. However, new entrants do still exist, in most cases opting to develop their own enterprise from scratch.

Of big concern for irrigation districts is the sale of water out of the water authority district leaving the region with stranded assets and vacant land that has been cleared of vines (blocks where the owner has walked away) scattered throughout the remaining irrigation district. Accordingly, the threat of pest and disease increases and places extra burdens on those who continue to farm. With the disappearance of a neighbouring property there is also the increased problem of sunburn and wind damage.

2010 will continue to be a challenge for irrigated farming. Climate Change policy is still on the agenda. The financial recovery of our economy will play a large part in the future of farming enterprises. Additional challenges continue with the changing value of the Australian dollar, rising inflation and rising interest rates. The opportunists will certainly add another dimension to water trading and even corporate farming enterprises.

Lyn Heaysman
Vice-Chairperson, Murray Mallee
Rural Financial Counselling Service

Murray Valley Citrus Board Product Price List

Available through the Murray Valley Citrus Board office.

Item Name	Grower Price
PUBLICATIONS	
Citrus Disease and Disorders	\$30.00
Citrus Growing Manual	\$22.00
Drip Irrigation Book	\$10.00
Good Bug Book	\$44.50
CD The Good, the Bug and the Ugly	\$70.00
PRODUCTS	
Citrus Peelers - Complete	\$1.00
Cranston Gauge	\$48.00
Hand Lens	\$8.50
Citrus Sizing Rings (USA & Domestic measurements)	\$25.00
Phenolphthalein PH Indicator	\$50.00
NET BAG SALES	
Grapefruit 3 kg net bags - per 1000	\$220.00
Imperial 1.5 kg net bags - per 500	\$110.00
Navel 3 kg net bags - per 1000	\$220.00
Valencia 3 kg net bags - per 1000	\$220.00
MEETING ROOM FACILITIES	
Half day Board Room hire	\$55.00
Full day Board Room hire	\$110.00
Half day Projector Multimedia hire	\$110.00
Full day Projector Multimedia hire	\$220.00
Coffee Tea & Biscuits (per head) - Board Room hire	\$2.50
CITREP NEWSLETTER ADVERTISING	
<i>Black & White</i>	
1/9 PAGE Portrait (60 mm x 85 mm)	\$35.00
2/9 PAGE Landscape (125 mm x 85 mm)	\$70.00
2/9 PAGE Portrait (60 mm x 175 mm)	\$70.00
4/9 PAGE Portrait (125 mm x 175 mm)	\$140.00
1/3 PAGE Landscape (190 mm x 85 mm)	\$110.00
2/3 PAGE Landscape (190 mm x 175 mm)	\$200.00
FULL PAGE (190 mm x 265 mm)	\$275.00
<i>Colour</i>	
1/9 PAGE Portrait (60 mm x 85 mm)	\$80.00
2/9 PAGE Landscape (125 mm x 85 mm)	\$160.00
2/9 PAGE Portrait (60 mm x 175 mm)	\$160.00
4/9 PAGE Portrait (125 mm x 175 mm)	\$310.00
1/3 PAGE Landscape (190 mm x 85 mm)	\$240.00
2/3 PAGE Landscape (190 mm x 175 mm)	\$500.00
FULL PAGE (190 mm x 265 mm)	\$610.00
FLYER - 1 PAGE INSERT	\$300.00

As at February 2010

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