

# Citrep

Issue #68 • March 2012

Newsletter of the Murray Valley Citrus Board

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Jan Denham

## Chairman's Report

It's that time again. Four years have passed quickly it seems and by the time you receive this Citrep, you will have received a package of information and many will have attended the consultation meetings carried out by the Victorian DPI on the re-making of the Murray Valley Citrus Board (MVCB).

The future of the services provided by the MVCB in this region depends on the outcome. This important decision needs to be made by all growers. Growers must consider the situation carefully.

The MVCB, set up to manage your regional levy, to provide you with regionally relevant research and grower information services, is established under the Agricultural Industry Development Act. Every four years growers are asked to vote on whether they wish to continue with the Order establishing the Murray Valley Citrus Board.

The voting process is managed by Vic DPI, on behalf of both Victoria and NSW, and is responsible for the preparation of the documents sent to Murray Valley growers, the process of consultation, subsequent advice to Ministers and the polling of growers, independently of the Board.

Following the DPI consultation meetings, a report is prepared for the Minister who then decides if there should be a poll of growers about the re-making of the MVCB. If the Minister decides to carry out the poll the Electoral Commission will be advised to conduct it.

The MVCB has, over the years, been a leader in the development of the citrus industry and continues to provide important services.

It was the first to see the need for a sound database on crop forecasting and planting statistics. It has developed robust systems that have been adopted by other citrus growing regions. This data is now provided free of charge to Citrus Australia, the industry national body, in aggregated form for their National Crop Forecast and Plantings database.

The MVCB was the lead industry in establishing the PFA (pest free area) and, until last season, achieved great cost savings for all MVCB growers. A grower recently told me that he estimates cold disinfestation of his fruit for export last season cost him \$70–\$80,000 dollars. That is just one grower. The fight continues against the recent outbreak.

Having a well-resourced regional group has been invaluable in addressing, in a timely manner the Queensland fruit fly (QFF) outbreaks that occurred last season and are continuing into this season, which the emergency required. The Board was

Cont'd on page 3...



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# Citrus Board Funding the War on Queensland Fruit Fly

The last 18 months have seen an unprecedented number of outbreaks of Queensland Fruit Fly (QFF) in the Murray Valley. At one stage, there were 34 outbreaks operating within the Sunraysia Pest Free Area. Around half of these outbreaks are on commercial grower's properties with the rest being in peri urban areas.

The Murray Valley Citrus Board (MVCB) has been working very closely with both the Victorian and New South Wales Departments of Primary Industries and other government agencies to help eradicate the outbreaks and regain regional access to lucrative QFF sensitive domestic and export markets. The strategy for the 2011/12 summer period has varied from last summer with growers being asked to take a hands-on role in performing eradication measures on their properties with Government departmental staff focusing on peri urban areas.

The MVCB has been proactive in making the QFF chemical, Naturalure, available to both New South Wales and Victorian citrus growers within the Murray Valley.

Fortunately, the Board had planned for an emergency pest situation by allocating levy funds paid in previous years to enable control measures to be undertaken when outbreaks occurred. Clearly, this is a major benefit of having a regional statutory Board in place.

The Board's property registration process, which includes a detailed aerial map of each citrus property and their extensive up-to date plantings database, has also been a bonus for a co-ordinated and strategic approach to QFF control measures in the Sunraysia Pest Free Area.

It has enabled properties affected by QFF outbreaks to be quickly identified and property owners to be contacted.

Growers operating horticultural business within 1500m of an epicentre of a declared QFF outbreak must take action to control QFF on their properties. From detailed aerial maps, it has been established that there are approximately 132 citrus properties inside the 1500m radius, comprising around 1500 hectares, which require eradication measures.

Without the Board collecting and collating individual property owners



19 December 2011

**INDUSTRY ADVICE NOTICE NO. 2011/60**

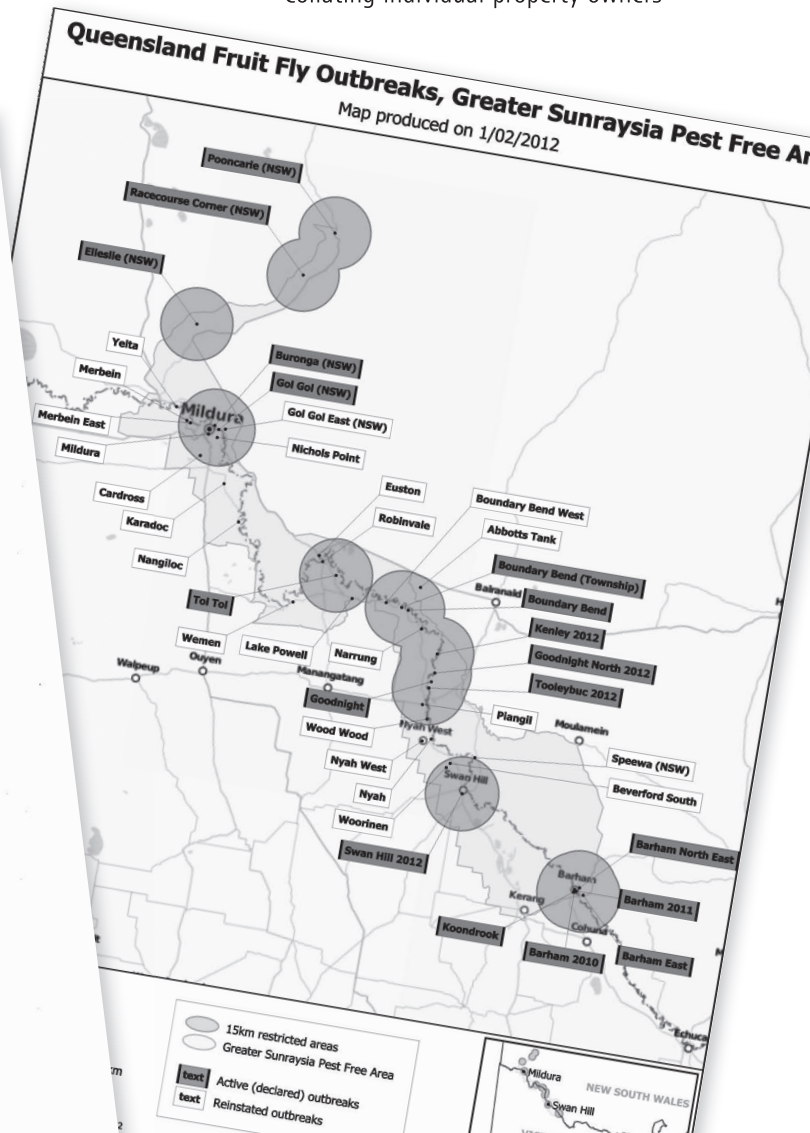
**Plant Export Operations – Manual of Importing Country Requirements (MICoR)**

This Industry Advice Notice is an update to IAN 2011/56 recently issued to inform exporters of the introduction of a new information management system that brings together the importing country requirements of Australia's agricultural export trading partners on to one single platform. Previous notification advised that the Manual of Importing Country Requirements or MICoR Plants was due to 'go live' on the 12 December 2011. Due to unforeseen issues with the data migration and search functionality we were not able to meet this date. MICoR Plants will 'go live' on Wednesday 21 December 2011 following further validation of the data and testing of the system.

Access to MICoR Plants is via your web browser at the DAFF website, you can then navigate to MICoR in few different ways. You can enter the URL into your browser address line at the top of the browser page <http://www.daff.gov.au/micor/plants> or you can access MICoR from your commodities home page.

The PHYTO database will continue to be accessible for a short period of time. For further information contact [micor.plants@daff.gov.au](mailto:micor.plants@daff.gov.au)

*Reinardis*  
for Kylie Calhoun  
A/g Assistant Secretary  
Plant Export Operations



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

contact details and planting information, the citrus industry would have been operating in a vacuum not having the necessary information to co-ordinate QFF eradication operations in this region.

The good news is that because of the targeted and strategic approach undertaken by the Board, a number of outbreaks have been successfully eradicated, and as a result, twenty-three areas have been reinstated to enable the movement of fruit into QFF sensitive domestic and export markets such as Thailand, New Zealand, Indonesia, India and the European Union.

Areas that have been reinstated are: Abbotts Tank, Boundary Bend West, Cardross, Karadoc, Lake Powell, Narrung, Nyah West, Speewa, Wemen, Yelta, Beverford South, Piangil, Woorinen, Nyah, Euston, Gol Gol East, Merbein, Merbein East, Mildura, Nichols Point, Robinvale, Wood Wood and Nangiloc.

The MVCB is very much aware of the regional implications of QFF outbreaks in both our export and domestic markets and is still working diligently towards achieving Pest Free Area status again. The MVCB's Executive Officer, Mr Hugh Flett says, "Fruit fly free status is the jewel in the export crown, enabling citrus producers in the Murray Valley region access to key export markets worth millions of dollars to the local Murray Valley economy. This status is at risk as long as these outbreaks exist. They must be eliminated as soon as possible and further outbreaks must be prevented at all costs."

The Board would like to thank all citrus growers, Board staff and departmental staff involved in the eradication programme.

### Mary Cannard

Industry Development Officer, MVCB

quickly able to identify all citrus growers in the 1.5km radius of the epicentres and facilitated the necessary actions that growers were required to carry out. The Board was able to subsidise the costs of the treatments for those growers. It is important to note that the control of QFF is for the benefit of all growers within the PFA, not just those in the 1.5km outbreak quarantine area.

During the height of the drought, the MVCB was able to negotiate critical water allocations for growers in NSW. Unfortunately, this decision was not accepted by the Victorian Water Authorities despite major efforts on the part of the Board. This negotiation and outcome was of great assistance to NSW growers. The quick action and government response was made possible by the up-to-date plantings data on hand at the MVCB. Issues such as this will occur again and having the capacity to act in a strategic and timely manner with accurate information will be critical for all growers in the Murray Valley region.

The grower information sessions keeping growers up to date and arranged by our IDO, Mary Cannard, continue to be of value to growers and attendance always exceeds expectations.

Citrus Australia Limited (CAL) is proposing that the National R&D levy be increased (which can only occur by a poll of all growers) and that there should be Regional Advisory Committees to advise CAL on regional issues. This proposal will see all decisions about where the National R&D levy is spent leaving the regions with no independently controlled resources.

Under this model there is no guarantee that:

- any of the increased national levies will be spent in the region from which they came
- the issues of our region will be addressed or funded
- funding would be allocated to maintain the PFA
- the Tri-State Fruit Fly community awareness project would be funded
- there would be resources to assist growers in times of emergency - eg QFF outbreaks, leaving all the costs to a few for the benefit of all
- our regional views on national issues will be heard

The MVCB Board currently spends its budget on the following areas:

- 57% on grower services – this includes the IDO and sessions for growers, fruit testing, crop forecasting, plantings data, research (currently citrus gall wasp) on-farm trials to increase fruit size and post harvest treatments
- 25% on industry – this includes the PFA and Tristate Community Awareness program
- 18% on governance

A well-resourced and efficient MVCB has served growers of the region well over many years and would continue to do so.

In this context, I have been proud to lead a Board that has faced some significant regional challenges during its term of office. We have worked diligently in the growers' best interests with sound research, commitment and enthusiasm throughout.

If you value the services that the MVCB provides, I urge you to continue to support the Board. Please consider what our region would be like if we have no access to funding to address our regional issues.

### Jan Denham

Chairman, MVCB





Hugh Flett

## Chief Executive's Report

The Murray Valley region has experienced one of the worst seasons for Queensland Fruit Fly (QFF) outbreaks. At one point in the year, the region had 34 active outbreaks.

The Murray Valley Citrus Board (MVCB) continues to take a leading role in the battle against fruit fly incursions. At the time of writing this report (9th February 2012), the Board had funded the purchase of 10,000 litres of the chemical 'Naturalure'. This chemical was provided without charge to approximately 122 citrus growers in the Murray Valley who then applied it to eradicate QFF outbreaks. Achieving a successful outcome will result in saving all growers the costly pre and/or post harvest treatments that have been a part of the season this past year.

To date, much success has been achieved, but there is more work to be done. The number of outbreaks has fallen to 18. Growers in these outbreak epicentres are continuing to apply treatments provided by the Board. Six of these active outbreaks centre on the Boundary Bend, Kenley Tooleybuc area. A further 7 are in and around Swan Hill and Barham. A few remain active in the Ellerslie/Pooncarie Racecourse corner locale. There are two outbreaks at Buronga and Gol Gol awaiting a successful outcome from treatments.

All growers in the Murray Valley should join with me in congratulating the growers who have contributed to eradication through their efforts. Without them playing their part, the region could not hope to achieve a pest free status again in the shorter term.

Achieving and retaining a Pest Free Area status is of the utmost importance to citrus growers who are faced with increasing competition from other exporting countries (and domestic producers) and higher exchange rates. Whether your product is exported or shipped domestically makes no difference. Whilst we are in outbreak conditions, the additional costs of treatments to achieve the required ICA conditions are prohibitive and impact considerably on grower returns.

The importance of having regional representation in times such as these cannot be understated. Without a regional body to represent their interests with State Governments and other parties, growers would be left with little to call upon. This 12 month period has seen citrus growers

within the Murray Valley pay up to \$10M in pre and post harvest treatments. The MVCB has been integral in both the establishment of the pest free area and its continuation.

Your Board calls on you to carefully consider what the future may hold without retaining a regional Board. A regional Board will continue to look after the best interests and concerns of citrus growers in the Murray Valley. A regionally based Board provides the best vehicle to represent growers on regionally specific production, pest and disease issues.

In the last few years the Board has funded and distributed Citrus Gall Wasp parasites by the hundreds of thousands on farm. These parasites have survived in our hot temperatures and are now increasing in numbers. The aim is for these parasites to eventually manage the gall wasp incursion without the additional cost of chemical treatment being borne by growers. One of the major benefits of using parasites is that as the pest spreads, so do the parasites.

Fuller's Rose Weevil is the citrus pest which creates major export market access issues. The Board played an integral role in initiating funding for research into post harvest disinfestations and examined orchard control regimes such as tree trunk barriers, to stop the weevil entering citrus trees. This led to orchard protocols that enabled growers to comply with market access requirements.

Without your regional board, NSW growers with permanent plantings would not have had access to a critical supply of water during the irrigation season of 2007. At the same time, a great deal of effort was expended to achieve the same outcome in Victoria with the previous government. Unfortunately, this important proposal did not receive support. In the last four years, the MVCB has been the lead agency in bringing State and Federal government water agencies to Mildura, providing growers with the opportunity to share their concerns with the appropriate policy makers.

The MVCB provides an Industry Development Officer (IDO) and a Field Officer (FO) who

liaise and assist growers on-farm with any production, pests and disease issues. They are on-call to see the problems in situ and are able to leverage a network of professionals to provide advice and solutions. The IDO and FO collect data and produce an accurate crop forecast each year. The Board then makes the aggregated data available to the national body, which then includes it in the national crop forecast. In addition, the Board provides plantings statistics to enable updates to the national plantings database.

The MVCB was instrumental in achieving Japan's acceptance of the Pest Free Area winter window for seasonal access into Japan. Citrus that is picked and packed during the period 1 June to 31 December is permitted to be exported without the requirement for cold treatment against fruit flies. The Japanese market has now overtaken the US as the largest export destination for citrus, both on volume and dollar terms per tonne. The Board continues to be involved in the maintenance of this market each year.

A regional Board meets the specific regional research needs of citrus producers and then enables the transfer of this knowledge through on-farm services. It provides growers with the resources to strategically combat pest incursions in a timely manner. Clearly, a regional Board also provides the best chance to maintain governmental resources in growing regions.

**Hugh Flett**  
CEO, MVCB

## Proposed Murray Darling Basin Plan

SCG Directors have been active in attending numerous meetings and a briefing from the MDBA in relation to the proposed Basin Plan. Our concerns on this issue were aired in an interview on the Alan Jones national radio show late last year during his visit to Mildura.

Other than a review in 2015 and more aligned commencement dates, the proposal is substantially unchanged from the previous guide. The magic number for the Sustainable Diversion limits is now 2750 GL. However, there is conjecture as to how and where 971 GL of shared downstream water needs for the Murray system will be wrung out of the southern system.

Another potential concern is the mammoth water holdings of the Commonwealth Environmental Water holder and its effect on dam carryover storage and the impact on security of other users. There appears to be little or no accountability as to how Environmental water is and will be used. Some critics are suggesting that they have already purchased more than they know what to do with.

It is disappointing that significant savings in the Lower Lakes are being ignored due to the fragile political climate in that region. At the briefing in Mildura, the MDBA conceded that there are savings to be made at the Lakes and that they are currently looking at some options. A further issue with any SDL's is how the pain will be thrashed out by the State Water Plans in 2019. The states may go hard on irrigators to ensure that they meet their own targets under the basin plan.

Despite all of the rhetoric, it is difficult to understand how the Plan will achieve one of its goals to "provide greater certainty for all water users, including in times of drought and low water availability." SCG welcomes grower views on the Plan and will complete our submission shortly for lodgement. We encourage all growers to lodge a submission and voice their opinions on this important issue.

SCG is a member of the National Irrigators Council (NIC) and receive weekly updates on the political happenings surrounding the plan. Any SCG member wishing to receive this update can do so by contacting Deb Scott at the SCG office.

### Remaking of the Murray Valley Citrus Board Order

Late last year, SCG wrote to Victorian Agriculture Minister Peter Walsh requesting that he call a poll to allow citrus growers in the Murray Valley to have the opportunity to vote to remake the Order to retain the Murray Valley Citrus Board for a further four years.

SCG believe that the regional presence and stability given by the Murray Valley Citrus Board is crucial to the future of our industry in Sunraysia. Unfortunately, the poll will come on the back of the worst season ever experienced by citrus growers in our region. Our greatest hurdle this past season was the high Australian dollar. Despite this the MVCB has advocated and worked hard to combat the vast Queensland Fruit Fly problem, continued campaigning against the Basin Plan, maintained vital plantings statistics and provided local CITTgroup and extension services. Each year growers are able to vote on projects the MVCB will undertake. It is important that growers use their vote each year to steer the MVCB in the direction they believe will deliver the most benefit to our region.

Some growers and organisations are currently campaigning for the removal of the MVCB and other State based boards in favour of a national body. Under such a proposal - how will the level of regional services that we currently receive be maintained? Who will have voting power in a national structure? How will the needs of different growing regions (eg QLD mandarins, WA Grapefruit, North Coast Limes) be addressed?

Abandoning our current system for some ideology is risky for growers and may not present a significant upside. Will we make any more money? Unfortunately, the continued push to eliminate the regional

Boards is churning through significant industry funds and time - surely these would be better spent on developing new overseas markets.

### SCG Meetings

This season, SCG will be holding a number of open meetings for members to attend and share their views. At this stage, it is envisaged that the meetings will be held in various parts of Sunraysia and include a BBQ or similar social function.

The SCG Directors welcome and rely on direct contact from our growers to discuss ideas and raise concerns. The SCG email is [scg@mvcitrus.org.au](mailto:scg@mvcitrus.org.au)

### Vince DeMaria

Chairman,  
Sunraysia Citrus Growers Inc.



Jeremy Giddings

# Running Costs of Diesel, LPG and Electrical Pumpsets in Sunraysia

Irrigators often ask which pumpset type is best for their situation. In the following discussion the fuel and power operating costs, and other considerations are compared for three pumpset types.

Fuel or power costs were all determined as at February 2012. Pumpsets compared are:

- diesel fuel
- liquefied petroleum gas (LPG)
- standard irrigation electricity tariff
- off-peak irrigation electricity tariff

Establishment costs have not been considered as costs are just too variable. Electricity infrastructure supply costs, for example, can easily be \$5,000 to \$70,000 or more depending on the existing level of infrastructure.

### Energy Costs at the Shaft

This discussion looks at the cost of providing power at the engine shaft, to make the comparison more reasonable.

### Diesel Fuel

The wholesale price for diesel fuel varies on a daily basis. Retail price can vary from company to company. A general wholesale figure in Sunraysia in February 2012 was 150 cents per litre, including GST.

A federal customs and excise rebate can be claimed on this cost from the customs department. The approximate wholesale price for fuel supplied to primary producers using the fuel on-farm, and excluding GST, is around 82 cents per litre (February 2012).

To obtain the cost at the shaft, the cost per megajoule is determined by:

- dividing the cost per litre by the **specific energy** of a litre of fuel. Diesel fuel has a specific energy of 38 megajoules (MJ) per litre.
- derating this figure for the **engine efficiency**. The NSW Department of Mineral Resources adopts a diesel engine efficiency of 35%, meaning 35% of the heat energy of the fuel is available as energy, converted to mechanical energy, at the engine shaft.
- putting the result into a cost per kilowatt-hour (kWh).

$$1 \text{ MJ} = 0.278 \text{ kWh} \quad (3.6 \text{ MJ} = 1 \text{ kWh})$$

$$\text{Cost/kWh at shaft} = \frac{82\text{c}}{38} \times \frac{1}{0.35} \times \frac{1}{0.278}$$

$$= 22.2 \text{ c/kWh}$$

### LPG (Liquefied Petroleum Gas)

The price paid for LPG is generally set by the amount used annually, the consistency of demand, the locality, and distance from depot. For an irrigation horticulturist requiring about 10–15 tonnes bulk supply per year with a 2-kilolitre (1-tonne) tank, around 85 cents per litre would be reasonable (February 2012, excluding GST). As there are no taxes on LPG, there are no rebates available.

NSW Department of Mineral Resources adopts an LPG engine efficiency of 30%.

LPG has a **fuel specific energy** of 25.5 megajoules per litre.

Using the same formula as above:

$$\text{Cost/kWh at shaft} = \frac{85\text{c}}{25.5} \times \frac{1}{0.30} \times \frac{1}{0.278}$$

$$= 39.9 \text{ c/kWh}$$

In addition, there is an annual rental fee on the LPG storage tank of about \$300, depending on the size of tank required.

$$\text{Cost/kWh at shaft} = \frac{27.3\text{c}}{0.9}$$

$$= 30.3 \text{ c/kWh}$$

### Electricity

#### Standard day rate

Electricity prices can vary according to supplier. A reasonable figure for Sunraysia is 27.3 c/kWh excluding GST.

NSW Department of Mineral Resources adopts an electric motor efficiency of 90%.

$$\text{Cost/kWh at shaft} = \frac{15.894\text{c}}{0.9}$$

$$= 17.66 \text{ c/kWh}$$

*Off-peak electricity* (10 pm to 7 am weekdays and all day on weekends and Public Holidays)

A reasonable figure for Sunraysia is 15.894 c/kWh

Motor	Calculations	Extra charges	Annual operating cost
Diesel	15,000 × 22.2c = \$ 3,330	nil	\$ 3,330
LPG	15,000 × 39.9c = \$ 5,985	annual fee of \$300	\$ 6,285
Electricity (standard)	15,000 × 30.3c = \$ 4,545	Service availability charge \$ 1,387	\$ 5,932
Electricity (off-peak)	15,000 × 17.66c = \$ 2,649	Service availability charge \$ 1,387	\$ 4,036

Figure 1

## Activities of the Murray Valley Citrus Board – March Quarter 2012

In addition, there are other charges, sometimes called a service availability charge. A reasonable figure for Sunraysia is 380 c per day which equates to \$1,387 per year.

### Seasonal operating costs (February 2012)

The above figures can be used to compare operating costs. Fig 1. (below left) shows annual operating costs, with power at the shaft of 30 kW and irrigating for a total of 500 hours over the season and therefore a total annual usage of 15,000 kWh.

These figures are for comparison purposes only and are based on adopted power efficiencies. Actual efficiencies will vary depending on the condition and suitability of the engine selected.

### Other Considerations

When choosing a power source, other considerations include:

- initial establishment costs (power extension and connection or fuel storage tanks)
- initial engine/motor costs and life expectancy
- maintenance, repair or replacement costs over the life of the unit
- personal preferences and,
- Projected costs in the future, effect of carbon tax etc

### ACKNOWLEDGMENTS

Ross Lake, Manager, Tasco Inland Australia, Mildura  
Craig Matthews, Elgas Lmt Mildura

### Jeremy Giddings

Irrigation Officer, Industry & Investment NSW, Primary Industries

### Board Members and CEO

- Sunraysia Horticulture Alliance meeting re MDBA
- QFF symposium Sydney, with Australia's Chief Plant Protection Officer
- Mildura Show
- Sunraysia Pest Free Area response committee meeting
- Citrus Australia Conference
- SMART production workshop with DPI Vic and Rendall McGuckian consultants
- DAFF biosecurity meeting regarding market access
- QFF response committee meeting
- Rural Financial Counselling Service AGM
- Victorian Basin Plan Advisory Committee meeting
- Sunraysia Citrus Growers AGM.
- Pest Free Area Management Committee meeting
- VFF meeting re Basin plan
- Tri State Fruit Committee meeting in Melbourne
- QFF symposium with Aust Chief Plant Protection Office
- MDBA roundtable in Mildura
- Vic DPI 'Feeding Asia's demand' meeting in Melbourne
- Lower Murray Darling Catchment Authority workshop
- CAL meeting on R&D investment plan
- Vic DPI consultation meetings on remaking the Order for the MVCB.
- CAL Export Forum in Melbourne

**Hugh Flett**  
CEO, MVCB

### IDO Activities

- Produced Citrus Board News weekly
- Helped with BBQ and field walk on Strategic Cost Savings on Farm at Mourquong and Citrus Gall Wasp and Fullers Rose Weevil Management at Coomealla
- Attended Vic DPI 'Feeding Asia's demand' meeting in Melbourne
- CAL meeting on R&D investment plan
- Promoted citrus at the Taste of Melbourne, Mildura Show, Werribee Harvest Picnic and Picnic at Hanging Rock
- Attended Vic DPI consultation meetings on remaking the Order for the MVCB.
- Participated in CAL Export Forum in Melbourne
- Participated in Vic DPI Horticultural Industry Network meetings
- Visited Pakistan citrus growers under AusAid project funding
- Provided monthly citrus articles for Sunraysia Daily
- Undertook fruit density and sizing counts for the Murray Valley crop forecast
- Attended Postharvest steering committee meetings
- Held IDO steering committee meeting
- Submitted funding application for new IDO project 2013/16
- Submitted milestone report for current IDO project
- Provided grapefruit samples for screening for Australian Citrus Dieback phytoplasma
- Attended HAL Strategic Agrichemical Review for citrus

### Mary Cannard

Industry Development Officer, MVCB



# Citrus Information Technology



During the last four years the MVCB has funded and facilitated 52 CITTgroups, field walks, information sessions and technical workshops in the Murray Valley. The range of topics has been wide and varied, but they fall into six main categories: Pests and diseases, Irrigation and nutrition, Crop regulation and production, Postharvest treatments, New varieties and Technical workshops.

## **Pests and Diseases**

Managing pests and diseases is an integral part of producing quality citrus for the export and domestic markets. The Board has not only provided funding for the release of Citrus Gall Wasp parasitoids to manage this incursion and to explore IPM compatible chemical options for the management of CGW; it has also held annual CGW workshops to enable growers to recognise the symptoms and understand the phenology of this pest.

The MVCB has also facilitated and funded visits from eminent citrus entomologists

such as Dr Andrew Beattie, Dr Peter Crisp, Dr Jianwa Mo and James Altman to present information to citrus growers on Red Scale Management, Fuller's Rose Weevil management and Huanglongbing.

Through CITTgroups growers have also learnt about the newest chemical options for use on citrus. Over the last four years MVCB has facilitated eleven pest and disease workshops for Murray Valley growers.

## **New Citrus Varieties**

CITTgroups detailing new citrus varieties are very popular with growers and the

Board has facilitated eight in the last four years, where fruit from the new varieties was made available for growers to sample. The work of Dr Steve Sykes, (CSIRO) and Graeme Sanderson (NSW DPI) has been vital in developing and trialling new citrus varieties in this region, and both have used MVCB's CITTgroups to disseminate new varietal information to growers. Growers have also been able to examine plantings of new public varieties at the MVCB organised field days at the NSW DPI.



# Transfer Groups (CITTgroups)



This spread clockwise from top left:  
 1. Dr Michael Treeby explains the new citrus nutrition trial at NSW DPI 2. Dr Andy Krajewski explaining the practical side of pruning citrus 3. Dr Tahir Kurshid talking to growers about his rootstock trial

### Drought Workshops

During the drought the Board was proactive in providing growers with technical information on management of permanent plantings during low water allocations and with information about the water market and water trading. It was also instrumental in providing growers with the opportunity to hear, first hand, from state and federal Water Authorities. Blockies turned up in droves in 2008 for the Murray River Perspective and again in 2010 to for the Water Policy Information Session. In total eight drought related workshops were run by the MVCB for Murray Valley growers.

### Crop Regulation and Production

Due to the biennial bearing nature of citrus, crop regulation and pruning workshops have been influential in enabling growers to balance crop loads from year to year. The small crop of large fruit in 2010 led to expectation of a large crop of small fruit in 2011. Therefore, the MVCB facilitated and funded field walks to provide technical information on the use of Ralex to regulate crop loads in an effort to mitigate the effects of an excess of small fruit reaching the market and consequently reducing returns to growers.

In 2010, the Board funded WA based Dr Andy Krajewski, Australia's expert in citrus pruning, to present technical pruning workshops for Murray Valley growers. These workshops proved very popular and were repeated in 2011. Other pruning workshops, utilising the technical expertise of NSW DPI extension staff, together with a bus trip to highlight the different pruning regimes used by three growers, have shown the need for crop regulation to balance crop loads.

*Cont'd on page 11...*

## 2011 Tour of the Murray River: An On-going MVCB Citrus Promotion

The 2011 Tour of the Murray River was the biggest and best conducted in its sixteen-year history.



From a general viewpoint, the field quality was of the highest order, the standard of the racing fiercely competitive, the crowds doubled, media interest was excellent, the hospitality first-rate and the weather was very kind.

The MVCB continued to have a key promotional role in the eight-day Tour. MVCB Field Officer, Tony Bothroyd attended the event throughout promoting citrus in a very practical way by distributing products to participants, local councils and spectators. He attended all Civic Welcomes and mixed freely with Councillors and community representatives of the various municipalities.

The MVCB has been involved with professional road race cycling for many years, starting with the then Herald-Sun tour when it sponsored the very successful Sweethearts Team. A lot of effort was put into this initial venture and the endeavour worked well.

The 2011 Tour of the Murray River cycling classic produced the most expansive and challenging route yet. The 847 km tour, raced in 15 stages started in Yarrawonga on Sunday, August 28 and concluded with its traditional 66 km kermesse in Mildura on Sunday September 4.

The tour embraced seven municipalities – Moira, Campaspe, Gannawarra, Swan Hill,

Balranald, Yarriambiack and Mildura – and was backed by Tourism Victoria and the New South Wales Government.

Cities and towns to feature in the 15 stage tour included Cobram, Numurkah, Nathalia, Echuca, Kyabram, Rochester, Kerang, Swan Hill, Lake Boga, Robinvale, Euston, Ouyen, Patchewollock, Merbein, Red Cliffs and Mildura.

The event is the third race of the four-tour Scody Cup, Australia's premier domestic road cycling series. The Murray tour was also a feature event in Cycling Australia's 2011 national road teams competition.

- As such, the tour has grown into Australia's most important domestic road cycling classic, attracting entries from all Australian states, New Zealand and some from other countries.
- It is now regarded as a breeding ground for future Australian international team members, and a vital lead-up event for the Olympic and Commonwealth Games.
- The tour is also more than a bike race – it has become an important community event involving thousands of people and organisations in the Murray Region.
- The tour links with and supports significant community festival activities such as the Ouyen Great Vanilla Slice Triumph etc.
- Hundreds of school children watch the tour and the cyclists serve as role models.

- Participating riders visit many schools and address children on road safety, health and fitness, the perils of drug-taking and recreational and competitive cycling.
- An official entourage of about 300 accompanies the tour. This includes cyclists, crew members, officials, sponsors, police and media. Supporters are extra.
- As such, the tour is an important source of economic activity for cities and towns along the route. It is like a great travelling circus.
- Media coverage of the event is at near-saturation levels along the Murray River regions, on television, radio and in newspapers.
- The profile of the citrus industry is further enhanced through the sponsoring partnership of the Mildura Fruit Company. For the past three years the MFC has had the naming rights of the final stage of the tour – the MFC Mildura Kermesse.

Overall, the citrus industry gives and gains a lot through its involvement and more people are giving thought to increasing the promotional opportunities for the industry across a concentrated and widely publicised event. In this regard, the MVCB continues to show the way and receives justified recognition. The citrus industry is the only primary industry sector that has been given this opportunity to date.



## Citrus Information Technology Transfer Groups (CITTgroups)

Cont'd from page 9...



John Craven, Tour Director, regards the MVCB promotion very highly and sees the Board's consistent involvement as a valued partner in the event as a real bonus in a promotional sense.

The elite event strongly advertises healthy lifestyles and citrus products are a good mix in terms of a live promotion that does work. These activities are interactive and shared experiences that take place in a focussed environment.

Certainly the on-site promotions at all stage starts and finishes was an excellent way of getting the citrus industry message across to a wide catchment area and to groups of people who operate across Australia and overseas.

The reaction of many school pupils, both in the Schools Program and as spectators, was enlightening and their fascination with such highlights as Blood Orange juice was obvious and memorable. Overall, a job well done.

### E. Warhurst

Compiler and Patron,  
Tour of the Murray River



Top: Graeme Sandersan displaying fruit from new varieties. Bottom Left-right: 1. Growers at the NSW DPI Farm Walk. 2. Growers at a crop regulation CITTgroup on Mansell's farm.

The three field walks held to examine the preliminary results of the field trials project, funded by HAL and MVCB, had a strong response from growers. Over 110 growers attended. Eighteen demonstration field trials were initiated in the spring of 2010 to evaluate various products and practices to increase fruit size and/or productivity. In total, 19 different CITTgroups dealing with crop production and regulation were organised for growers.

### Irrigation and Nutrition

The MVCB also funded and facilitated four citrus nutrition, technical workshops. They were presented by Steven Falivene (NSW DPI) and provided a comprehensive technical background on citrus nutrition, which enabled growers to apply the right amount of fertiliser at the right time for their orchard situation. These workshops also provided information on appropriate nutrition monitoring techniques to make sure that fertiliser was being used in the most cost effective and environmentally sustainable manner.

Other workshops in relation to irrigation and nutrition included a Soil Solution workshop, an Irrigation Environmental Action Plan workshop, an Advanced Fertigation and a Martinez nutrition program.

### Postharvest/Other Workshops

Packing shed quality control workshops have been introduced by the Board in the last four years, to ensure that citrus growers and pack house staff have the knowledge and tools to identify pests and diseases in the packing shed, and to

create certainty that importing country requirements are met.

As well, the Board has funded citrus postharvest programs for the last four years, which have been a vehicle for Dr Peter Taverner and his staff to keep industry abreast of his work. They covered packing shed sanitation, oil use in packing sheds and new fungicide for packing sheds.

The MVCB, in conjunction with NSW DPI, has facilitated the training of export crop monitors. It ensures that growers are meeting the requirements of the Asian export market orchard protocol therefore minimising export rejections.

In summary, much has been organised and the outcomes, particularly at the local and regional level, have been very positive.

All activities have been based on need and growers have appreciated the fact that the MVCB has readily responded in a practical, researched and co-operative manner.

Further consequences are that strong networks and direct information sources as well as operational structures have eventuated, which will enable on-going work to continue in these vital areas. This fact is significant in times that are very challenging for the industry as a whole. CITTgroups will remain as the core of many MVCB research and development projects.

Mary Cannard  
IDO, MVCB



# The Age Harvest Picnic



I attended the Werribee Park event on Sunday, 27 November, 2011. My aim was to arrive early to observe the location, the overall layout and view the arrival of the anticipated large crowd.

A not-for-profit event aiming to promote Victorian producers to a wider audience, the Age Harvest Picnic was in its 24th year, making it one of the longest running festivals in Victoria. Set on the Great Lawn at Werribee Park, with the impressive historic mansion as backdrop, it provided a day out for families, friends and food lovers, with music on stage, cooking demonstrations by some acknowledged chefs and activities for children.

The MVCB stand was billed as "the promotion of citrus growth along the Murray Valley, including fresh pure juice and fresh citrus for tasting."

On entry, the perspective and size of the event was obvious. Easy access to all exhibitor stands was a feature of the venue. Overall, it presented as a very professional set-up with the display tents ringing a large central flat, grassed area that provided ample space for children's competitions and activities.

Stallholders went to a lot of trouble with their displays and presentations. Signage, generally speaking, was of high quality.

The location itself is picturesque and impressive. The centrepiece is the Werribee Mansion. Built in the Victorian era of Australia, the 1870's mansion is Victoria's largest and most elaborate residence. The Chirnside family built the stately Italianate mansion in 1876 – it was the largest private home ever built in Australia. The 60-room structure has been carefully restored to reflect its Victorian past and many of the Chirnside's belongings and fine furniture are on display for public viewing. The gardens remain a feature.

The MVCB stand occupied a prime location next to the stage. This area was the attention focus throughout the day. Clearly, the Board is regarded by the organisers as an important and long-time contributor to the event. Heavy rain (some 80 millimetres) had occurred the day before. Consequently,

there was plenty of activity required by the exhibitors early on Sunday.

The MVCB stand was staffed by TonyBothroyd, Mary Cannard, Eric and Kerry Wright and Darren and Anne-Marie Minter. The exercise was a first time for Darren who admitted to being a reluctant starter, but he quickly came to realise the promotional possibilities of person-to-person contact with the buying public and responded to the opportunity with enthusiasm.

"Promotion and marketing is a very important priority and I now see this experience as excellent value," he commented.

Mary Cannard, Industry Development Officer, MVCB also made some interesting observations. "This is a fine way to get the citrus message out through direct tasting of the juice and fruit. The public appreciate the free tastings, particularly as the cost of

# nic at Werribee Park



This spread left-right:  
1. The crowd scene. 2. Eric Wright serving some early (and happy) customers. 3. The Werribee venue, early morning.

entry is substantial. It is also a great time of the year to promote grapefruit as they are currently at their best."

Eric Wright emphasised the educational opportunities provided by the venue. "The display and the tastings are all about highlighting the seasonality of citrus varieties which enable access to fresh produce all year round. The younger audience respond to the colourful visual impact of the stand as it displays examples of the different citrus varieties. This all combines to create an environment of total interaction - to look, taste and question at a very personal level."

Tony Bothroyd, Field Officer, MVCB in reviewing the promotional activity stated that thankfully the weather remained fine, the crowd was huge after lunch and the stall staff were run off their feet in the end.

"We were totally cleaned out. The attendance comprised a broad

cross-section of people. In many ways, this event is very similar to Hanging Rock (held on Sunday, 26 February, 2012) but the emphasis is more on a family fun day with many more young people involved. This is the fourth occasion I have participated and I am convinced the exercise is absolutely worthwhile. The MVCB is well regarded and our citrus products, displays and responses to questions received a lot of favourable comment. Of real interest were the many questions relating to orange juice and what to look for on the supermarket shelves. Many consumers want Australian grown, and are keen to see advances in the labelling laws highlighting the fact."

As an observer, the promotional and information-giving opportunities of events such as this are obvious. The Werribee Park occasion is relatively informal, but provides the opportunity to actively involve the public as individuals or in small groups. Store promotions cannot create the same atmosphere or achieve comparable results.

The strength of promotions such as Werribee Park is that the product is taken to the people. Because of this, the public responds accordingly, as seen by their constant demands at the display stand counter to taste the product and seek information through intelligent questions. Growers should be encouraged by this increasing state of awareness and enquiry.

Overall, I gained further valuable insights by attending and intend to continue this practice whenever I can.

**E. Warhurst**  
Compiler

# Carbon Trading and The Potential For The Citrus Industry To Provide Sequestration Services – Growing Trees

In an earlier article the attention of citrus growers was drawn to the Federal Government's commitment to reducing Australia's net emissions of greenhouse gases (GHG). One plank in the Government's strategy is the sequestration (capture and storage) of carbon dioxide (CO<sub>2</sub>) in geological (i.e. rock formations) or biological (i.e. plants) systems.

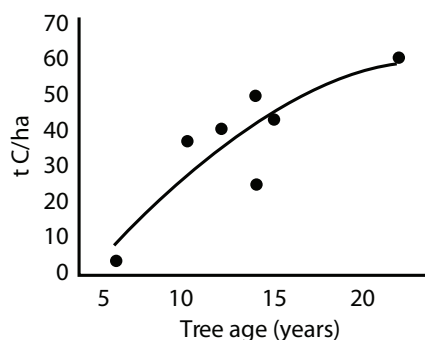
To that end the Government has developed the National Carbon Offset Standard<sup>1</sup>, which sets out some definitions and rules for how a sequestration market will operate. A key suggestion is the notion that providers of sequestration services should be able to demonstrate that the carbon that is sequestered as a service is additional to the carbon that would have been sequestered in the normal course of events. The removal of an existing planting (due, possibly, to the trees being old or an unprofitable variety) and the planting of new trees may be viewed as business as usual. In other words, the new planting went ahead as a normal part of a citrus enterprise, and all the CO<sub>2</sub> removed from the atmosphere by the trees would have happened anyway. So, in the Government's view, there would be no additional carbon sequestration. However, this argument is untested, and the rules have not been finalised. There will probably be some debate around this point before the scheme's details are finalised.

## How Much Carbon Is There In Citrus Trees?

The dry weight of the whole tree is needed to estimate how much carbon there is in the tree. The logistics and cost involved in excavating and washing the root system of entire trees is daunting given the sheer volume of material involved. Not surprisingly, there are relatively few measurements of the dry weight of whole citrus trees. In fact, over the past 80 years or so, only seven sets of measurements of whole tree dry weights have been published<sup>2</sup>. These numbers were used to estimate how much C is in

the trees as a function of tree age (see graph below), assuming that 47% of dry matter is C.

The estimates range from about 3 tonnes of C per hectare for 6 year old trees through to nearly 60 tonnes per hectare for 22 year old trees. The trend line suggests that accumulation of C is tapering off by about this time, but there aren't enough data to say this confidently. Effectively, about 3 tonnes of C are accumulated by the trees each year from planting to when the trees are about 20 years old.



Estimates of the amounts of C, on a hectare basis, in citrus trees as a function of tree age. Based on tree dry weights from 7 published studies. Line represents trend over time.

## Carbon Tax, Permanent Sequestration & Industry Practice

Most readers would be aware of the debate concerning a tax on C emissions. There is also much speculation about how much that tax will initially be. At this point, \$10/tonne appears to be the lower end of expectations. For sequestration to

be attractive the price being charged to sequester each tonne must be less than the tax, otherwise it is easier and cheaper to pay the tax. If the tax is set at \$20, then the maximum extra income from offering a sequestration service based on growing trees is likely to be less than \$60 per hectare per year (i.e. \$20/tonne C × 3 tonnes C accumulated by trees/year) up to the time when trees are about 20 years old. There will also be compliance and auditing costs to be met, and it is not clear who wears those costs. This assumes of course that growing trees isn't viewed as business as usual.

Another serious complication is the Government's definition of permanent sequestration as being at least 100 years. Many producers now only leave trees in the ground for about 20-30 years, after which they are pulled out, piled up and burnt, before planting new trees. Obviously, all the CO<sub>2</sub> that those trees took from the atmosphere to produce leaves, branches, trunk and roots, is lost back to the atmosphere.

This conflict between industry practice and the Government's definition is particularly relevant to individual producers, but on regional or industry-wide scales, there is usually only a small percentage of the total acreage being redeveloped at any one time, and this percentage tends to remain more or less the same over time. Thus, given the area planted to citrus stays roughly the same from year to year, groups of producers could aggregate to provide a sequestration service based on a fixed proportion of the total area being under trees over the long

<sup>1</sup> <http://www.climatechange.gov.au/government/initiatives/~-/media/publications/carbon-accounting/revise-NCOS-standard-pdf.aspx>

<sup>2</sup> Cameron, S. H. & Appleman D. 1933. The distribution of total nitrogen in the orange tree. *Proceedings. American Society for Horticultural Science* 30, 341-348; Cameron, S. H. & Compton, O. C. 1945. Nitrogen in bearing orange trees. *Proceedings. American Society for Horticultural Science* 46: 60-68; Feigenbaum, S., Biorlorai, H., Erner, Y. & Dasberg, S. 1987. The fate of N-15 labeled nitrogen applied to mature citrus trees. *Plant and Soil* 97, 179-187; Liguori, G., Gugliuzza, G. & Inglese, P. 2009. Evaluating carbon fluxes in orange orchards in relation to planting density. *The Journal of Agricultural Science* 147, 637-645; Mattos, D., Graetz, D. A. & Alva, A. 2003. Biomass distribution and nitrogen-15 partitioning in citrus trees on a sandy entisol. *Soil Science Society of America Journal* 67, 555-563; Morgan, K. T., J. M. S. Scholberg, Obreza, T. A. & Wheaton, T. A. 2006. Size, biomass, and nitrogen relationships with sweet orange tree growth. *Journal of the American Society for Horticultural Science* 131, 149-156

<sup>3</sup> *Design of the Carbon Farming Initiative. Consultation Paper. Department of Climate Change and Energy Efficiency. 2010.*



## Sunraysia Farmers' Market Update

Discussions with Ms Sue Pull, Market Co-ordinator, Sunraysia Farmers' Market Inc indicates that patron numbers have increased dramatically.



"Our last market held at the Australian Inland Botanic Gardens in December, 2010 was estimated to be in the mid 400's. A count we took at the end of August at our new location was just under 2000, and this was a quiet market without any added attractions."

Apparently, new stallholder enquiries are frequent with a number having to be turned away due to quotas for particular items already being filled.

Feedback from locals and visitors is very positive and has been communicated to stallholders, breakfast volunteers, local tourism and community organisation representatives and Market Committee members.

Elina Gareffa (Tabletop Grapes) passed on a comment from one of her customers who had travelled extensively overseas, who stated that this was one of the best markets she had seen.

"I even had a phone call from a gentleman, who is planning his holiday route in April of next year and wanted to make sure he was in Mildura to coincide with our market at that time."

Sue Pull also advised that the Sunraysia Farmers' Market has purchased an old caravan to use for portable storage. "It was well worn and a little shabby to say the least and there was discussion regarding how we could present it better on our budget.

We approached the Mildura Youth Centre Liaison Officer, Kerren Miles, who had put together a holiday program

for young people. They painted a mural around the sides of the caravan, designed by 'Moose' McGowan, a signwriter from Merbein who volunteered his time to prepare and mark out the van.

It is a very bright, colourful, funky design of fruit and vegetables in an animated style with the market's logo on each side.

The caravan was on display for the first time at the Saturday market on October 1, at the Ornamental Lakes, Mildura.

Not only will the stallholders and patrons enjoy the visual display each market day, but also the youth involved will have an ongoing reminder of their work as the van will certainly be recognized as it is transported to and from the market."

Sue also stated that the Farmers' Market website is almost complete and that other events such as the Houseboat Expo and the Sunraysia Sustainability Fest are looking to align with the market as they know a ready-made, large crowd is assured. The Market Committee remains happy to combine dates, as it is a win-win situation for all.

"It is important to note that we could not operate without the hard work of a loyal band of volunteers to make sure the market comes together every two weeks. In acknowledging this, we are looking forward to a long and bright future with more variety and maintaining our partnership with the Lions Club who provide the very important barbeque. We remain determined to let everyone know that we have the best produce and the best farmers and producers in Australia.

As such, we certainly are an alternative to the big boys with our Supermarket Under The Trees."

term. Aggregation of many small providers of sequestration services is part of the Government's plan<sup>3</sup>.

It needs to be acknowledging that there are too few data to say with great certainty how much C is present in citrus trees. The few estimates that are available suggest that if the C tax is the upper limit of likely returns for providing a C sequestration service, then returns for provision of sequestration services based on simply growing trees are likely to be low. The low returns per hectare and other costs may not be a disincentive if many producers join together to provide a service. There is a need to present to Government the argument that the C that will be sequestered in a new planting or in an existing planting as it grows is not business as usual. Unless this argument is won, or the rules are changed, it seems unlikely that citrus producers can provide sequestration services by simply growing citrus trees.

### Michael Treeby

NSW Department of Primary Industries, Dareton NSW

## A CAL Conference Presentation

The 2011 Conference was held at the Wolf Blass Visitor's Centre in the Barossa Valley on Monday, 24 October, 2011. Once again, the MVCB and the Nangiloc/Colignan Primary School citrus partnership played a significant role in the proceedings.



Left-right: 1. Pupils serving samples. 2. Kalia Allison and Tayla Cordier making the formal presentation.

Their participation was organised by Carolyn Nulty who is a teacher aide at the school. Two families from the school were involved – Steve and Eleanor Allison and Jackie Cordier.

Kalia Allison (Grade 6) made the formal presentation, while her sister Kerra (Grade 5) co-ordinated the slide show off stage. Tayla Cordier also played a supportive role.

"The conference was another opportunity to promote citrus to a knowledgeable audience in a different way. It was the first time both girls had presented and they were brilliant. It was also another opportunity to highlight the valued relationship we have with the MVCB and how this enables our school to enhance educational opportunities with a conjoint involvement with the local citrus industry.

This was also the first time we had families present, and their attached letters indicate how impressed they were, with both the conference and the educational opportunities that the MVCB, Nangiloc/Colignan partnership provides.

We also set up an interactive display giving away fresh juice. This gave conference delegates the opportunity to interact with the children. Our display was by far the most impressive. We used our purpose built trailer, which is such an easy way to organise promotional displays. Everything required is stored in the trailer. Wheel it in, open doors and all the preparation is done," Mr Eric Wright Principal commented in summarising the activity.

Jackie Cordier recorded her impressions in the following letter:

"Reflecting on the recent Citrus Conference in the Barossa Valley I was very impressed by the presentation given by the children and the maturity and confidence they showed throughout the entire event. I was also very taken by the keen interest shown by the delegates to the Fundzinc stall and their many questions and comments of a unique concept enabling the children to show their support and interest in the Citrus Industry. Fundzinc is a wonderful platform for innovative young entrepreneurs. Many were left wondering why the schools their children attended did not have such a brilliant concept as this little country school.

I personally did not realise what a wonderful idea this was until I saw the reaction of other people and the great enthusiasm and maturity in which the children interacted with the delegates.

I therefore have to thank Nangiloc Primary for giving my daughter such a wonderful opportunity and confidence building blocks through Fundzinc.

Furthermore, I would like to thank the Principal for his great efforts in coaching these children to become the very best they can be. It is said a winning team is only as good as its coach. Well done Nangiloc/Colignan Primary!"

Steve and Eleanor Allison contributed this response:

"Steve and I would like to thank the school for allowing Kalia and Kerra to represent Fundzinc at the Citrus Conference in the Barossa Valley this year.

It was a great honour for them to be chosen and for my husband and I to listen to all the girls at the conference. Their confidence and knowledge about the Fundzinc program was outstanding. They showed such pride in their school and the program. As parents we have never felt more proud, not only our own children but of the whole school, Principal Mr Wright and teachers who have guided them to this level of confidence and pride that they showed on stage as they were presenting to a room full of strangers.

Off the stage they yet again amazed us with their interactive skills as they served juice at their stand and freely engaged in conversation and answered questions when approached by other conference members.

We are so pleased that our children have had the opportunity to be involved in this program. We have seen them emerge into such confident girls through this. They have also shown keen interest and understanding of the role that our citrus industry plays in the community.

Thank you Nangiloc/Colignan Primary School. Thank you Mr Wright, teachers and Fundzinc. Our girls have a great foundation on which to build in the future."