

**Co-ordinating a market development
program for the Australian citrus value
chain**

Andrew Harty
Citrus Australia Limited

Project Number: CT09055

CT09055

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**Coordinating a market development program for the Australian
citrus value chain**

Final Report – July 2013

Andrew Harty, Nathan Hancock & Kym Thiel

Citrus Australia Ltd

Project Number: CT09055



**Project CT09055: Coordinating a market development program
 for the Australian citrus value chain**

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Purpose:

This report describes the activities, outputs and outcomes of this citrus market development project over the past 3 years. It provides industry stakeholders with a record of what improvements to market development were achieved, and those obstacles which remain.

Funding:

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Media Summary

The Australian citrus industry is one of this country's largest and most valuable horticultural industries. Citrus is grown commercially in every state or territory of Australia except for Tasmania and the ACT. This wide spread of production into many different climatic zones allows for a large range of varieties to be grown, providing supply across the entire year. The 28,000 hectares of citrus farmed by 1,800 growers produce annual crops of around 600,000 tonnes, with a farm gate value of approximately \$450m. The markets for this produce are segmented into 3 sectors: domestic fresh; export fresh; and processed juice.

The Australian citrus industry faces many challenges, but also has several exciting new opportunities within its grasp. Some of these opportunities, such as developing new export markets in Asia, will require significant technical and marketing inputs. Other initiatives, such as instilling a quality culture into our industry, will require major mindset changes.

This project has aimed to drive and coordinate all aspects of citrus market development, with the primary goal of increasing citrus consumption domestically and on overseas markets, thereby improving industry prosperity and sustainability.

We have followed value chain thinking throughout this project, and have attempted to facilitate a change in attitude regarding the current citrus supply chain. As with most other primary produce supply chains in Australia, the main driver of the chain is currently the production base. Product is generally 'pushed' up the chain, often with scant attention paid to the requirements and preferences of buyers and consumers. This approach results in unwanted product (wrong timing, quantity, quality) being foisted onto markets, with inevitable loss of value. We sought through this project to reverse that mindset: consumer requirements (and hence market demand) should become the starting point for 'pulling' product through the chain, and a quality culture is essential.

Our key activities in this project have fallen into 10 main areas: export market development; domestic market development; variety development; orchard production issues; market information; agrichemical issues; biosecurity; R&D planning & implementation; international linkages; communications.

Our main drive in the export arena has been to focus the industry on new Asian markets, notably China, South Korea and Thailand. We have led trade missions to these markets, hosted and participated in in-bound missions, and worked on market access protocols to ease trade restrictions. Our chief achievement in the domestic market segment has been development of the Australian Citrus Quality Standards program. This program, which educates and monitors industry's performance in delivering good tasting citrus to market, has now gained serious traction in all levels of the value chain.

Our Variety Committee arranged a major series of new variety workshops, which has helped spur a restructuring of the citrus plantings base towards products more preferred by consumers here and overseas. We organised a national campaign to reduce over-cropping (and hence small fruit

size) of navel oranges in the 2011 season, and also held workshops to educate Imperial mandarin growers on ways to prevent fruit dryness.

Agrichemical usage poses many challenges for industry, and we arranged a proactive, industry-wide approach to reviewing the agrichemicals needed to manage our key pest and disease issues. To back up our excellent reputation for delivery of safe food, we developed an agrichemical residue testing program, initially for Japan only, but now extended to all domestic and export markets.

A major effort was dedicated to developing the industry's new 5-year strategic R&D plan. We consulted extensively with industry, and gained consensus on the key priorities for investment of levy funds.

All our activities have been communicated to our industry via conferences, national and regional forums, grower workshops, our website and electronic news, and extensively through articles in the industry magazine, Australian Citrus News.

This project has succeeded in initiating value chain thinking in the citrus industry. Although there is still much work to do, it is very pleasing to see the vast majority of our growers, packers and marketers all focused on delivering safe, high quality citrus products which will create consumer pull and generate greater prosperity for the Australian citrus industry.

Technical Summary

The Australian citrus industry is one of this country's largest and most valuable horticultural industries. Citrus is grown commercially in every state or territory of Australia except for Tasmania and the ACT. This wide spread of production into many different climatic zones allows for a large range of varieties to be grown, providing supply across the entire year. The 28,000 hectares of citrus farmed by 1,800 growers produce annual crops of around 600,000 tonnes, with a farm gate value of approximately \$450m. The markets for this produce are segmented into 3 sectors: domestic fresh; export fresh; and processed juice.

This project has aimed to drive and coordinate all aspects of citrus market development, with the primary goal of increasing citrus consumption domestically and on overseas markets, thereby improving industry prosperity and sustainability. To achieve this goal, we have consulted with our industry through 3 issues committees (export market, domestic market and variety) and many regional forums, national forums and workshops. We have also established linkages with all sectors of the value chain, including growers, packers, wholesale and retail marketers, exporters and overseas buyers. We have developed strong relationships with federal and state government agencies, research providers, agrichemical distributors and many other industry stakeholders.

Key activities undertaken in this project have fallen into 10 main areas: export market development; domestic market development; variety development; orchard production issues; market information; agrichemical issues; biosecurity; R&D planning & implementation; international linkages; communications.

Our main drive in the export arena has been to focus the industry on new Asian markets, notably China, South Korea and Thailand. We have led trade missions to these markets, hosted and participated in in-bound missions, and worked on market access protocols to ease trade restrictions. We have worked with researcher providers to investigate new pest disinfection options

Our chief achievement in the domestic market segment has been development of the Australian Citrus Quality Standards program. This program, which educates and monitors industry's performance in delivering good tasting citrus to market, has now gained serious traction in all levels of the value chain.

Our Variety Committee organised a major series of new variety workshops, which has helped spur a restructuring of the citrus plantings base towards products more preferred by consumers here and overseas. We organised a national campaign to reduce over-cropping (and hence small fruit size) of navel oranges in the 2011 season, and also held workshops to educate Imperial mandarin growers on ways to prevent fruit dryness. A team member based in South Australia provided dedicated industry development services to Riverland citrus growers.

Agrichemical usage poses many challenges for industry, and we arranged a Strategic Agrichemical Review Process to review the agrichemicals needed to manage our key pest and

disease issues. This process has resulted in a fungicide evaluation program in Queensland to find alternative control measures for mandarin fungal diseases. To back up our industry's excellent reputation for delivery of safe food, we developed an agrichemical residue testing program, initially for the Japan export market only, but now extended to all domestic and export markets. This program, which is audited by the National Residue Survey division of DAFF, has grown considerably in 3 years from 150 to 350 samples.

A major effort was dedicated to developing the industry's new 5-year strategic R&D plan 2012-17. We consulted extensively with industry, and gained consensus on the key priorities for investment of levy funds. We have also helped with implementation of the plan, by facilitating research workshops to develop pathology and postharvest disinfestation workshops, and by sitting on the Industry Advisory Committee's reference group.

Our activities have been communicated to our industry via annual national conferences, national and regional forums, grower workshops, our website and electronic news, and extensively through articles in the industry magazine, Australian Citrus News. Our network of 3 issues committees and 4 regional committees provides a strong two-way communication framework.

This project has succeeded in initiating value chain thinking in the citrus industry. It has also greatly strengthened the number of value chain projects now operating in the citrus industry, including the ACQS program, a dedicated market access project, the NRS residue monitoring program, and a national biosecurity project. Although there is still much work to do, it is very pleasing to see the vast majority of our growers, packers and marketers all focused on delivering safe, high quality citrus products which will create consumer pull and generate greater prosperity for the Australian citrus industry.

Introduction

The Australian citrus industry is one of this country's largest and most valuable horticultural industries. Citrus is grown commercially in every state or territory of Australia except for Tasmania and the ACT. This wide spread of production into many different climatic zones allows for a large range of varieties to be grown, providing supply across the entire year. The 28,000 hectares of citrus farmed by 1,800 growers produce annual crops of around 600,000 tonnes, with a farm gate value of approximately \$450m. The citrus industry channels product into three market segments: domestic fresh; export fresh; and juice.

The Australian citrus industry faces many challenges, but also has several exciting new opportunities within its grasp. Some of these opportunities, such as developing new export markets in Asia, will require significant technical and marketing inputs. Other initiatives, such as instilling a quality culture into our industry, will require major mindset changes.

This project has aimed to drive and coordinate all aspects of citrus market development, with the primary goal of increasing citrus consumption domestically and on overseas markets, thereby improving industry prosperity and sustainability.

Project objectives

The Australian Citrus Industry Development Needs Assessment conducted in 2009 recommended that industry development should reflect a much-increased focus on markets and marketing activity, and should proceed along 4 program areas: market development; information & data management; communications; and capacity building.

Project CT09055 has aimed to deliver two of these goals: market development, and information & data management. Although not primary aims of the project, elements of the communications and capacity building programs were by necessity also covered in some of our objectives.

The key objectives of the project were:

1. To establish a team of trained individuals (previously employed as industry development officers) and refocus their activities on value chain coordination. These value chain coordinators (VCCs) would provide linkage between each step of the value chain, from growers through to packers, processors, marketers, buyers and, most importantly, consumers.
2. To foster a far stronger national focus on market development, rather than the narrower regional focus under which industry development officers (IDOs) previously operated. To ensure this national focus, the VCCs would be managed by Citrus Australia's General Manager Market Development (GMMD). Under this umbrella, a national category approach to citrus market development would be encouraged.
3. The most important objective would be facilitating a change in attitude regarding the current citrus supply chain. As with most other primary produce supply chains in Australia, the main driver of the chain is currently the production base. Product is generally 'pushed' up the chain,

often with scant attention paid to the requirements and preferences of buyers and consumers. This approach results in unwanted product (wrong timing, quantity, quality) being foisted onto markets, with inevitable loss of value. We sought through this project to reverse that mindset: consumer requirements (and hence market demand) should become the starting point for ‘pulling’ product through the chain.

Factors affecting industry change

Several significant international and domestic changes and trends have affected the fortunes of the citrus industry within the life of this project. We mention some of these changes here because they have significantly influenced the directions of our activities:

Weather events: after 6 years of devastating drought, a changing weather pattern in 2010 brought humid conditions and flooding to the main south eastern citrus production regions. This change caused direct damage and hardship to growers in Queensland, and to a lesser extent in the Riverina. It also resulted in changing pest pressures, most notably the massive increase in fruit fly numbers which occurred in the Riverina and Sunraysia regions from 2010 onwards, which have threatened the trading arrangements for citrus from those regions. It has been necessary for our project team to assist with initiatives to manage these issues.



Citrus Australia assisted with Queensland flood recovery in February 2013 by maintaining market confidence in the remaining crops and by pushing for government assistance

Exchange rate: the strengthening Australian dollar, which peaked at a record high of US\$1.10 in 2012, had far reaching effects on the industry. Primarily it resulted in much reduced returns from export markets, which in turn resulted in more of the citrus crop being diverted to the domestic market, with inevitable over-supply problems. The negative effect on returns and cash flow has affected the ability of many growers to apply management best practice, to adopt new technologies and to change their variety mix. At time of writing, the falling dollar is providing a glimmer of hope, but it will take a considerable lift in grower returns over several years for their accumulated losses to be recovered, and to return the industry to a sound footing.

Production and supply chain costs: labour costs on farms and in packing sheds, already the highest in the world, continued to steadily rise as the minimum wage was raised each year. Electricity is a key energy requirement for irrigation pumping and packing shed operation, and significantly increased charges have taken their toll on grower returns. Increased freight costs due to the carbon tax and other renewable energy impositions have impacted on industry profitability. As with the exchange rate issue, this lack of profitability has meant that our activities and recommendations have been tailored heavily towards greater cost efficiencies.



Increases in electricity charges have had a major impact on irrigation pumping costs

The Asian Century: recognition of the huge market potential of Asian economies has occurred at a government level, and at an industry trade level. New markets, particularly in China, South Korea and Thailand, offer a lifeline to the industry's export sector. The challenges of supplying these markets are multiple, including reliable delivery of preferred quality, competition from other

competitors, and compliance with quarantine and food safety regulations. Our project has heeded these new directions, and has focused increasingly on boosting trade into Asia. Our market access activities have focused directly on relieving technical quarantine barriers, and advising the industry on protocols which will provide them access. But we have also taken a broader approach to Asian market development, by facilitating trade missions to key markets and supporting trade fairs.



Trade development efforts will help make China one of our largest citrus export markets: Judith Damiani and Andrew Harty meet with the DAFF agricultural counselor in Beijing, Rob Williams, and senior officials from the Chinese quarantine division (CIQA), November 2012

Industry rationalization: like many other agricultural industries around the world, the Australian citrus industry has continued its relatively rapid transition from multiple, small-scale units to fewer large-scale entities. Vertical integration has accompanied this consolidation, with many citrus operations now encompassing orchard production, packing and marketing. Overseas investment in Australian citrus operations is still relatively new, but two of our largest farming operations and our biggest packing shed now have significant foreign stakeholders.

By contrast, the traditional family citrus farm now finds itself under several threats, often including lack of succession plans, inefficiencies of scale, and lack of capital to make necessary

changes and improvements. Managing an industry-wide market development program which attempts to serve all sectors of the industry has required flexibility and innovation.



The Australian citrus production base is consolidating into fewer, larger units

Variety development: as with all horticultural industries, the citrus variety mix forms the foundation of our industry's production base. The race to develop better citrus varieties has continued unabated here and elsewhere in the world. The challenge to Australian citrus growers has been in following large-scale consumption trends (such as the moves to easy peel convenience and seedlessness) while also identifying varieties which fit high-value market windows, are relatively low cost to produce, and which are not hampered by unmanageable royalty and marketing restrictions. This project has sought to provide information to the industry in its decision making on new varieties, with the goal of achieving sound investment for growers from their new plantings.



Development, evaluation and planting of new varieties continues to change our citrus market offer: growers sampling new citrus varieties in Leeton, July 2011

Industry structural change: during the course of this project, unprecedented structural changes have occurred in citrus industry governance, and remain ongoing. The Riverina state board was disbanded, and the grower entities in South Australia (Citrus Growers of South Australia and the South Australian Citrus Industry Development Board) were wound up. Murray Valley growers were polled on the remaking of their state board in 2012, with a narrow majority agreeing to retain the structure. The peak industry body continued to unify the industry at a national level, while maintaining strong regional representation through establishment of advisory committees in Queensland, Riverina, South Australia and Sunraysia. Against this backdrop, the market development team has often faced significant challenges in dealing with industry issues which often cut across these industry divisions. Nevertheless, at a working level, we have generally succeeded in maintaining good relationships with IDO and extension staff in each region, and have kept industry politics at arm's length in the national projects in which we are involved.

*With all these changes, challenges and opportunities in mind, the one over-riding concept which has remained constant throughout our project is **value chain thinking**. We have endeavoured to follow the simple principle that 'pull' of products within our industry must come from delivery to market of citrus fruit (or juice) of sufficient quality that attracts purchasers. We have attempted to drive that recognition by embarking on the lengthy process of instilling a quality culture into our industry.*

Project Resources

Following the employment of Andrew Harty as General Manager Market Development (GMMD) in February 2010, the first major activities of this project were the establishment of two fundamental cornerstones:

- A national market development team of skilled staff to engage with industry on market development issues, implement initiatives, and achieve meaningful outcomes for the industry.
- National issues committees, to advise the board of Citrus Australia on key problems and opportunities facing the industry, and to drive the broad direction of this project.

Market development team

At the start of the project, 3 staff were employed or contracted by Citrus Australia as Value Chain Co-ordinators (VCCs). This title was created to distinguish these new roles from those of Industry Development Officers (IDOs) and to emphasise a fresh focus on the entire value chain, rather than simply being production focussed. Each VCC retained their previous regional grower liaison roles but was also allocated a national market sector responsibility, with position descriptions and work plans developed for each VCC to reflect these dual roles:

<i>VCC</i>	<i>Region</i>	<i>National responsibility</i>
Kym Thiel	South Australia	Export market
Nathan Hancock	Western Australia	Market information
Helen Ramsey	Western Australia	Domestic market

Initial co-funding arrangements in this project were very complex, and involved lengthy negotiations due to the multiple parties involved: Citrus Growers of South Australia; South Australian Citrus Development Board; Fruit West; the Department of Agriculture & Food Western Australia; Horticulture Australia Ltd; and Citrus Australia.

During the course of the last 3 years, this team has been revised many times, in terms of both personnel and roles, but always with the goal of better aligning project resources with specific

industry needs. These changes have required project variations from HAL, and have resulted in a more robust and focused project.

The main changes which occurred were:

- Nathan Hancock was relocated from Perth to Mildura in 2011, and was appointed Market Information & Quality Manager, with responsibility for supporting the Domestic Market Committee.
- Nathan subsequently also took over management of the new Australian Citrus Quality Standards project (CT12004).
- Helen Ramsey became sole VCC for Western Australia in 2011, providing industry support and activities under the guidance of the Citrus Leadership Group of Fruit West.
- This role was then developed into a separate Fruit West project with HAL in 2012, with Bronwyn Walsh filling the new IDO role in WA. We maintain our strong ties with market development in this region, with Nathan Hancock sitting on the steering committee for this project.
- The South Australian Citrus Industry Development Board withdrew their funding support for the project in 2012, at which time Kym Thiel's role was reduced from fulltime to 0.7 FTE. Kym moved from support of the Export Market Committee to supporting the Variety Committee.
- In March 2013, Kym resigned from this position, but recruitment of a new VCC will begin after 1 July 2013 with the signing of a new market development project contract with HAL (CT13022).
- In Queensland, after consistent advice from industry, we reallocated funding (which had been set aside for a 0.5 FTE VCC position) to the region's most pressing need, the development of new fungicides. This work was contracted out to agencies in Queensland and has progressed successfully over the past season. The GMMD remains closely involved in guiding the direction of this research.
- With the establishment of a stand-alone citrus market access project CT12005, David Daniels was appointed Citrus Market Access Manager in 2012.

As CT09055 reaches completion, the structure of the market development team is shown below:

Time allocation of Citrus Australia team to market development projects in 2013				
	<i>Andrew Harty</i>	<i>Nathan Hancock</i>	<i>SA VCC</i>	<i>David Daniels</i>
CT13022 Market Development	1.0		0.7	
CT12004 ACQS		0.5		
CT12005 Market Access				1.0
CT11011 Residue Monitoring				
CT13023 Market Information		0.5		
CT13034 Biosecurity				

NB: Andrew Harty (GMMD) has no time allocation to any projects other than CT13022, but will maintain management oversight of the other 4 Citrus Australia projects, and a close advisory role with CT13034 Biosecurity. The new SA VCC position has yet to be filled, but will be supported by a voluntary contribution from the South Australian regional advisory committee.



*The citrus market development team in March 2013
From left: Andrew Harty, Kym Thiel, Nathan Hancock, David Daniels*

Issues committees

Export market and domestic market committees were established in 2010, and a variety committee was formed in 2011. Each consisted of 7-8 skilled industry members, chosen for their experience, passion and industry vision. Regional representation was not a key selection criterion but was included where possible. Young industry members were also invited to join each committee, to provide fresh perspectives and capacity building. The HAL citrus industry services manager has been invited to attend committee meetings. A Citrus Australia VCC supported each committee by arranging meetings, and taking minutes. A Citrus Australia director sat on each issue committee to provide a direct line of communication between the board and the committee.

Each committee was issued with terms of reference, and their membership and effectiveness was reviewed internally and by the board of Citrus Australia in 2011. Each committee has met 3-4 times annually, and has held additional teleconferences and email consultations. Minor changes to membership have occurred over the life of the project. The membership of these 3 committees in 2013 is shown in Appendix 1.

Key issues for each committee have been:

- Export market: market access
- Domestic market: quality standards; promotion programs
- Variety: breeding programs; rootstock and variety evaluation; grower information

These committees have functioned well, and have been an essential aspect of this project. They have clarified where we should and should not allocate effort and resources; they have provided useful advice on how objectives should be tackled; and most critically, they have always kept us focused on the over-riding goal of improving grower returns.



The Domestic Market Committee discussing citrus quality with Melbourne wholesale marketers



The Variety Committee inspecting new variety plantings in Leeton



The Export Market Committee observing sample preparation in a residue testing laboratory

Key Project Activities

Our main activities can be divided into 10 key areas:

- Export market development
- Domestic market development
- Variety development
- Orchard production issues
- Market information
- Agrichemical issues
- Biosecurity
- R&D planning & implementation
- International linkages
- Communications

We report here on our main activities within each of these areas.

Export market development

Market access

Our technical market access activities have been described in detail in the final report of our market access project CT10023 and will not be reported further here, except to say that all the time input into CT10023 by Citrus Australia staff was funded via CT09055. Major activities were the two Vapormate trials conducted in 2011 and 2012, in which Kym Thiel played a key role.

Trade development

Besides technical market access, we have helped organize and participated in three trade missions:

- Korea, Japan and Hong Kong market study trip, September 2011
- Thailand and Korea trade mission, February 2012
- China trade mission, November 2012

The Victorian DPI market access team was the main driver behind the 2012 events, and we have developed a strong working relationship with this team.

The China trade mission in November 2012 included our participation (Judith Damiani & Andrew Harty) at the China Fruit & Vegetable trade fair in Beijing. We used our meetings with Chinese quarantine officials to push for improvements to our citrus quarantine protocol.

This was a hugely valuable and eye-opening event, and has prompted us to think seriously about developing a China Strategy for our industry. Clearly China will provide a major new market for our Class 1, high-value product and we need to pull out all the stops to develop it as quickly as possible. While improving the difficult market access protocol is an obvious key activity for our new market access project CT12005, we also need to take a more in-depth approach to market development in China other than simply attending trade fairs. Citrus Australia has begun talks with a recognised China trade expert, David Thomas from Think Global (<http://bricandchina.com/>) on developing such a strategy, and how we can engage our industry in this process. We have booked David to be a keynote speaker at our Leadership Forum in October 2013.

Export market coordination

Changes to the Export Efficiency Powers in 2012 meant that citrus exports are now almost completely deregulated. The remaining transition measures are two statutory committees administered by HAL, the Citrus to China committee (which sets minimum prices for oranges into China) and the Citrus to USA committee (which sets minimum prices for all citrus varieties into the USA). We participated and provided advice on the establishment of these two committees, and sit on their regular teleconferences as observers.

At the request of industry, we also set up two voluntary price recommending groups, both under ACCC exporter group exemptions. The Japan Export Group consists of all the major exporters to that market (approximately 95% of the trade) and has met at the start and throughout each season by teleconference to agree on minimum prices for each size and grade shipped to Japan. We also collected weekly shipping data from each of the participating exporters, and reported the collated total back to the group. For the 2013 season, we have also established a Mandarin Export Group, which provides a similar forum but in this case for mandarins exported to all markets. To assist with price benchmarking, we have purchased access to a detailed, weekly, Chinese wholesale market report.

Riverland value chain analysis

Kym Thiel was a key member of a PIRSA-led team that analysed the citrus value chain in the Riverland. Although this year-long study covered all markets, its most useful recommendations were focused on the improving quality of product to export markets, in particular Japan. A detailed report (CT10029) was distributed to the South Australian industry.

Domestic market development

Quality standards

One of Citrus Australia's key goals is to increase citrus consumption in Australia. The Domestic Market Committee has identified two key objectives to achieve this goal:

- Improving the citrus eating experience for consumers
- Promoting the positive attributes of citrus to consumers

To address the first objective, our Domestic Market Committee recommended in 2010 a program for establishing national standards for citrus maturity, based on sugar levels, acidity and juice content. The committee also recommended that compliance by industry to these standards should be monitored. With strong and widespread support from industry, Citrus Australia then established the Australian Citrus Quality Standards Program, and began applying it in the 2011 citrus season.

Industry was widely consulted on the quality standards, and a set of national specifications (the Australian Citrus Quality Standards) was defined following extensive feedback from throughout the value chain. These standards were circulated to all sectors of the industry – growers, packers, wholesalers and retailers. To train the industry in maturity testing techniques, we developed a training manual and DVD. Nathan Hancock also began an extensive series of practical demonstration workshops, an exercise which has been repeated over the past 2 years where required.



Nathan Hancock demonstrates Brix and acid testing procedures to Gayndah growers & packers, one of many training demonstrations held throughout the industry

Starting in late 2011, we began a market testing activity in which samples were collected from wholesale markets in each capital city and tested for internal quality. The test results were distributed weekly to all sectors of the industry (including the wholesale and retail markets), identifying the marketer and grower/packer, and highlighted any failures. This report has been very pivotal to altering industry's attitude to quality standards.

As we enter into the second full season of market testing in 2013, this market testing exercise is clearly raising awareness of eating quality. The program has impacted the entire supply chain with practice change observed at orchard, pack house, wholesale and retail levels.

In 2012, the industry identified the ACQS program as a key objective in its new 5-year levy investment plan (Objective 2.1.1 *Implement a national quality standards program to improve eating quality*) and a stand-alone project CT12004 is now in progress. The objectives of this project include:

- Identifying and implementing better mechanisms for achieving industry compliance to the Australian Citrus Quality Standards (ACQS).
- Comprehensive monitoring of compliance to the standards at orchard & packing shed level, and in the market place.
- Ensuring that the quality standards set by the ACQS program will significantly improve consumer repeat purchase, by aligning the standards with international and Australian sensory evaluation results.
- Evaluating easier technical methods for measuring quality attributes.
- Exploring ways in which citrus growers can improve internal quality through orchard management techniques.

Market engagement

The market development team has strived to develop strong linkages with wholesale and retail marketers of citrus, with the aim of sharing information on consumer preferences and trends, market dynamics, quality issues, seasonal volume supply, and promotion programs.

We have developed good relationships with the main supermarkets (Woolworths, Coles and IGA) and have also worked with alternative retailers such as the burgeoning on-line distributor Aussie Farmers Direct. In the wholesale sector, we visit each capital city market at least 3 times annually. These marketer meetings have provided us with valuable insights into the sales end of our value chain, and prompted us to keep our activities very market-focused.

In 2012, we participated in a series of supermarket-industry workshops facilitated by HAL. The first two (with Woolworths and Coles) have been completed and have proved valuable in defining common goals on which we can work together. A third workshop with Aldi is planned for August 2013.



Judith Damiani, Andrew Harty and marketing manager Simon West meet with the Aussie Farmers Direct team in 2011: a key outcome was a major promotion of bagged oranges by AFD which helped relieve the glut of small fruit in the 2011 season.



Woolworths citrus buyer Malcolm McLean explaining citrus retailing issues with industry delegates on the Citrus Australia 2011 conference market study visit



The market development team assisting with orange promotions in Sydney and Melbourne in 2011

Assisting import program rationalisation

Australia has an open trade policy with most countries, and as a major exporter of citrus, we also allow citrus imports from approved countries. In 2012, there were 27,000 tonnes of citrus imported, mostly oranges and lemons, and primarily from the USA. Generally there is no major competition with domestic crops due to counter-seasonality. But there is often a serious clash between domestic and imported lemon supply in the summer months.

An excessive lemon import program in 2010/11 resulted in serious losses not only for domestic growers and packers, but also for importers and retailers. At the request of industry, the market development team sought to prevent this glut situation occurring by surveying domestic growers on their estimated lemon supply in the 2011/12 summer, and distributing this information to importers and retailers. This succeeded in achieving a more orderly, smaller import program in that season, and the exercise was repeated again in 2012/13 with equal success.

Our discussions with the citrus buying teams of the major supermarkets have included ways in which the switch-over from imported to domestic orange supply in autumn can occur more smoothly. Our crop estimates have helped assure retailers that import programs can be curtailed in good time for the start of strong domestic supply.

Variety development

The market development team spent much time organising a series of variety change workshops, which were held in March 2013 in the Riverland, Sunraysia and the Riverina. With almost 200 growers and other industry people attending, we clearly touched a nerve with these workshops and will now seek to maintain the momentum of variety change. The March-April edition of ACN featured an article on these workshops, and we have distributed the workshop booklet and DVD to those unable to attend.

Behind the scenes, we have continued to use our Variety Committee to drive and support variety change, by adding focus and urgency to variety and rootstock evaluation projects, investigating new varieties grown in countries such as Japan, Korea and China, and continually pushing nurserymen and growers to use high-health propagation material supplied by Auscirus.



*Kym Thiel discusses top working & new orchard development with Riverland growers
March 2013*

Andrew Harty also spent considerable time working with HAL and CSIRO on a salvage plan for the southern region breeding program. This has been a long and convoluted exercise, which after two years has still not been finalized. Andrew also visited the Queensland breeding program in Bundaberg on two occasions, and maintains close contact with breeder Malcolm Smith.

Orchard production issues

During this project, the market development team tackled two major production issues: crop regulation of navel oranges; and the dry fruit problem in Imperial mandarins.

Navel crop regulation

A major navel orange crop failure in the 2009/10 season rang alarm bells that trees would deliver a huge return crop in 2011, with concurrent small fruit size. We therefore worked with industry and state government research & extension staff in the 2010/11 growing season to develop a crop regulation program for the Tri-state growing regions which would alleviate this problem.

After an initial team meeting in Mildura in April 2010, we embarked on a series of information exercises: magazine articles throughout the growing season explaining the available management tools; a crop regulation management calendar inserted into the Australian Citrus News; and many crop regulation workshops held around the growing regions.

Although the overall crop in 2011 was heavy, and had on average significantly smaller fruit size, those growers who carefully applied the management program reported significant improvements in fruit size and farm gate returns in 2011, and better return crops in 2011/12. After a further growing season with further applied management practices, it is now pleasing to see the national navel cropping pattern settle into a far more balanced situation.



Crop regulation team meeting at Citrus Australia offices, Mildura, in April 2010

Imperial dryness

The Imperial mandarin is the flagship variety of the Australian citrus season, and is much loved by Australian consumers. However, the variety has an inherent problem which causes it to produce dry fruit in some seasons under some growing conditions. Lack of juice in citrus fruit is very unappealing to consumers, and anecdotally we are aware of many consumers who have been disappointed by dry Imperials.

In 2011, we coordinated a series of workshops throughout the main Imperial growing regions (Queensland, the Riverland and Sunraysia), informing growers of the seriousness of the problem, and suggesting practices which could reduce the incidence of dryness. We highlighted the work of Queensland DAFF researcher Helen Hofman, and included presentations from the Queensland breeder Malcolm Smith on alternative varieties and rootstocks, and from Taste Technology on NIR grading of dry fruit.

Nathan Hancock has continued to drive this issue through magazine articles, and his work with the Australian Citrus Quality Standards Program. He also coordinated a meeting in the Central Burnett in May 2013 to plan research trials into growing practices which potentially exacerbate the problem.



The range of Imperial juiciness, from fully juicy (left) to very dry (right)

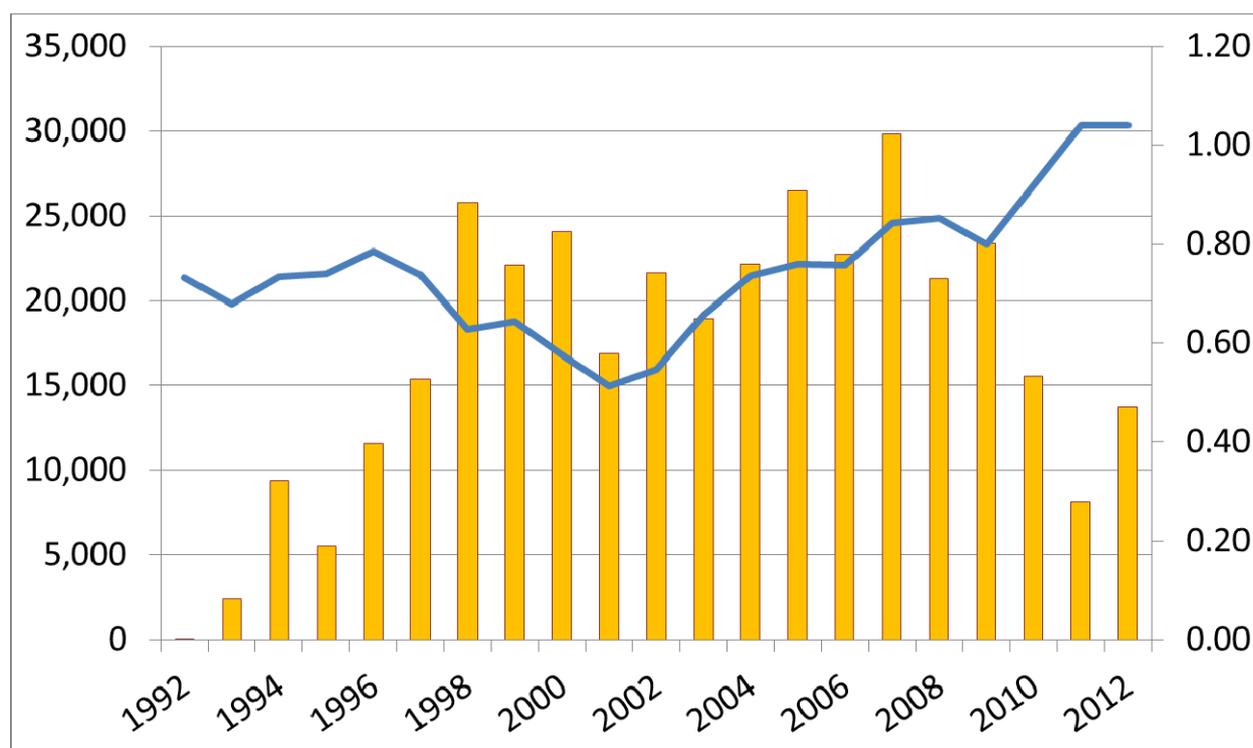
Market information

For the past 3 seasons, Nathan Hancock has managed our InfoCitrus project, which collates weekly dispatch volumes from packing sheds around the industry. This project has been extensively described in the final report of CT09034.

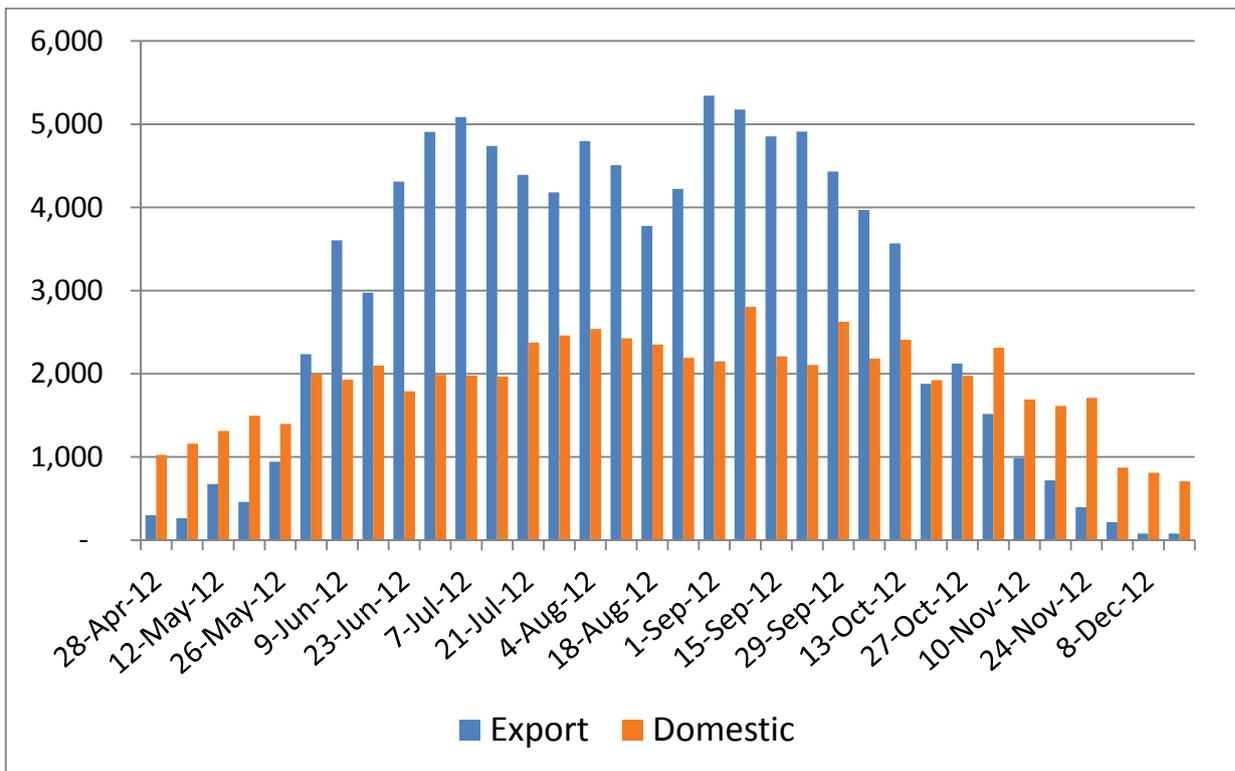
A national citrus plantings database update was executed in 2011, with the assistance of the Murray Valley Citrus Board. Nathan Hancock coordinated information gathering from all other regions. This exercise was described in the final report of CT10035, and has provided a database which has guided many of our medium-term industry decisions.

We collated national crop forecasts in each of the years 2010, 2011 and 2012, with the assistance of regional state boards. With the demise of the Riverina and Riverland state boards, Citrus Australia coordinated an interim national crop forecast project (CT12020) for the 2013 season.

We have used these various sources of data, and export market statistics from MT12009, to analyse industry trends, threats and opportunities, and have presented these at various industry forums and conferences. Two examples are shown below:



Navel orange volumes (left axis, gold bars: tonnes) exported to the USA from 1992 to 2012, in relation to the exchange rate (right axis, blue line: A\$/US\$) and the arrival of Chilean navels in 2009. This graph provides a succinct analysis of the two key factors which led to a decline in orange trade into the USA.



Weekly navel orange dispatches (tonnes) to export and domestic markets in the 2012 season. Assuming a sustainable weekly demand on the domestic market of 2,000 tonnes, it is apparent when oversupply occurred, and also the critical need to maximise export volumes.



Citrus Australia coordinated crop estimates in the Riverina and Riverland in 2013

Agrichemical issues

Horticulture Australia has identified agrichemical issues to be one of the key challenges facing the horticulture industry in the next 10-20 years. The number of agrichemical products available for use in the production chain will almost certainly decrease, and yet pest control challenges will rise and phytosanitary quarantine requirements for export markets will increase. Although the citrus industry has a strong record of integrated pest management, with minimal pesticide usage, food safety concerns in domestic markets and importing countries will continue to rise, while the ability to test horticultural produce for agrichemical residues is already dramatically increasing in volume and precision.

Against this backdrop of greater agrichemical residue awareness, we initiated three projects to better prepare the value chain for these upcoming impacts:

Strategic agrichemical review process

In 2011 we coordinated a Strategic Agrichemical Review Process (SARP) to ensure that industry remains compliant with domestic and international food safety requirements while still retaining an agrichemical range which provides effective pest & disease control. Stage 1 of the SARP was completed in November, with 16 technical experts from different regions and sectors of the industry participating. Stage 2 consisted of AgAware Consulting (Peter Dal Santo) collating all comments into a draft report and returning to participants for their revisions, then preparing the final report. This document informs industry of the gaps in citrus agrichemical use most urgently needing research effort. A revision of the citrus SARP is planned for August 2013, to catch up with developments that have occurred here and in export markets over the past 2 years.

New fungicide evaluation

At the request of industry in Queensland, we allocated funding (previously earmarked for a half-time VCC position) to a program to identify and screen new fungicide options for mandarins. This program was planned to deliver new chemistry which would ensure effective control and compliance with food safety requirements. We have coordinated this program with Andrew Miles from Queensland DAFF to identify candidate fungicides which met 3 criteria: efficacy against the two main diseases (*Alternaria* and citrus black spot); not from the same resistance groups as current chemistry; and having acceptable maximum residue limits (MRLs) in our main export markets.

This project has progressed well, with spray application being contracted to local consultancy Bugs for Bugs, under Dr Miles' guidance. First results are expected in the 2013 season.

Throughout this process we consulted extensively with the Queensland industry to ensure we were remaining on course with their requirements. They have given us a clear message that development of new fungicides remains their top regional priority, and should take precedence over regional VCC services. We obtained a project variance to cater for this industry preference, and have guided the application for a stand-alone project (CT13020) which will complete this research.

Registration of Rovral (iprodione) is progressing well, with residue and efficacy trials underway in the Central Burnett. Citrus Australia coordinated the voluntary funding of these trials by Queensland growers, and contracted the service provider (Crop Research Ltd). The APVMA requires these trials to run over two seasons, and we successfully applied for a VC project on behalf of the Central Burnett citrus grower associations to cover the costs of Year 2 (VC funding for Year 1 was not available due to the funding cap being reached).



Identifying new fungicides which control fungal diseases such as citrus black spot remains a key priority for the Queensland citrus industry

NRS citrus residue monitoring program

In 2011, Citrus Australia initiated an agrichemical residue monitoring program for Japan citrus exports, utilising the services of the Department of Agriculture, Forestry & Fisheries - National Residue Survey (NRS). This pilot program was in response to excess residues detected in Japan on Australian oranges in 2010, which posed a serious threat to ongoing trade in our largest export market. The pilot had good industry support, with the six major exporters participating in the program (representing around 85% of the export trade) and submitting 150 samples for testing. The goal of the program was achieved: there were no agrichemical breaches on Australian oranges in Japan in the 2011 season.

We continued this program in the 2012 season, under a new stand-alone project CT12006. The number of participating exporters was increased to 13, and the number of samples tested to 238. Unfortunately, there were 3 MRL breaches in Japan, due to marginally excessive applications of postharvest fungicide. However, all test results were 100% compliant with Australian MRLs. In the upcoming 2013 season, 17 exporters are now participating with 350 samples estimated. We have also expanded the program to cover all markets, domestic and export.

There are significant market advantages for the Australian export industry in having a robust national food safety program in place, with inter-governmental recognition. Indonesia, Korea, Taiwan, Hong Kong and Vietnam have all begun revising their food safety programs and already in one instance (Indonesia) the issue of agrichemical residues has threatened ongoing trade. This program proposes to continue and expand the monitoring program over the next 3 seasons. Brochures explaining the program and listing the agrichemicals tested for will be translated into 6 Asian languages to cater for our main export markets.



The Symbio Alliance residue testing laboratory has been contracted to provide testing services for the NRS citrus program

Biosecurity

Citrus growers have ranked biosecurity as their joint top R&D priority together with market access. Our main roles in this area have been twofold: assisting Riverina growers in controlling the extensive outbreak of Queensland fruit fly that has affected their region since 2010; and helping develop a national biosecurity project under Plant Health Australia's management. We have also supported our industry's high-health budwood program, Auscitrus; and discussed post-entry quarantine with DAFF.

Riverina fruit fly campaign

We assisted the formation of Riverina Biosecurity Incorporated, and Andrew Harty remains a member of the executive committee of RBI. We put much effort into helping RBI develop a business case for their fruit fly campaign, and helped with the recruitment process for a campaign coordinator. In July 2012, we organised, promoted and funded a series of 9 workshops across the region, in which fruit fly expert Dan Papacek explained the basic concepts of trapping, bait spraying and male annihilation technique. We produced a brochure and posters showing the 3-step management process, and followed up these events with articles in Australian Citrus News.

In March 2013 we again supported and presented information at a series of Riverina pre-season meetings which aimed to spur on the bait spraying activities of growers in the region.



We showcased the Riverina fruit fly campaign in two winter editions of Australian Citrus News in 2012

National citrus biosecurity project

We were actively engaged in the planning and structure of the new citrus biosecurity project, CT13034. Key objectives of this project are:

- Appointing a dedicated part-time citrus biosecurity manager
- Providing Emergency Plant Pest Response Deed training to all relevant sectors of the industry
- Clarifying the owner reimbursement costs framework
- Organising industry-driven pest incursion simulation exercises
- Producing Version 3 of the Citrus Industry Biosecurity Plan and Version 2 of the Citrus Orchard Biosecurity Manual
- Revising the contingency plan for huanglongbing and its vectors
- Providing biosecurity awareness training throughout all growing regions
- Completing grower & stakeholder surveys after years 1 and 3 of the project.

This project began on 1 June 2013, and a first step will be the formation of an industry steering committee, in which we will participate.

Auscitrus

Support for Auscitrus has featured heavily in our events and publications. We included an Auscitrus session in our 2012 conference field trip, and also at our new variety days in March 2013. Several articles have been published in ACN, extolling growers and nurserymen to only use high-health Auscitrus budwood when propagating new orchards. We have maintained a close working relationship with the Auscitrus board of directors and management.

Post-entry quarantine

A delegation from the Variety Committee met with Department of Agriculture employees to discuss citrus post-entry quarantine procedures at Eastern Creek, Sydney, in 2011. Citrus budwood can pose a serious biosecurity risk if infected with viruses, and the main point of our visit was to assure ourselves that adequate and efficient processes were being adhered to. With DAFF resources for PEQ currently being revised and relocated, we need to keep a close watch to

ensure that robust but timely quarantine services are in place for imported citrus budwood. We also received a report from Border Security on the high number of interceptions of citrus material on inbound passengers in our international airports, which is a serious ongoing biosecurity concern.



Members of the Variety Committee met with DAFF quarantine staff at Eastern Creek, Sydney, in 2011

R&D planning & implementation

During this project, we have assisted with the planning and effective implementation of the new citrus industry 5-year levy investment plan (2012-17). Andrew Harty played a key role in the planning committee which developed the R&D plan in consultation with industry. After 2 years of consultation, development and drafting, the Australian Citrus Strategic R&D Plan 2012-17 was finally approved by the HAL board in February 2013, with the following comments:

- That the consultation with stakeholders was exceptional and very inclusive;
- That the plan is transparent and considered the broad diversity of the citrus industry's production systems, supply chain channels and markets;
- That the plan has an emphasis on growing demand for citrus through exports;
- That the plan is strongly dependant on increasing the levy and in the current environment this would be challenging;
- That the targets set out within the plan were ambitious but achievable if industry supported the plan.

To assist with implementation of the plan, we:

- Consulted with HAL, the Industry Advisory Committee and the National Horticultural Research Network to develop a program approach to citrus research funding;
- Coordinated with NHRN on the running of round table discussions with researchers to formulate robust program structures;
- Assisted in developing and delivering an awareness campaign to increase national levies to allow implementation of these programs;
- Maintained strong links with providers of research and extension services in industry priority areas.

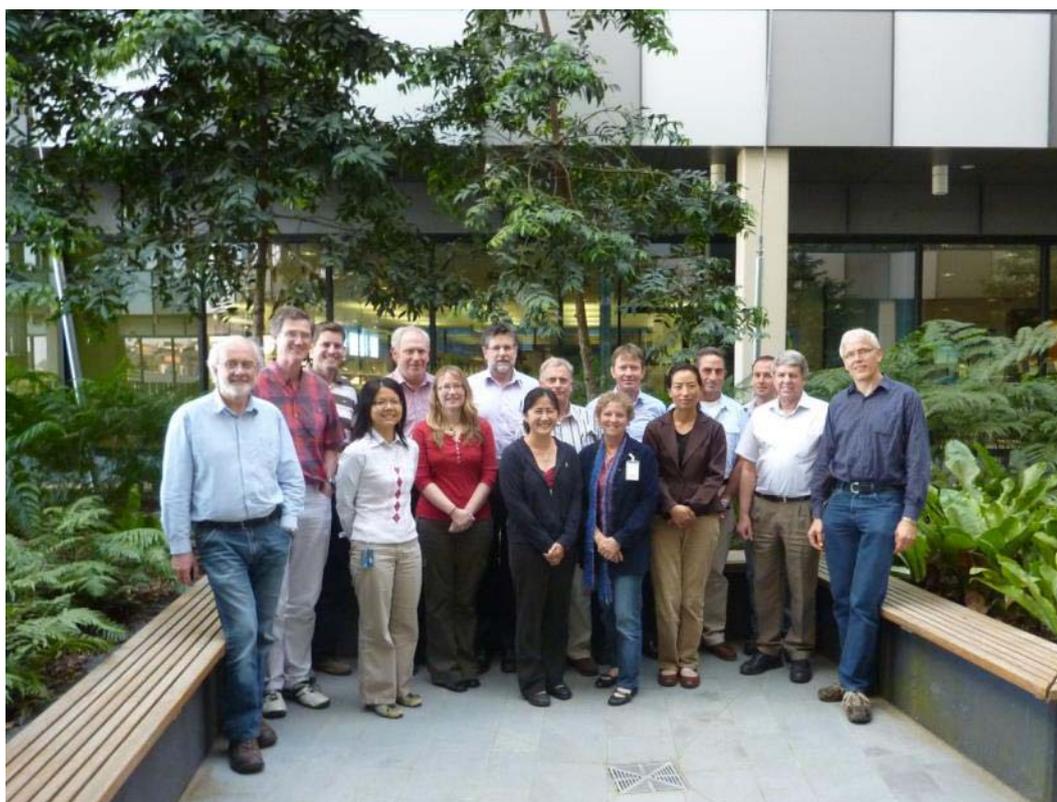
We participated in several meetings and teleconferences with HAL, the IAC and NHRN to establish a mechanism for developing cohesive citrus research programs. We presented a joint paper to the IAC, recommending a process for achieving program development in a transparent manner. In line with this proposal, two workshops were held in 2012: a postharvest disinfestation workshop and a citrus pathology workshop. From these events, project outlines were developed for submission to the HAL November 2012 call. Inter-agency cooperation was stipulated as a key requirement of these project proposals.

We have met individually with many researchers during the life of project to suggest and facilitate citrus research, especially in the areas of fungicide evaluation, breeding, variety evaluation and postharvest disinfestation.

In the lead up to the HAL project proposal call in November 2012, we assisted several researchers in developing their proposals. This was a voluntary arrangement – those who chose to take up the offer were assisted. The key aim of this assistance was to ensure that project goals aligned with (a) the 5-year R&D strategic plan, and (b) the two R&D workshops held on postharvest disinfestation and citrus pathology.

Project development in the citrus pathology area worked well, with two distinct proposals put forward which no longer overlap, but which each cover discrete areas of pathology: virology (related to high-health planting material for productive new orchards) and production pathology (related to disease-resistant varieties, evaluating new fungicides, and market access issues).

Project development in the postharvest disinfestation area unfortunately did not work as well. Despite indications at the workshop that collaboration between agencies would occur, the resulting proposals did not demonstrate a strong level of cohesion, and these proposals will require significant revision.



Researchers and industry representatives met in Brisbane in 2012 to plan a coordinated citrus pathology program

Andrew Harty participated in the IAC's R&D reference group, which had responsibility in February 2013 for checking all 23 levy-funded project proposals for their scientific merit. This exercise aided the IAC in deciding which projects would need revision of their methodology. It did not decide which projects should be funded by the IAC.

Note that in none of the above activities by the market development team was there any direction given or decisions made based on funding of research projects. During the R&D reference group exercise, Andrew Harty vacated the room while Citrus Australia projects were discussed.

R&D levy increase

The relatively low citrus R&D levy (compared to other industries here and around the world) remains the 'elephant in the room' preventing sustained levels of research in our industry. The levy rate of \$2.00/tonne has remained unchanged for almost 20 years. At each of our industry meetings during this project, the issue of a R&D levy increase was raised, but the common response has been 'things are too tough and it is not the right time for an increase'. The re-instatement in 2012 of the Murray Valley Citrus Board for another 4 year term will unfortunately make it significantly harder to achieve a levy increase as growers in that region are continuing to pay \$5.50/tonne in MVCB levies.

Nevertheless, at a time when technical solutions are desperately needed to solve key industry problems, we need additional investment in R&D. Another dollar per tonne of levy would generate an additional \$1.2m funding, sufficient to drive another 5-6 significant research projects.

International linkages

Our citrus industry is relatively small compared to others around the world, and we have much to gain and learn by forging linkages with international citrus producers. Besides our trade missions, we have also explored opportunities to informally share technical and market information with counterparts and colleagues in other countries.

Specific activities we have undertaken include:

- A visit to Jeju Island, South Korea, in 2012 to meet with Korean citrus growers, packers, marketers and industry associations, with the aim of exploring market access opportunities for mandarins.
- Together with the California Citrus Quality Council, we arranged two teleconferences with researchers in California, Australia and New Zealand to share information on Fuller's rose weevil control (FRW is our key quarantine pest).
- Andrew Harty participated in the Citrus Research International biennial symposium in South Africa in August 2012.
- The market development team led a study trip of 16 industry members to Spain in 2012, with the main focus being the International Citrus Congress in Valencia.
- We arranged the itinerary for and hosted a visit by Spanish fruit fly research company Probodelt in 2013, to investigate alternative fruit fly baiting and trapping options.
- We arranged the itinerary for and hosted a visit by the Kan-non Yama company from Japan, with the aim of sharing variety information and access.
- We hosted a visit by a major Peruvian citrus grower, Horacio Berios, in 2012.
- We hosted a visit by the president of the Chile Citrus Committee, Juan Enrique Ortuzar, in 2012.
- Participated in several visits by Californian citrus growers and gained valuable information on varieties and quality standards.



An Australian citrus industry delegation meeting with the Korean National Agricultural Cooperative Federation at Jeju, South Korea, in February 2012



Citrus Australia led a study trip of 16 citrus growers, nurserymen, packers, processors and marketers to Spain in November 2012

Communications

Maintaining excellent two-way communications with industry has been a critical aspect of this project. The market development team was heavily involved in many different communication vehicles to industry, including the national industry magazine (Australian Citrus News), our website and e-newsletters. The team also initiated, coordinated and made presentations to industry at conferences, regional and issues-based forums, and grower workshops.

Specifically, we provided key support to the following events:

- Three national citrus conferences, in 2010 (Hervey Bay, QLD), 2011 (Barossa Valley, SA) and 2012 (Leeton, NSW)
- Annual regional forums in each of the main production areas (Queensland, the Riverina, Sunraysia, the Riverland, and WA)
- Two export forums, in 2011 and 2012 (both in Melbourne)
- Workshops in each major production region on fruit maturity testing, in 2011 and again in 2012
- Four workshops on the dry Imperial mandarin problem in 2011, in each of the four main regions
- Workshops on market access, postharvest treatments and crop regulation were also jointly delivered with other state agencies.



We organised two well-attended export forums which were held in Melbourne in 2011 and 2012



Citrus Australia board members, CEO and GMDD communicating with a major grower in Western Australia during the regional forum circuit in 2013



Nathan Hancock addressing the 2012 Leeton regional forum on the Australian citrus quality standards program

Two Riverland Young Grower groups were developed by Kym Thiel during this project, one centred around Waikere and the other around Loxton. Both groups held several successful meetings over the past two years, including a joint field trip in July to investigate future prospects for Afourer mandarins in the region.



Kym Thiel established and coordinated events for two Young Grower groups in the Riverland, including this Afourer mandarin field day in July 2012

The Australian Citrus News was one of our most powerful means of communicating information to industry. Our team formed the core of the ACN editorial committee, which was responsible for planning the content in each edition. The list of articles we contributed are listed in Appendix 2. These 107 articles serve as reports for the many workshops, forums and conferences that we organised.

In 2012, we began producing e-News, an on-line fortnightly newsletter containing brief reports on topical issues and events. The market development team have been regular contributors to e-News.

Outputs

The market development team either developed completely or made major contributions to the following outputs:

- Market development reports to each meeting of the board of Citrus Australia
- Meeting minutes of the Export Market, Domestic Market and Variety Committees
- Notes from weekly DNE teleconferences
- Notes from Japan exporter group and mandarin export group teleconferences
- Australian Citrus News - 107 articles (see Appendix 2)
- Multiple e-News items
- Australian Citrus Quality Standards manual, DVD and specification sheets (2011 & 2012)
- Australian Citrus Quality Standards market reports
- Citrus Fruit Size Management Calendar & Checklist
- Fruit fly management brochure and poster
- NRS Citrus Residue Testing Program brochures, 2011 and 2012 versions
- Australian citrus export information brochure (bilingual Chinese & English)
- Citrus Australia Regional Forum & Variety Day 2013 booklet
- Riverland citrus industry value chain analysis (CT10029)
- Australian Citrus Strategic R&D Plan 2012-17
- Final reports for HAL projects CT12700 (study trip to Spain); CT10043 (new approaches to citrus market access pests); CT10023 (citrus market access & maintenance).

Outcomes

This project has succeeded in its initial aims, which were to use value chain concepts to instil a quality culture into the Australian citrus industry, and to boost consumption on the domestic and export markets.

Specific outcomes include:

- The citrus domestic market value chain is now aware of, trained in, and generally attempting to comply with the Australian Citrus Quality Standards. This is a huge shift from 3 years ago, when most of industry paid lip service to maturity standards and eating quality of their products. This change from a sole focus on fruit size and external appearance will require more years to become completely embedded into the value chain, but we are very pleased with progress to date. This project has spawned a stand-alone ACQS project which will expand and strengthen the program.
- Market access remains a key priority for export market development, and there has been considerable trade volume increases into new high-value markets over the past 3 years. In addition, trade into markets which were accessed partially through our efforts in this project have shown strong growth: trade into India has expanded from 803 tonnes in 2010 to 4,061 tonnes in 2012 (a 405% increase), and trade into Indonesia has expanded from 5,506 tonnes in 2010 to 10,493 tonnes in 2012 (a 90% increase). Trade to the Philippines will commence in the 2013 export season, and is expected to increase over the next 3 years as market channels are established. This project has led to the development of a stand-alone market access project, with a fulltime citrus market access manager appointed. This is a first for any horticultural industry in Australia, and demonstrates our industry's commitment to boosting export trade.
- Agrichemical residue monitoring across the industry has increased significantly in the life of this project. The numbers of participating exporters and tests has more than doubled since inception of the NRS program, and it now covers all of our markets. This foundation will place the industry in a sound position when confronted with increasingly stringent residue monitoring here and overseas. The 100% compliance to Australian MRL requirements of the 238 tests conducted last year is a powerful metric for bolstering the food safety reputation of our industry. The stand-alone residue monitoring project generated from CT09055 will provide another 3 years of food safety assurance for our industry.
- The new 5-year strategic R&D plan for the citrus industry provides a far more focused and tightly prioritised blueprint for levy fund investment. Implementation of this ambitious plan under the circumstances of stagnating levy income will be challenging, but we have shown that a more targeted and coordinated program approach to developing research projects can work.

- Our orchard issues work with industry has led to greater understanding of two topics which have vexed the industry: the alternate bearing, small fruit problem in navel oranges; and the dry fruit problem in Imperial mandarins. Although we have by no means solved these issues, there is far greater awareness of the tools available to tackle these problems.
- Natural disasters, pest outbreaks and other major events will continue to occur sporadically, affecting our industry in adverse ways. Our efforts in helping the Riverina industry to setup a fruit fly control campaign, and assisting the Queensland industry through the floods of 2013, are examples of a flexible market development team moving resources and developing skills to deal with unpredictable circumstances. These activities are difficult to foresee and write into project proposals, but will be an essential part of the new market development project CT13022.
- Finally, we believe that our extensive network of committees, reference groups and multiple individual growers, packers, exporters, researchers and other industry service providers has formed a robust foundation for improved industry communications and consultation. Our progression from print media to electronic media will make our communications more efficient and timely.

Project achievements & evaluation

We began this project in 2010 with only a very broad brief derived from the IDNA in 2009. It was important to consult at the start of the project with industry to define the specific activities they wished us to undertake. This consultation and prioritisation process has occurred through two main conduits: our three advisory committees, and the new 5-year strategic R&D plan.

Market development framework achievements

The R&D plan now defines where industry wants to head in the next 5 years, and this project has developed all its activities in alignment with the plan. After 3 years, we have developed 6 new projects which all fall under the citrus market development umbrella, and which directly fulfil priorities of the 5-year plan:

CT 13022	Driving citrus industry success through a coordinated market development program – Stage 2
CT12004	Australian Citrus Quality Standards Program
CT12005	Driving citrus exports through improved market access
CT11011	Agrichemical residue monitoring program for Australian citrus exports
CT13023	Delivering robust citrus market information for a more competitive industry
CT13034	Protecting Australia’s citrus industry from biosecurity threats

Within CT09055, we have also achieved and maintained two key requirements of the original project brief: 3 advisory committees; and a qualified market development team.

Project evaluation

- Advisory committee self-evaluation: an anonymous survey of our 3 committees was completed in 2011. Results are shown in Appendix 3. The overall response was satisfactory, and minor recommendations were taken on board and implemented.
- A phone survey of industry stakeholders was completed by HAL industry development portfolio manager Richard Stephens.. There was overall satisfaction with the project, with the exception of reported friction and dissatisfaction from the South Australian Citrus Industry Development Board. SACIDB was an initial VC contributor to the project, but later dropped out, and was subsequently wound-up by the SA agriculture minister during 2012.

- A BCA of the CT09055 was carried out by HAL business manager Ravi Hegde in June 2011 . It was estimated that, under the assumptions stated, each dollar worth of investment would generate benefits worth \$2.16 at 7% discount rate.

Benchmarking

Going forward to the second stage of this project (CT13022), we can provide some benchmarks which will help evaluate the success of the new project:

- Advisory committee self-evaluation: an anonymous survey of our 3 committees will again be conducted during CT13022, with the aim of demonstrating ongoing or improving satisfaction of the committee participants.
- ACQS program: a report card of the 2012 quality testing results was published in the February-March 2013 edition of Australian Citrus News. This report card will be produced annually, with the aim of showing improved compliance with the ACQ Standards.
- Agrichemical residue monitoring program: an annual analysis and report of testing results will be used to measure success of the program. In 2012, the 238 samples submitted by 13 companies showed 100% compliance with Australian MRLs. For each of the years of the new project CT11011, we will compare number of participants, number of samples submitted, and the level of MRL compliance.
- Market information: this project contains several KPIs, including delivery of timely annual crop forecasts, 3-yearly plantings database updates, and weekly InfoCitrus crop volume reports.
- Biosecurity: this new project includes industry surveys at the start and end of the project to evaluate industry awareness, level of training, and satisfaction in the biosecurity program.

Recommendations

- The broad aims of this project should be extended into CT13022, and a strong market development team deployed to tackle the new challenges which will inevitably arise.
- Specifically, a replacement for Kym Thiel should be recruited to provide industry development services to Riverland growers.
- An industry steering committee should be formed to guide this new project, and should include a member of the South Australian advisory committee.
- The GMMD should provide a management connection between all the related projects which have developed from CT09055: market access, ACQS program, and NRS residue monitoring.
- The new biosecurity project CT13034 will require considerable input and oversight from the GMMD and the citrus market access manager.
- Linkages should be strengthened with extension personnel, and technical advisers and employees in every sector of the industry.
- International linkages should also be strengthened, by attending overseas conferences and maintaining ties with researchers and technicians in other citrus industries.

Acknowledgements

We would like to acknowledge the excellent and widespread assistance we have received from the Australian citrus industry in driving this project. In particular, we are very grateful to the members of our three issues committees, who have given so generously of their time, experience and advice. The chair and board of directors of Citrus Australia have given unfailing support, assistance and guidance over the past 3 years, for which we are most appreciative. We thank the other staff members of Citrus Australia for their support, and in particular our CEO Judith Damiani, who has provided superb oversight and management of our team.

Appendix 1

Citrus Australia Issues Committee Members - March 2013

First name	Surname	Company		Industry Role
Export Market Committee				
Neil	Offner	Citrus Australia	Director	Exporter/Marketer
Ferdi	Bergamin	Mildura Fruit Company		Packer/Exporter
Brett	Jackson	Seven Fields		Grower/Packer/Exporter
Mark	Chown	Fellsdale Pty Ltd		Grower
Bindi	Pressler	2PH Farms		Grower/Packer/Exporter
Richie	Roberts	AgriExchange		Grower/Packer/Exporter
Allen	Jenkin	Ironbark Citrus		Grower/Packer/Exporter
Andrew	Harty	Citrus Australia	Chair	Staff
David	Daniels	Citrus Australia	Support	Staff
Domestic Market Committee				
Greg	Dhnaram	Citrus Australia	Director	Marketer
Marcus	Scott	Mildura Fruit Company		Packer/Exporter
Frank	Mercuri	Pacific Fresh		Grower/Packer
Dean	Morris	Willyama Grove/Moricom Orchards		Grower
Michael	McMahon	Abbotsleigh Citrus		Grower/Packer
Cathy	Lowe	Amaroo Orchards		Grower/Marketer
Andrew	Harty	Citrus Australia	Chair	Staff
Nathan	Hancock	Citrus Australia	Support	Staff
Simon	West	Citrus Australia	Support	Staff
Variety Committee				
Ben	Cant	Citrus Australia	Director	Grower/Packer/Marketer
Kevin	Parr	Glengrove Orchard		Grower/Packer
Steve	Burdette	AgriExchange		Grower/Packer/Exporter
Graeme	Sanderson	NSW DPI		Researcher
Bill	Robinson	Mildura Fruit Company		Grower/Packer/Exporter
Mano	Babiolakis	Global Produce		Marketer/Exporter
Tim	Herrmann	Auscitrus		Nursery
Andrew	Harty	Citrus Australia	Chair	Staff
Kym	Thiel	Citrus Australia	Support	Staff

Appendix 2

Citrus Australia market development contributions to Australian Citrus News

April/May 2010

- Industry warned to stop immature fruit hitting market early.
- Domestic Market Committee attacks key issues.
- New Export Committee focus on market access and competitor analysis.
- 2011 navel season is shaping up to be a large crop of small fruit
- Citrus specialists plan crop regulation strategies.
- Understanding the causes of uneven citrus cropping.
- Value Chain Co-ordinators support industry's market development.

June/July 2010

- Japan grants access to grapefruit from non-fruit fly free areas.
- Citrus Fruit Size Management Calendar & Checklist.
- A balanced crop is a profitable crop.
- Growers recognize the need to 'manipulate' crops now!

August/September 2010

- Red scale alert.
- Increase your returns by growing less?
- Boosting consumption with better tasting fruit.
- Navel fruit thinning: another chance to increase fruit size.

- Citrus industry plans improvement to quality of Imperial mandarin.

October/November 2010

- Lessons from Asia Fruit 2010.
- US export season challenging.

December 2010/January 2011

- Imperial forums continue to arm growers with key management clues.
- Export Market Committee forging new directions for 2011.
- Conference ranked first-rate by delegates.
- New National Quality Standards producing higher-valued, better tasting citrus.
- Final results from vital research project revealed at Field Day.
- A close-up insight into QLD's growing techniques.
- Export to Asia in 2011 by knocking out Fuller's rose weevil now.
- Hand thinning – is this our last chance to avoid a big 2011 crop of small fruit which loses money?

February/March 2011

- Competition, high \$A leaves exporters looking for markets.
- Export forum labelled a success!
- The cook, the bartender and the junior chef – 3 times the promotion value for Aussie mandarins.

April/May 2011

- Citrus Australia gathers industry input for new R&D plan.

- Export Forum - what has happened since?
- Better citrus quality achievable thanks to the Australian Citrus Quality Standards.
- 2011 National plantings database underway.
- Fungicides in Queensland.
- 2011 citrus outlook for heavier crops with smaller fruit size.

June/July 2011

- Quality standards report receives majority support.
- Field trip seeks out latest information on post-entry quarantine & budwood indexing facilities.
- Citrus market access update.
- Growers told that crop regulation is a 'must'.

August/September 2011

- Growers urged to know their R&D plan.
- Aussie Orange Week pulls out all stops.
- Testing proving a quality advantage.
- Information projects yielding results.
- Aussie Farmers Direct joins citrus campaign.

October/November 2011

- 2011 export season marred by strong Australian dollar and flood of small fruit.
- Aussie citrus – what's our point of difference?
- Export committee focus on greater market access.

- Up close & personal with Korean & Japanese export markets.
- Peru – the new South American powerhouse for citrus exports.
- Asia Fruit Logistica powers ahead in 2011.
- Prepare your orchard now for Korea, Thailand & China markets.

December/January 2011/12

- 2012 domestic market – strong focus on managing oversupply.
- Research continues to drive citrus variety and rootstock development.
- Balance your crop load now.
- Summary: Draft strategic R&D plan 2012-17.

February/March 2012

- Floods take toll on Riverina trees.
- Normal citrus tonnages expected in 2012.
- Quality standards to be beefed up in 2012.
- Regional forums – consult growers on reducing duplication, costs & uniting the industry.
- 2012 Citrus Export Forum sets the direction for citrus.
- Growing export opportunities in Thailand & South Korea.
- Citrus industry on a mission.
- Sunraysia exporters find market opportunities.
- Giant Spanish eyes review opportunities in Aussie citrus.
- Time to think about GA application.

April – May 2012

- What's the story with early season navels?
- Playing tough with quality is working.
- Granulated Imperials: how do they rate?
- Don't underestimate the power of pruning.
- What is your nursery tree costing you?

June-July 2012

- The war against fruit fly.
- Riverland growers sharing the 'load'.
- Global eating quality standards prove sweet fruit sells.

August – September 2012

- Riverina growers embrace fruit fly workshops.
- Late season mandarins capture market potential.
- Orchard management practices critical in reducing granulation.
- Explaining 'winter yellows'.

October-November 2012 (an entire edition dedicated to R&D)

- The link between R&D and orchard profitability.
- Pathology experts plan priority projects.
- Finding R&D solutions globally..South Africa.

December-January 2012/13

- Citrus market access takes a new role.
- Future market opportunities need GA focus.
- 2012 Citrus Conference gets top marks.
- Challenges ahead for Australia's navel industry.
- China's doors of opportunity for Aussie citrus.

February-March 2013

- Philippines access offers exporters new lucrative market.
- Qfly awareness – emerging in the Riverina.
- QLD floods still reap quality citrus.
- Kym takes a citrus break.
- Quality standards report card: progressing well, but needs improvement...
- BrimA: offering a 'sweeter' option for testing Aussie citrus.
- Citrus learnings from Spain.

April/May 2013

- Full house for 2013 variety day road shows.
- Citrus top working.
- Transition and investment – citrus looks to the future.
- 2013 national citrus crop forecast.
- Quality standards 2013 – adjustments made to balance flavour.

- Export market compliance stressed at national packhouse workshops.
- Japan ups ante on food safety standards.

June/July 2013

- Riverina growers adopting Qfly control.
 - Exporters anticipate an ‘interesting’ season.
 - Concerns remain over 2013 trade to Indonesia.
 - Navel taste panels launched in Perth.
 - Biosecured – protecting the industry’s production base.
 - R&D focus on better fungal disease control.
 - Emperor brown spot fungicide closer to being registered.
 - Replanting – best practice and soil improvement for optimum growth.
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Appendix 3



Survey Response: Domestic Market Committee

September 2011

Response rate: 7/8

Committee performance	Excels	Performs well	Satisfactory	Needs some improvement
Committee meetings are effective & time is used efficiently		57%	29%	14%
The committee debates issues in an open, focused & constructive manner	29%	57%		14%
The committee evaluates past successes and failures & monitors progress of current activities		14%	57%	14%
The relationship between committee members & Citrus Australia staff is constructive and productive	14%	71%	14%	

Chair performance	Excels	Performs well	Satisfactory	Needs some improvement
The Chair leads and facilitates the committee in a professional and proactive manner	43%	43%		14%
The Chair promotes members input, discussion & encourages shared understanding of matters	43%	43%		
The Chair ensures important information is distributed to members outside of meetings and on critical areas	29%	57%		14%

Are there any skills that the committee is lacking?

- I think the committee has a good range of people on there at the moment however most of them are grower & packers, I would like to see maybe someone from Woolworths or Coles on there.
- Generally all areas are covered, industry, growing, packing, marketing and wholesaling and, while not directly involved anymore, good knowledge of retailing also in the current committee members.
- Retail skill.
- Perhaps a customer on the committee rather than people that think they know what the customer wants e.g. a retailer.

Comments relating to the Chair's performance

- This is one person we can't afford to lose.
- I think Andrew Harty is invaluable in chairing these meetings.
- Andrew's done a great job in the chair, he conducts meetings very well and his knowledge and experience helps to keep the meetings heading in the right direction.
- Engages all members and encourages everyone to give their view.

Comments relating to the overall performance of the Committee and suggestions for improvement

- I know it's expensive to have meetings but it would be good to meet every quarter.
 - I feel the committee consists of members who are genuinely interested in improving the performance of our industry. I also believe there is a good representation of growers from various regions who are willing to share their ideas and valuable experiences.
 - I think the committee has performed very well and this has shown to be true with the introduced new National maturity standards, which is a massive step forward for the citrus industry, this never would have got off the ground otherwise. Very important to keep moving forward though, the committee needs to keep coming up with fresh ideas, thinking outside the square and do all it can ensure the profitability of the industry.
 - Generally, with Simon's help, the committee is making good progress. It's important that all attendees consider the entire industry and not just protect their turf.
 - I feel the committee has worked well on issues of standards, not sure if it performs well on marketing initiatives.
 - Difficult to gauge how decisions made and implemented by this committee have helped the overall sales of fruit. If you don't live in the city you don't hear the promotional blurb. The committee itself is a diverse range of people in different roles within the industry.
-

Survey Response: Export Market Committee

September 2011

Response rate: 5/6

Committee performance	Excels	Performs well	Satisfactory	Needs some improvement
Committee meetings are effective & time is used efficiently		60%	40%	
The committee debates issues in an open, focused & constructive manner		60%	40%	
The committee evaluates past successes and failures & monitors progress of current activities		40%	40%	20%
The relationship between committee members & Citrus Australia staff is constructive and productive	20%	20%	60%	

Chair performance	Excels	Performs well	Satisfactory	Needs some improvement
The Chair leads and facilitates the committee in a professional and proactive manner	20%	40%	40%	
The Chair promotes members input, discussion & encourages shared understanding of matters		80%	20%	
The Chair ensures important information is distributed to members outside of meetings and on critical areas	20%	60%	20%	

Are there any skills that the committee is lacking?

- I believe the committee should be more active.
- Well balanced committee - from North to South and mandarins and oranges.
- Maybe a city-based exporter would be good.

Comments relating to the Chair's performance

- I wonder if the Chair should be from the committee not CA staff but this comment is in no way against the current chair but I would like to raise the topic.
- Excellent Chair.

Comments relating to the overall performance of the Committee and suggestions for improvement

- I think as a first committee it has worked well however there is a lot of work in this area and all members need to contribute. Perhaps the committee should have its own full time staff member to concentrate only on market access and improvement and meet more regularly with structured outcomes to measure our performance.
 - The committee has a useful purpose to be a reference group for government and as a consultation point for wider industry issues. Representation is adequate, a larger committee may become more bureaucratic and cumbersome.
 - Face to face meetings should not always be in the South!
 - Meet more in the off-season in workshop style meetings where there is no deadline with regards to time and a bigger agenda can be put to members.
-

Survey Response: Variety Committee

September 2011

Response rate: 7/7

Committee performance	Excels	Performs well	Satisfactory	Needs some improvement
Committee meetings are effective & time is used efficiently	14%	86%		
The committee debates issues in an open, focused & constructive manner	29%	57%	14%	
The committee evaluates past successes and failures & monitors progress of current activities		71%	14%	14%
The relationship between committee members & Citrus Australia staff is constructive and productive	43%	57%		

Chair performance	Excels	Performs well	Satisfactory	Needs some improvement
The Chair leads and facilitates the committee in a professional and proactive manner	57%	43%		
The Chair promotes members input, discussion & encourages shared understanding of matters	14%	86%		
The Chair ensures important information is distributed to members outside of meetings and on critical areas	14%	71%	14%	

Are there any skills that the committee is lacking?

- I feel that there is a broad scope of knowledge on the committee.
- No, well balanced, representing various areas of the citrus industry viz. CAL, Auscitrus, leading state dept., nursery, marketing, varietal evaluation, orcharding, biosecurity.
- The role & function of the committee is still evolving. We do appear to have the correct balance of skills at this stage but should review in a year's time.

Comments relating to the Chair's performance

- The Chair has shown to have an enthusiastic approach to issues and has handled himself in a professional manner.
- Very professional in all areas.
- Well-rounded approach with excellent knowledge.
- Runs meeting well and covers issues of concern. Is moving the committee forward in a logical manner to provide worthwhile outcomes for the industry. May need to delegate some responsibilities to committee members for action between meetings.
- I am very happy with the communication by the Chairman.

Comments relating to the overall performance of the Committee and suggestions for improvement

- I feel that the committee has now found its feet in the issues at hand and has proven a great benefit in issues raised to its attention.
- I commend the performance of the committee so far, it has a very good blend of experience and skills necessary to advise on all variety issues.
- A well balanced mixture of experience and expertise in production citriculture, marketing and industry representation. The ability to hold 4 meetings in a relatively short period and have high attendance of the majority of members illustrates the commitment and professionalism of the group. The committee has the opportunity to drive and support structural change within the industry through recommendations on allocation of levy derived financial resources. The passage of time will evaluate the success of the committee and its ability to influence change.
- Good skills based committee.
- May need to have teleconferences to maintain momentum.
- I suggest we set key industry objectives as directed by the CAL Board so that we can be measured on our performance & delivery of results on an annual basis.

