Horticulture Innovation Australia

Final Report

Australian Almond Industry Conferences 2013 to 2015

Jo Pippos
Almond Board of Australia (ABA)

Project Number: AL12702

AL12702

This project has been funded by Horticulture Innovation Australia Limited with co-investment from the Almond Board of Australia (ABA) and funds from the Australian Government.

ISBN 978 0 7341 3940 5

Published and distributed by:
Horticulture Innovation Australia Limited
Level 8, 1 Chifley Square
Sydney NSW 2000
Tel: (02) 8295 2300
Fax: (02) 8295 2399

Content

Summary

The Australian Almond Conference (AAC) is a three-day event dedicated to the Australian almond industry and provides industry members and stakeholders with an opportunity to gain further information from Australian and international experts on the latest research and techniques to work through issues affecting the industry.

The development and presentation of an informative and effective program that addresses key research issues and focuses on providing updated information on the industry and future outlook is the primary goal of the Conference Committee. The AAC provides opportunities for all sectors of the industry to discuss current issues, whilst providing a forum for interaction and networking. Sessions are designed to encourage growers and other industry representatives to interact with presenters and sponsors.

The Conference program incorporates presentations, key-note speakers, workshops, trade exhibitions and networking opportunities across the three-day program. Conference participants include grower research/ R&D levy payers, the full industry supply chain, industry participants and service providers including members of the R&D community.

Project Objectives

The objectives of the Australian Almond Conference are to:

1. Provide an opportunity for networking by a broad range of industry members from across the supply chain and service providers to the industry, including R&D providers.
2. Encourage and facilitate discussion and education regarding key industry topics and challenges, including pollination, plant improvement, water availability, economic outlook, productivity and market outlook.
3. Provide an effective forum to inform levy payers on the almond industry R&D Program, with specific presentations on the key Horticulture Innovation Australia Ltd research projects.

Target Audience

This Conference is the premier event for the Australian almond industry, bringing together delegates representing 90% of total Australian production, and 99% of processing and marketing. The whole supply chain of the Australian almond industry attends along with valued members of the research community, government and major input suppliers

Project activities

Key activities from project AL12702 have been;

- Australian Almond Industry Conferences held in 2013, 2014 & 2016

Key Outputs

The outputs associated with the project have been;

- Organising and conducting the Australian Almond Conference, hosting industry delegates including researchers, growers, suppliers/ sponsors, staff and speakers
- The presentation of more than 30 research posters as part of Conference poster sessions
- The delivery of over 80 presentations as part of the official conference proceedings
- Review and extensive updates on industry specific topics including keynote speakers from California
- The generation of media articles and Conference reviews published in In A Nutshell (see appendix)
- Proceedings of each AAC distributed to delegates and placed on the ABA website.
- Numerous formal and informal meetings between industry stakeholders, researchers and HIA staff.

Key Outcomes

The outputs from the Australian Almond Conference 2013-2015 project have been;

- Networking by a broad range of industry members from across the supply chain and service providers to the industry, including R&D providers and HIA staff
- Facilitated discussion and education regarding key industry topics and challenges, including market development, hulling and shelling, plant improvement, pollination, food safety, pest management and economic outlook
- Well informed levy payers on the Almond Industry R&D Program, with specific presentations on the key HIA research projects.
- A well-presented industry to the wider community in a professional setting
- Shared industry knowledge between growers and other industry professionals leading to more informed decision making and prioritisation of future research projects
- Building and maintaining key relationships with international researchers and industry representatives

Recommendations

Future choice of Australian Almond Conference venue will continue to be evaluated to ensure adequate space is available for plenary sessions, conference exhibitions, social events and catering. With exponential increases in delegate numbers during the project period it was decided by the ABA Conference Committee to move the AAC to a city venue as it became increasingly difficult to source regional venues that could accommodate all conference requirements. The move proved to be a positive step for the event, with record numbers of growers, delegates and attendees participating at each event.

Whilst it is essential to have a venue able to cater for larger delegate numbers, social events and sponsor exhibition space, a key factor in arranging a successful conference is the early planning of the conference program and choosing effective, informative and respected speakers for the attendees. Speaker invitations sent to potential presenters early in the programming phase ensure that the conference program will be interesting, relevant and timely to issues surrounding the almond industry, growing season, climactic conditions as well as help with internal budgeting, delegate and speaker travel arrangements and the availability of key speakers.

Relevant conference speakers and technical experts from overseas and outside of the industry are a valuable inclusion by growers to the conference program, and the committee has discussed and decided to continue to invite relevant expert panel members and speakers to each conference.

During 2015 the ABA Conference Committee discussed and agreed to alter the timing of the AAC to a biennial event, with an Almond Research & Development Forum and associated field day to be conducted in every off-conference year.

It was agreed by the Committee that the Research & Development Forum will enable industry to converse with researchers, network and provide an ideal opportunity for collaboration/conversations across the supply chain and between researchers and industry. This Forum will become the principal event for growers and industry to hear dedicated research information and outcomes from ABA projects and industry research providers, whilst the Australian Almond Conference will remain dedicated to presenting Australian and international updates covering many aspects of almond growing and key industry issues such as: water and irrigation management; pollination; pest control; biosecurity; domestic and international marketing activities and strategic planning.

Keywords

Almonds; conference; research; development; growers; industry; collaboration; innovation; communications; dissemination

Introduction

Serving as a centre for communication, the Australian Almond Industry Conference (AAC) offers presentations on almond production related topics that directly impact growers' decisions and activities in the orchard and marketplace. With technical experts from across the globe, Australian almond growers and allied industry members gather for the only conference in Australia dedicated entirely to the almond industry.

The programs of the Australian Almond Conference held in 2013, 2014 and 2016 included presentations covering all aspects of the almond supply chain and featured both Australian and international presenters. The Conference is one of the best opportunities for processors and growers to sharpen their knowledge to foster the long-term sustainability of the industry. The highlight of the information-transfer calendar, each program included both international and domestic keynote speakers presenting key industry issues and R&D project updates on topics such as:

- Production: orchard design; rootstocks; varieties; pollination, irrigation; nutrition; pest and disease control; soil health; robotics and automation; harvest technologies; on farm dehydration and storage; carbon efficiency; and quality assurance.
- Processing: hulling; shelling; packaging; phytosanitary requirements; food safety; new products and quality assurance.
- Marketing: domestic & export including nutrition research; market analysis; market development and market access.
- Operating Environment: economic updates; Australian Almond industry statistics (plantings, production, sales); climate change, water availability; biosecurity; labour.

Conferences also include the addition of interactive and digital media such as video segments in presentations, pre-recorded video presentations from eminent researchers throughout the world's almond community. This enables attendees to access information and resources and promotes better technology transfer to delegates through more interactivity. Videos and links to digital media presentations are uploaded to the ABA's website and social media channels including YouTube, Facebook & Twitter to help extend the reach of the information presented at each Conference.

Each Conference program included opportunities for industry networking and interaction, social events including a welcome reception and Conference dinners that featured recognition of outstanding industry contributors and prominent guest speakers.

In June 2013, an 'Activated Almonds Forum' was held with an invitation to all industry stakeholders to attend. The Forum was a great success with over 75 industry stakeholders attending and has grown to numbers in excess of 150 participants. During 2015 the ABA Conference Committee discussed and agreed to alter the timing of the AAC to a biennial event, with an Almond Research & Development Forum and associated field day to be conducted in every off-conference year.

The Research & Development Forum will provide a more informal event enabling industry to converse with researchers, network and provide an ideal opportunity for collaboration/conversations across the supply chain and between researchers and industry. It is envisaged that the Forum will become the principal event for growers and industry to hear dedicated research information and outcomes from ABA projects and industry research providers, whilst the Australian Almond Conference will remain dedicated to presenting Australian and international updates covering many aspects of almond growing and key industry issues such as: water and irrigation management; pollination; pest control; biosecurity; domestic and international marketing activities and strategic planning.

Methodology

To deliver the outcomes and services of this project the ABA appoints a Conference & Communications Manager who oversees the project's delivery in consultation with the CEO, the ABA Board and ABA Conference Committee and Industry Development Staff. Other input was received from Hort Innovation via the mid-term review, conference feedback surveys to ensure the latest ideas and expertise are used to produce and deliver the project.

Prior to each event the Conference & Communications Manager develops an operating plan to guide activities that will be completed to fulfil the project's milestone objectives, including delivery of the outputs.

Conference information is developed and distributed to all growers nationally prior to each event by way of the industry publication 'In A Nutshell' and direct email blast to all known growers/levy payer's, researchers and industry stakeholders. Information was also presented at Regional Grower Meetings held in each almond growing area during the year.

The aim of the Australian Almond Conferences is to provide delegates with the opportunity of combining presentations and/or demonstrations that would be of interest and provide a variety of relevant and effective information enabling them to make informed business decisions. The development and presentation of an informative and effective program that addresses key research issues and focusses on providing updated information on the industry and it's outlook is the primary goal of the event. A broad range of relevant topics and issues are addressed throughout the program, whilst providing opportunities for delegate networking and interaction.

The 2013 Australian Almond Conference also included the last HAL Annual Almond Levy Payer's Meeting prior to the inception and change to Hort Innovation Ltd.

Articles reviewing key presentations, findings and recommendations were published in the Almond Board of Australia's quarterly newsletter, 'In A Nutshell' and are distributed to almond growers, industry members and stakeholders. This newsletter is also uploaded to the Almond Board of Australia website and available for download to any interested party.

Proceedings were distributed to all growers and delegates containing conference presentations and handouts distributed during each conference. Presentations and handouts were also uploaded to the Almond Board of Australia website and available for download.

Further articles in industry publications and general news media were borne from the conference in publications such as 'Good Fruit & Vegetables', 'Australian Nutgrower', 'Weekly Times' and 'Area News'. Copies of articles are appended to this report.

Outputs

During the key outputs from this project have been:

- Organising and conducting the Australian Almond Conference, hosting industry delegates including researchers, growers, suppliers/ sponsors, staff and speakers
- Presentation of more than 30 research posters as part of Conference poster sessions
- Delivery of over 90 presentations as part of official conference proceedings
- Review and extensive updates on industry specific topics including keynote speakers from California
- The generation of media articles and Conference reviews published in In A Nutshell (see appendix)
- Proceedings of each AAC distributed to delegates and placed on the ABA website.
- Numerous formal and informal meetings between industry stakeholders, researchers and HIA staff.

Australian Almond Conference 2013:

1. Successful organisation & completion of the 2013 Australian Almond Conference, hosting 320 delegates
2. Presentation of scientific research posters as part of the Poster Session
3. Delivery of 31 presentations as part of the official conference proceedings,
4. Presentation of the HAL Almond Annual Levy Payers Meeting, and John Lloyd presenting on the Horticulture Australia Limited Review and extensive updates on industry specific topics including keynote speakers from California
5. Generation of media releases and subsequent articles published in national publications
6. Publication of almond conference articles and reviews in 'In A Nutshell' publication
7. Conference proceedings distributed to registered delegates and uploaded to the Australian almond industry website www.australianalmonds.com.au
8. Videos and links to digital media presentations would be uploaded to the ABA's website and social media channels including YouTube, Facebook & Twitter
9. Formal and informal meetings between industry stakeholders, researchers and HAL staff.

Australian Almond Conference 2014:

1. Organising and conducting the annual conference, an event that hosted 373 registered industry delegates including researchers, growers, suppliers/ sponsors, staff and speakers
2. The presentation of 22 research posters as part of the Poster Session
3. The delivery of 33 presentations as part of the official conference proceedings, including the Annual Levy Payers Meeting, John Lloyd presenting on the Horticulture Australia Limited Review and extensive updates on industry specific topics including keynote speakers from California
4. The generation of several media articles and Conference Review in the Summer 2014 edition of In A Nutshell
5. Proceedings of the conference distributed and placed on the ABA website.
6. Videos and links to digital media presentations uploaded to the ABA's website and social media channels including YouTube, Facebook & Twitter
7. Formal and informal meetings between industry stakeholders, researchers and HIA staff.

Australian Almond Conference 2016:

1. Organising and conducting the first of the Australian Almond Biennial Conferences, an event that hosted 409 registered industry delegates including researchers, growers, suppliers/ sponsors, staff and speakers
2. The presentation of research posters as part of the Poster Session
3. The delivery of 27 presentations as part of the official conference proceedings, including an update on the Horticulture Innovation Australia Strategic Research & Development Plan for Almonds by Michael Clarke from AgEcon Plus
4. Featured research presentations from 6 international keynote speakers
5. Generation of media releases and media articles in local and national publications
6. Featured conference articles in the proceeding edition of 'In A Nutshell'

7. Proceedings of the conference distributed and placed on the ABA website www.australianalmonds.com.au
8. Videos and links to digital media presentations uploaded to social media channels including YouTube, Facebook & Twitter
9. Formal and informal meetings between industry stakeholders, researchers and HIA staff.

Outcomes

The outcomes during this project have been numerous and beneficial to the Australian Almond Industry by facilitating networking by a broad range of industry members from across the supply chain and service providers to the industry, including R&D providers and HIA staff, promoted discussion and education regarding key industry topics and challenges, including market development, hulling and shelling, plant improvement, pollination, food safety, pest management and economic outlook.

A well-informed industry and levy payers on Almond Industry R&D Programs, with specific presentations on key HIA research projects ensured that shared industry knowledge between growers and other industry professionals continually lead to more informed decision making and prioritisation of future research projects as well as building and maintaining key relationships with international researchers and industry representatives.

Key outcomes from the Australian Almond Conference 2013-2015 project have been;

- Networking by a broad range of industry members from across the supply chain and service providers to the industry, including R&D providers and HIA staff
- Facilitated discussion and education regarding key industry topics and challenges, including market development, hulling and shelling, plant improvement, pollination, food safety, pest management and economic outlook
- Well informed levy payers on the Almond Industry R&D Program, with specific presentations on the key HIA research projects.
- A well-presented industry to the wider community in a professional setting
- Shared industry knowledge between growers and other industry professionals leading to more informed decision making and prioritisation of future research projects
- Building and maintaining key relationships with international researchers and industry representatives

Industry Conferences play a critical role in ensuring world's best production systems and management strategies are put in place to maximise the competitiveness of the Australian almond industry. The Australian Almond Conference also supports a well-informed industry community including information on research projects, HIA projects, industry investment and market factors by enabling ease of communication to industry members through having an up-to-date database and email contact management tool, increased transparency and two-way information flow.

Increasing capacity to meet the challenges of industry, firstly involves knowing what the challenges will be and secondly, having a knowledge base of how the challenges can be met. Each Conference program worked on several levels to deliver these messages including:

1. High Caliber National & International Speakers linked to the almond industry in various capacities to outline challenges. These speakers included government representatives, HAL and Hort Innovation Australia staff, Almond Board of California representatives, international industry experts across soil health, irrigation, finance, pollination and growing practices.
2. Sessions that outlined importance of continuing quality as a means of meeting the challenge including speakers from NSW & VIC DPI, SARDI and PIRSA on pest & disease management.
3. Case studies from other industries to show how they met a similar challenge including Apple & Pears Australia Limited (APAL) and Meat and Livestock Australia.
4. Educating the Industry at an operational and sensory level with presentations from retailers and CSIRO.

As a result of the above, the challenge was more clearly outlined, the perspectives of the relevant agencies and governments delivered and opportunity was provided to delegates to absorb case studies and educational information which will assist them make future decisions about their own business.

Evaluation and discussion

Serving as a centre for communication, the Australian Almond Conference (AAC) offers presentations on almond production related topics that directly impact growers' decisions and activities in the orchard and marketplace. With technical experts from across the globe at each event, Australian almond growers and allied industry members gather for the only conference in Australia dedicated entirely to the almond industry.

The Conference is the best opportunity for processors and growers to sharpen their knowledge and to foster the long-term sustainability of the industry. The highlight of the information-transfer calendar, the program includes both international and domestic keynote speakers presenting the latest advances in production and pest and disease management, along with almond marketing strategies in Australia and internationally.

The 2013 event hosted a program of speakers to address new developments across the supply chain and future initiatives. International and domestic keynote speakers were invited to present the latest information and the interaction between audience and presenters drew out much valuable information and opinion. The outstanding program included the HAL Annual Levy Payer's Meeting, presentations on the advances in varietal breeding of Australian almonds, rootstock choice, food safety, pollination and storage pests, advances in tree spacing and high density orchard spacing trials.

Keynote speakers included John Slaughter, Director of Breeding Program at Burchell Nursery in California; Bruce Lampinen, Integrated Orchard Management (walnut & almond specialist) from the University of California Department of Plant Sciences; Gerald Martin, Chairman of Pollination Industry Research & Development Council and Roger Duncan, Pomology & Viticulture Advisor from the University of California Cooperative Extension.

Record numbers of growers and industry stakeholders converged on the Stamford Grand in Glenelg SA, from October 28th – 30th to attend the 2014 Australian Almond Conference (AAC) and Trade Exhibition.

The first day's program included the Annual Levy Payers' Meeting, presentations on branding and market development, the global market, nutrition, orchard robotics, hulling and shelling developments and orchards of the future, whilst the second day's proceedings included a look at pest and disease management, pollination practices and a presentation by our 2013/14 Phil Watters Award recipient, James Callipari, on his study tour of Spain.

Keynote international speakers at the 2014 event included Professor Jim Adaskaveg, Plant Pathologist, Mycologist and Epidemiologist from the University of California; Richard Waycott, President and CEO from the Almond Board of California; Tim Birmingham, Director or Quality and Industry Services from the Almond Board of California and Dr. Neal Williams, Professor of Bee Biology from the University of California's Department of Entomology and Nematology. The conference aided in the continued development of the relationship between the Australian and Californian industries.

The Conference 2016 was by far and away the most well attended event in the 17 year conference history, with 409 attendees. Registrants came from all over the globe cementing that the Australian Almond Conference is a must attend event on the horticultural calendar.

This program of speakers addressed developments across the supply chain and future initiatives and boasted the largest ever line up of international and domestic keynote speakers, presentations of the latest information. The interaction between audience and presenters drew out much valuable information and opinion over the entirety of the event.

The significant expansion of the Conference trade exhibition in 2016 boasted 37 exhibitors showcasing the latest products and innovations, with opportunities to network during the breaks, as well as a dedicated Welcome Function in

the exhibition space. The two-day conference program included 27 presentations covering many aspects of almond growing and key industry issues such as: water and irrigation management; pollination; pest control; biosecurity; domestic and international marketing activities and strategic planning.

A video address from Almond Board of California President and CEO, Richard Waycott discussed reflections on their industry, the ABC's accomplishments over the past year and what lies in store for 2017. Vernon Crowder, Senior Vice President and Senior Analyst, Food & Agribusiness Research and Advisory of Rabobank USA, covered topics including the anticipated Californian harvest of 907,000mt, the largest marketable crop in history, and how the rise of net returns to growers has led to increases in plantings over the last decade.

Presentations from international guests Blake Sanden, Irrigation and Agronomy Farm Advisor from the University of California, on "Correlation of individual tree nut yield, evapotranspiration, tree stem water potential, total soil salinity and chloride in a high production almond orchard" highlighted information from a five year fertility-irrigation study in almonds in Kern County, and Dr Itamar Nadav from Netafim introduced a comparative presentation on variable rate drip irrigation (VRDI) on winegrapes.

Gavin McMahon from the Central Irrigation Trust and National Irrigators Council and Alister Walsh from Waterfind followed, with Gavin presenting an outline of the water reforms currently being undertaken in the Murray Darling Basin and the progress that has occurred to date. Alister's presentation emphasized that water allocation outlooks for the current 2016/17 water year show the importance of a planned water management strategy, and that almond growers should know their level of water requirements for their orchard in advance and planning for these needs is essential to save money and maximise outputs for coming seasons.

Dr Gabriele Ludwig, Director, Sustainability and Environmental Affairs of the Almond Board of California, Dr Peter Boutsalis from Plant Science Consulting, and Lance Beem, President of Beem Consulting/Beem AgroSciences Corp USA rounded out the first day's presentations covering issues such as Californian Almond Sustainability and their Journey so far, Optimising Weed Control in almonds and Plant Growth Regulation and Pest Protection Strategies.

Thursday's Conference Program presented delegates with some enthusiastic and entertaining speakers. Professor Catherine Itsiopolous, Head of School of Allied Health from La Trobe University, Associate Professor Alison Coates from the University of South Australia, Lisa Yates from Nuts for Life, and Simone Austin, Accredited Sports Dietitian & Accredited Practising Dietitian began the days presentations with an informative, insightful and enthusiastic sessions on Mediterranean Diet, the Relationships between nut consumption and vascular and cognitive function, Nuts for Life and their role in supporting the Australian almond industry, and the Role of Almonds in Sports Recovery. Michael Clarke from AgEconPlus rounded out the first morning session with some early insights into the Almond Strategic Investment Plan 2017- 2022.

The most highly rated session of the 2016 Conference included presentations by Dr Gordon Wardell, Director of Pollination Operations from Wonderful Orchards USA, Ian Zadow, Zadow Apiaries and former Chair of the Australian Honey Bee Industry Council. Their presentations on The Biology Behind Preparing Honey Bee Colonies for Almond Pollination and On Property Best Practice: Timing and Management of Hives, were the talking point of the entire conference.

The final session to round out the conference included Intelligent Information Systems for Horticulture and Tree Crops from Dr James Underwood of the Australian Centre for Field Robotics, University of Sydney; Transforming Almond Orchards: Tree Architecture and Advance Production Systems from Dr Grant Thorp of Plant & Food Research Australia; Getting Useful Information for almond producers from Precision Agriculture Sensing Technologies with Dr Rob Bramley of CSIRO Agriculture and Food and finally; Evolution of Management Practices of Select Harvests & GPS Planting with

Ben Brown from Select Harvests.

By any measure each Australian Almond Conference was a success, it is our premier forum for sharing information that benefits our industry and its participants and promotes us to the broader horticultural community.

Conference feedback was gained through a number of means including interactive surveys emailed to all participants at the conclusion of each conference, telephone feedback and verbal comments. Evaluations were used to gauge effectiveness of the conference program, venue and speakers and used to make changes and improvements for future events.

Evaluations over the project life rank the conference aspects:

Evaluation Totals 2013 - 2016	Excellent	Good	Fair	Poor	Unsatisfactory	No Ans	
Org & Reg	95	66	12	2	2	1	
Venue	66	79	28	4	0	1	
AV	64	62	19	3	0	30	
Catering	49	78	41	8	2	0	
Support Staff	91	64	17	1	1	4	
Relevance	44	81	22	10	3	18	
Topics	43	80	28	7	4	16	
Structure	48	86	21	5	1	17	
Quality of Presentations	51	82	20	7	0	17	
Value for Money	44	73	31	8	1	21	
Number of Speakers & Sessions	50	84	28	11	2	3	
Length of Sessions	48	83	31	9	3	4	
Length of Conference	59	84	19	8	5	3	
	752	1002	317	83	24	135	
	33%	**43%**	**14%**	**4%**	**1%**	**6%**	**100%**

Each Conference has been deemed of the ‘best ever’ event and each included outcomes which will help to drive future direction of the Industry. The excellent feedback extended beyond delegates to the exhibitors and sponsors of each event, with all expressing strong interest in supporting future Conferences conducted using similar guidelines and management.

Recommendations

Future choice of venue will be aimed toward ensuring adequate space is available for plenary sessions, break-out sessions, conference exhibitors and for social events and catering.

With increases in grower delegate numbers it was decided by the ABA Conference Committee to move the AAC from Adelaide to Melbourne for the 2016 event. It has become increasingly difficult to find regional venues that can cater for all AAC requirements. This move proved to be a positive step for the event, with record numbers of growers, delegates and sponsors attending and participating.

Whilst it is essential to have a venue that is able to cater for larger delegate numbers and sponsor exhibition space, a key factor in arranging a successful conference has been the early planning of the conference program and choosing effective and interesting speakers for growers. Speaker invitations sent in advance have helped to ensure that the conference program is interesting, relevant and timely to issues surrounding the almond industry, growing season, climactic conditions as well as helping with internal budgeting, delegate and speaker travel arrangements and the availability of key speakers.

Relevant conference speakers and technical experts from overseas and outside of the industry continue to be a valuable inclusion by growers to the conference program, and the Conference committee has discussed and decided to continue to invite relevant expert panel members and speakers to future Conferences.

Recommendations for future events include:

- Continue to evaluate and ensure that future Conference and event venues have adequate space for plenary sessions, break-out sessions, exhibition, social events and catering.
- Providing more seating areas for delegates during break times to allow small meetings to be conducted between delegates and participants
- Continue to invite international researchers and expert industry leaders to present at each event
- Continue to provide early draft program information to industry and potential delegates to ensure adequate planning therefore maximising attendance
- Inclusion of an allied horticulture industry speaker should be planned for each Conference, with knowledge sharing and learnings from other industries fostering technology transfer
- Further inclusion of digital media (video) to programs where speaker attendance is unviable
- Additional promotion of events through ABA Social Media channels and horticulture industry publications (eg Australian Nutgrower Magazine)
- Scheduled media releases leading up to each event promoting key speakers and topics

Scientific refereed publications

'None to report'

Intellectual property/commercialisation

'No commercial IP generated'

Appendices

- **Australian Almond Conference 2013:**
    1. Conference Registration Form
    2. Official Conference Program
    3. LINK: 2013 Australian Almond Conference Presentations - http://growing.australianalmonds.com.au/conference/presentations-proceedings/
    4. Delegate List
    5. Evaluation Form
    6. Evaluation Analysis
    7. 'In A Nutshell' Summer 2013
    8. Media Release – Nominations sought for Phil Watters Award
    9. Media Release – Riverina Grower Wins Phil Watters Award
    10. Media Clippings:
        a. Weekly Times – Almonds Blossom, 16 October 2013
        b. Tasmanian Country - Almonds blossom to a record, 18 October 2013
        c. Weekly Times – Nuts on the right track, 30 October 2013
        d. Area News – Going Nuts for Almonds, 6 November 2013
        e. Australian Nutgrower Journal – Nut Industry News, November 2013
        f. Good Fruit & Vegetables – Big Issues Nutted Out, November 2013
- **Australian Almond Conference 2014:**
    1. Conference Registration Form
    2. Official Conference Program
    3. LINK: 2014 Australian Almond Conference Presentations - http://growing.australianalmonds.com.au/conference/presentations-abstracts/
    4. Delegate List
    5. Evaluation Form
    6. Evaluation Analysis
    7. 'In A Nutshell' Summer 2014
    8. Media Clippings:
        a. Weekly Times – Aussie almonds take on the world, 5 November 2014
        b. Good Fruit & Vegetables – Almond growers on market mission, 1 December 2014
        c. Australian Nutgrower Journal – Nut Industry News, December 2014
        d. Stock Journal – Aussie almonds a world favourite, 11 December 2014
- **Australian Almond Conference 2013:**
    1. Conference Registration Form
    2. Official Conference Program
    3. LINK: 2016 Australian Almond Conference Presentations - http://growing.australianalmonds.com.au/conference/presentations-abstracts-2/
    4. Delegate List
    5. Evaluation Form
    6. Evaluation Analysis
    7. 'In A Nutshell' Summer 2016
    8. Media Release – International speakers headline 17th Australian Almond Conference
    9. Media Exposure summary
    10. Media Article Summary List
- **Australian Almond Conference Evaluation Totals 2013-2016**

Today's Challenges Tomorrow's Success

15th Australian Almond Conference

Stamford Grand Hotel, Glenelg, South Australia

October 29-31, 2013

Accommodation

Stamford Grand Hotel ★★★★☆

Moseley Square/2 Jetty Rd Glenelg South Australia 5045

Stamford Grand Adelaide Glenelg Hotel is one of the best luxury accommodations in Glenelg Adelaide.

Located on absolute beachfront in Glenelg, with all the facilities and services you expect from a Stamford Hotel. Stamford Grand Adelaide Hotel is an ideal base for you to discover all that Glenelg and Adelaide has to offer.

Our Glenelg accommodation is perfect for those who are looking for a beachside location that is close to Adelaide's special events, yet out of the city!

Rates & Bookings

The Almond Board of Australia has secured the following discounted rate for our guests during the Almond Conference:

Superior City View Room - $175.00 per room, per night, room only.
Ocean View Room - $205.00 per room, per night, room only.

To receive this negotiated rate, please advise Reservations that you are attending the **Almond Board of Australia Conference** or quote the code (**TH2910**) at the time of booking. A valid credit card number will be required to confirm your reservation.

To secure your room please contact the Stamford Grand Reservations team on:
Ph: +61 8 8379 1222
E: reservations@sga.stamford.com.au

Information

Conference Venue

With panoramic views of the ocean, city and Adelaide Hills, Stamford Grand Adelaide is one of Australia's leading resort-style hotels.

Located on absolute beachfront in the popular seaside suburb of Glenelg, the five star Stamford Grand boasts 220 spacious guest rooms and suites with spectacular views. The rooms are sleek and contemporary in style, with facilities to cater to your every need. In-house facilities include two restaurants, two bars, outstanding conference and event facilities, a pool, spa, sauna and gymnasium.

Just a 10-minute drive from the airport and a 20-minute drive from Adelaide's CBD, the hotel is a short stroll to the vibrant retail precinct of Jetty Road. Catch the Glenelg tram from the hotel doorstep into the city centre, or enjoy any number of leisure activities by the beach including bike riding, catamaran sailing, shopping, cinemas, restaurants and cafés.

Terms & Conditions

Refunds & Cancellations

All cancellations must be notified in writing to the Almond Board of Australia (details below). Cancellations after June 30th and before September 1st, 2013 will incur a $100 cancellation fee. Cancellations after this date cannot be accepted, however transfer of registration to another delegate will be accepted. All refunds will be paid at the conclusion of the Conference.

Hotel Cancellation Policy

Delegates wishing to make any changes to a reservation at any accommodation provider must notify the hotel directly. Please contact your hotel for more information.

Personal Details

In registering for this Conference, relevant details will be incorporated into a participant list for the benefit of all delegates (name, email and organisation only), details may be made available to parties directly related to the Conference including venue and accommodation providers (for the purposes of room bookings only) and to inform you of future Almond Board of Australia activities.

Disclaimer

The Almond Board of Australia, will not accept liability for any injury of any nature sustained by participants or for loss or damage to property as a result of the Conference or exhibition and related events.

This initiative has been facilitated by HAL in partnership with the Almond Board of Australia and has been funded by voluntary contributions from industry.

Almond Board of Australia Inc.
ABN 31 709 079 099
9 William Street, PO Box 2246
Berri South Australia 5343

P + 61 8 8582 2055
F + 61 8 8582 3503
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

ALMOND BOARD OF AUSTRALIA

HAL Horticulture Australia

Today's Challenges Tomorrow's Success

15th Australian Almond Conference

Stamford Grand Hotel,
Glenelg, South Australia

Tuesday, October 29th - Thursday, October 31st, 2013

DELEGATE REGISTRATION

HOSTED BY:
The Almond Board of Australia

SUPPORTED BY:
Horticulture Australia

Delegate Registration

Early Bird Registration closes **Friday, 4 October 2013**

Please complete **one form per delegate** and return completed forms to:
Almond Board of Australia, PO Box 2246, BERRI SA 5343, fax to +61 8 8582 3503 or email jireland@australianalmonds.com.au

Delegate Name:

Company/Organisation:

Position/Job Title:

Postal Address:

City State: Postcode:

BH Phone: Mobile:

Email:

Conference Registration Includes

- Welcome Reception Ticket
- Entry to all Conference Sessions
- Access to Trade Exhibitions
- Morning & Afternoon Teas
- Daily Buffet Luncheons
- Conference Dinner Ticket
- Delegate Satchel & Name Badge
- Conference Proceedings CDROM

Conference Registration (Includes all events)	**Early Bird**	**Full Price**	**Tick**
Registration (ABA Member)	$ 300	$ 400	☐
Registration (Non Member)	$ 375	$ 480	☐

Single Day Registration (Does NOT include events)	**Price**	**Wed Oct 30**	**Thur Oct 31**
Single Day Registration (Please tick)	$200	☐	☐

Event Only Registration (Included only in full registration)	**Price**	**Tick**
Welcome Reception only	$ 80	☐
Conference Dinner only	$ 100	☐

If you have any special dietary requirements please indicate here:

_____

_____

To qualify for ABA Member rates each delegate must be a current financial member of the Almond Board of Australia for 2013/14 . If you have any questions in regard to your membership or registration please contact the ABA office.

Today's Challenges Tomorrow's Success

For further details regarding the Conference please contact Jo Ireland at the ABA Office on +61 8 8582 2055 or jireland@australianalmonds.com.au

Print A Copy

Submit by Email

For accommodation information please refer to section overleaf

Tuesday, October 29th

- Industry Exhibition Setup
- Pre Conference Registration
- Welcome Function

Wednesday, October 30th

- Registration
- Trade Exhibition
- ABA Annual General Meeting
- Official Conference Opening
- Annual Levy Payers Meeting
- Keynote Addresses
- Pre Dinner Exhibition Drinks
- Annual Conference Dinner

Thursday, October 31st

- Trade Exhibition
- Keynote Addresses

Payment Details

☐ Cheque enclosed for $_____
(cheques made payable to Almond Board of Australia in AUD)

☐ Electronic Funds Transfer
Acc Name: Almond Board of Australia
Acc# 040339140 BSB# 105-052 **REF: Your Surname**

Credit Card: ☐ VISA ☐ Mastercard

Card Numbers:

_____ - _____ - _____ - _____

Expiry Date: _____/_____ CCV: _____
(Credit Card Verification Number)
Last 3 digits on reverse

Card Name: _____

Signature: _____

Total Payment Due: $ 0 AUD

A confirmation email will be sent following processing of your registration. Please retain a copy of this registration form for your records.

Today's Challenges Tomorrow's Success

15th Australian Almond Conference

Stamford Grand Hotel, Glenelg, South Australia

October 29-31, 2013

OFFICIAL PROGRAM & ABSTRACTS

HOSTED BY:
Almond Board of Australia

SUPPORTED BY:
Horticulture Australia Ltd

PROGRAM SPONSOR:
Weiss McNair

Haifa delivers the future – today. Online tools and innovative software to maximise your production potential.

JOIN THE HAIFA WORLDWIDE COMMUNITY

Have your questions answered by agronomy experts

Identify nutrient deficiencies

Learn from other growers' experiences

Share your own experiences

www.haifa-group.com/registration/

SMART! SOFTWARE – 20% DISCOUNT

Exclusive to Haifa

Easy to use software calculates optimal fertiliser program for any crop under any conditions at all growth stages

Analyses fertilisation costs

www.haifa-group.com/knowledge_center/expert_sofwares/

VIEW THE HAIFA GROUP YOUTUBE CHANNEL

An ever increasing library of professionally produced informative videos. Subjects include:

- agronomical tips to growers
- plant nutrition
- fertigation and foliar nutrition applications
- technology animations

www.youtube.com/HaifaGroupChannel

AUST. ALMOND CONFERENCE 2012-2014 Platinum SPONSOR

Haifa

Pioneering the Future

Talk to Haifa Australia's Trevor Dennis and Shaul Gilan at the conference about how **potassium nitrate can mitigate the effects of chloride and sodium.**

For further information, contact your Haifa team

Trevor Dennis, Managing Director
E: trevor.dennis@haifa-group.com **M: 0400 119 852**

Shaul Gilan, Southern Agronomist
E: shaul.gilan@haifa-group.com **M: 0419 675 503**

Haifa Australia
T: 03 9583 4691
E: info@haifa-group.com
www.haifa-group.com

Contents

Information

Accommodation

The Almond Board of Australia are not responsible for any accommodation bookings for the 2013 Australian Almond Conference. All bookings/changes/cancellations must be made directly with the Stamford Grand Hotel in accordance with their accommodation terms and conditions.

Delegates wishing to make any changes to a reservation at any accommodation provider must notify the hotel directly. Please contact your hotel for more information.

Badges

Badges can be collected from the registration desk during opening hours.

Disclaimer

The Almond Board of Australia, will not accept liability for damage of any nature sustained by participants or guests for loss or damage to property as a result of the conference or exhibition and related events.

Internet

The Conference venue has facilities for wireless or cable internet services. Delegates who require internet services will need to arrange this at their own expense with their service provider or with the venue.

Insurance

Participants carry their own risk for personal injury or loss of property (including baggage) during the conference. The organisers are in no way responsible for any claims concerning insurance.

Liability

Whilst every precaution will be taken, neither the Almond Board of Australia nor the Conference Venue will accept responsibility for any loss or damage which may occur to persons or property at the Exhibition (from any cause whatsoever).

Parking

Stamford Grand Adelaide offers a range of secure and affordable parking options 24 hours 7 days a week.

Entrance and Exit is via St Johns Row.
The maximum height restriction is 1.95 metres
Valet Parking, and self parking is available

For bookings and enquiries regarding car parking please call 08 8376 1222 or email sales@sga.stamford.com.au

Personal Details

In registering for this Conference, relevant details will be incorporated into a participant list for the benefit of all delegates (name and organisation only), details may be made available to parties directly related to the conference including venue and accommodation providers (for the purposes of room bookings only) and to inform you of future Almond Board of Australia activities.

Refunds & Cancellations

All cancellations must be notified in writing to the Almond Board of Australia (details below). Cancellations of paid delegates after June 30th and before September 1st, 2013 will incur a $100 cancellation fee. Cancellations after this date cannot be accepted, however transfer of registration to another delegate will be accepted. All refunds will be paid at the conclusion of the conference.

Registration

Please see the Conference registration desk at the venue if there are any questions in regard to your registration.

Smoking

Please note that smoking is not permitted inside the Conference venue.

Almond Board of Australia Inc.
ABN 31 709 079 099
9 William Street, PO Box 2246
Berri South Australia 5343

P + 61 8 8582 2055
F + 61 8 8582 3503
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

ALMOND BOARD OF AUSTRALIA

HAL
Horticulture Australia

Welcome

Welcome to the 2013 Australian Almond Conference, our first held in a capital city with the event having outgrown the venues available in our producing regions. This year's Conference will be attended by a record number of delegates and it appears the expansion in the Australian almond industry is being reflected in the growth of the Conference.

This event is hosted by the Almond Board of Australia (ABA) and provides a forum for producers, processors and marketers of the Australian almond industry, our major suppliers and members of the research community and government.

"Today's Challenges Tomorrow's Success" is this year's conference theme. This may seem an offbeat theme given the successful year the almond industry is enjoying, but the ABA is always mindful that our role is to drive profitability by addressing input cost efficiency, production risks and increasing demand for our product.

During periods of profitability, industry participants have the capacity to address risk factors and we do not need long memories to recall the challenges presented by the drought and the wet harvesting seasons. This Conference will hear from the research programs developed to address these risks, look at how other industries have developed production models that are moving toward optimal yields within highly efficient operating systems.

We are very fortunate to continue to have respected Californian researchers visit Australia to present at Conference and conduct field days. We extend a very warm welcome to Bruce Lampinen and Roger Duncan.

The industry is coming off a year of record growth in demand in the domestic and export markets and is facing the challenge of finding a home for our 2013 almond crop that jumped from 50,000 tonnes to nearly 80,000 - an increase of 60%. Presentations on global and domestic markets will provide an insight into the likelihood of continuing strong returns for the Australian industry.

The Conference always provides many opportunities for socialising and networking with the Welcome Reception and the Annual Almond Conference Dinner. This year's Conference Dinner will honour the sixth and seventh inductees into the Australian Almond Industry Hall of Fame, Tony Read and Ben Robinson. This initiative recognises the contributions made by those our industry is built on.

Our fully booked trade exhibition will showcase products and information from many different industry suppliers, allowing Conference delegates to browse and interact with exhibitors throughout the two days of Conference.

Sponsorship is critical to the success of this event and we gratefully acknowledge the support of our Conference sponsors once again this year.

On behalf of the Board and staff of the ABA we hope you enjoy the 2013 Australian Almond Conference.

Neale Bennett
Chairman

Ross Skinner
CEO

Conference Dinner Entertainer

Tom Berger - Perceptionist

Although born in Tasmania, he began speaking German before he learnt English. When he started at primary school, Tom soon discovered that there was a silent, non-verbal language through which he could communicate to other children. Language again became a challenge when his family moved to South Africa in the 1960s. Tom was again in a situation where he needed to non-verbally decipher people while he learnt to speak Afrikaans. For Tom, the human body became a billboard.

Tom is now able to astonish audiences with his amazing mind games in a show called Your Thoughts are Written All over your Face. It's an entertaining blend of mystery, humour, psychology and intuition using total audience participation. Tom dazzles as he challenges his audiences to question what is real and what is unreal; what is possible and what is impossible. Radio presenter Alan Jones said he was "Just unbelievable". Hobart's Mercury newspaper wrote, "Definitely a crowd pleaser!"

Tom has spent many years studying human behaviour and how to influences people's decisions. He is able to determine what people are thinking and what decisions they will make purely by watching and interacting with them. Tom calls it "Speed Reading People" and now uses this phenomenal skill to wow his audiences.

Join us for a night of great entertainment as he blends perception, humour, psychology and influence in his one man show. Conference delegates will experience a jawdropping performance of wonder as Tom speed reads people with uncanny accuracy. "I see what you're thinking", he says. And he does..... in a mini X-Files on stage type show which is thought provoking and totally interactive.

He's a human lie detector too -- in The Lying Game your goal is to lie to Tom and get away with it. Not so easy, as one by one the cues and tells that give you away are shown and exposed in a fun and eye opening sequence. You've got to experience it to believe it!

Want to know what part of the body you should always look at first to know someone's intentions? You'll learn this during the show, it's something you'll always use in sales or social situations.

It is an outstanding entertainment experience you will talk about for days!

Almonds in Australia

From pioneer planting to prime production

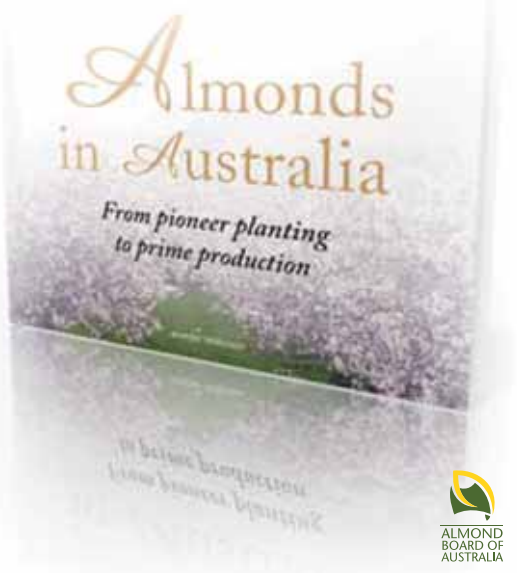
The rich history of the Australian almond industry has now been woven into a coffee table book chronicling the endeavours of those who have shaped today's vibrant industry.

'Almonds in Australia – From pioneer planting to prime production' was officially launched as part of the Australian Almond Conference Dinner held in the Barossa Valley, South Australia on Tuesday, 9th October 2012.

'Australian Nutgrower' Editor, Jennifer Wilkinson researched and wrote the 336 page book, and uncovered some remarkable stories through her interviews with numerous almond producers, traders, scientists and researchers.

"This book pays homage to those who had the vision, courage and persistence required to successfully establish a new industry and develop it by laying the foundation through trial and error, innovation, adoption and adaptation of overseas and local horticultural practices.

"Commitment to, and investment in, unknown varieties and methods takes a strength of character that few of us today need to display. We share in the knowledge gained by our pioneering industry participants, including growers, processors and marketers as well as nurserymen and researchers".



The history book can be purchased by contacting Jo Pippos, Communications Manager the Almond Board of Australia on 08 8582 2055, jpippos@australianalmonds.com.au or visiting www.australianalmonds.com.au/display/shopping

AAC 2013 Program

Tuesday, 29th October

6.30pm	Australian Almond Conference Welcome Reception	*Sponsored by:*

Wednesday, 30th October

8.00am	AGM Sign In, Conference Registration & Trade Exhibition Open	
8.30am	Almond Board of Australia AGM	Neale Bennett, ABA Chairman & Ross Skinner, ABA Chief Executive Officer
9.30am	Annual Levy Payers' Meeting	Greg Buchanan - Almond Industry Advisory Committee Stuart Burgess - Horticulture Australia
9.50am	Horticulture Australia R&D Program Update	David Moore - Horticulture Australia
10.15am	Morning Tea & Trade Exhibition	
10.45am	Official Conference Opening "A Word From Our Sponsor"	Trevor Dennis - HAIFA Australia
11.00am	Trendy Californian Almond Orchards - Varieties & Other Bling	John Slaughter - Burchell Nursery USA
11.20am	The Upside of Almonds Downunder	Dr Michelle Wirthensohn - University of Adelaide Tony Spiers - Lindsay Point Almonds
11.40am	What Lies Beneath: Root Knot Nematodes & Rootstock Choice	Peter Clingeleffer - CSIRO Plant Industry
12.00pm	Lunch & Trade Exhibition	
1.00pm	Shining a Light on Canopy, Yield & Food Safety	Bruce Lampinen - University of California
1.40pm	What is Plan Bee? Protecting Pollination	Gerald Martin - Pollination Industry Reserach & Development
2.00pm	Honeybee Pollination for Maximum Yield	Dr Saul Cunningham - CSIRO Group Leader, Ecology Program
2.30pm	Afternoon Tea & Trade Exhibition	
3.00pm	Carob Moth - Eating Your Profits?	David Williams - Department of Environment & Primary Industries VIC
3.30pm	Aeration, Cooling & Dehydration - On Farm Storage Options	Michael Coates - University of South Australia
4.00pm	Aspergillus - Protecting Your Crop & Reputation	Dr Chin Gouk - Department of Environment & Primary Industries VIC
4.30pm	Telling Storage Pests to "Bug Off"- A Grains Industry Perspective	Peter Botta - PCB Consulting
5.00pm	Day Close	

Session Sponsor Mossmont Nurseries

Session Sponsor Flory Industries

Australian Almond Conference Dinner

6.30pm	Pre Dinner Canapes
7.00pm	Australian Almond Conference Dinner Including 2013 Almond Industry Hall of Fame Induction

E.E. Muir & Sons

Thursday, 31st October

8.30am	Registration & Trade Exhibition	
8.50am	Day 2 Welcome Address & Gold Sponsor Presentation "A Word From Our Sponsor"	Neale Bennett - Almond Board of Australia Bianchi Orchard Systems
	Productivity Panel: More from Less or More from More?	
9.00am	Industry Reflections: Transforming Apple Orchards	Grant Thorp - Plant & Food New Zealand
9.20am	Past to Present: Revolutionizing Australian Apple Orchards	Kevin Sanders - H & LM Sanders
9.40am	Beyond Tomorrow: Investigating High Density Orchards	Roger Duncan - University of California
10.20am	Panel Session Conclusion	Ben Brown - Almond Board of Australia
10.35am	Morning Tea & Trade Exhibition	
11.00am	2011 Phil Watters Award Recipient Report	Dean Dinicola - Mandole Almond Orchard
11.10am	Presentation of the 2013 Phil Watters Award	John Kennedy - Lindsay Point Almonds
11.20am	Evolution of Australian Almond Marketing	Joseph Ebbage - Almond Board of Australia
11.40am	Untapped Water Opportunities in the MDB	Rod Luke - Kilter Rural
12.10pm	OrchardNet - How Does Your Orchard Stack Up?	Brett Rosenzweig - Almond Board of Australia
12.30pm	Almond Industry Macro Trends	Paul Thompson - Select Harvests
12.50pm	Conference Close	

Session Sponsor
MADEC - National Harvest Labour

The Conference Organisers reserve the right to amend this program, please visit www.australianalmonds.com.au/industry/conference_2013 for updated program details

Neale Bennett

Chairman & Sunraysia Region Grower Representative
Almond Board of Australia

Neale has been involved with almonds since converting his family farm from vines in 1992. Neale also operates a contract almond harvesting business Cowanna Harvesting.

His appointment as Deputy Chairman and Sunraysia Region Grower Representative on the ABA Board follows positions as Secretary, Treasurer and Chairman of the Sunraysia region of the Australian Almond Growers' Association (AAGA).

Neale's committee positions include the Audit, Remuneration and Conference Committees He is also a member of the Almond Industry Advisory Committee (IAC).

Peter Botta

Director, PCB Consulting

Peter Botta has a passion for creating successful grain storage systems for the grain and food industries, helping growers to ensure their grain is stored in a manner to achieve maximum profit. He has extensive experience in grain storage systems, insect control and quality management across the grain supply chain.

Peter specialises in Grain Storage Systems, Grain Storage Solutions, Grain Storage Advice and Training and is regarded as an authority on grain storage in Australia. With more than 21 years experience in the grains industry, he has worked with a range of grower groups and farmers, industry representative groups, agribusiness and bulk handling authorities. He specialises in the practical issues associated with grain storage, including the risks associated with storing grain for both on farm use and the domestic and export market. Peter is also conversant in the risks, hazards, markets and costs associated with storing grain both on farm and in various commercial facilities.

Ben Brown

Industry Liaison Manager, Almond Board of Australia

Ben Brown was appointed as Almond Industry Liaison Manager in May 2007. Ben is responsible for working with almond growers, ensuring industry issues are identified and addressed in the R&D strategic planning process. He oversees a broad range of communication activities to assist in the transfer and uptake of research outcomes. Ben also has management responsibility for the almond industry's budwood site located in Monash, South Australia.

Dr Greg Buchanan

Chairman Almond Industry Advisory Committee

Dr. Greg Buchanan worked for the Victorian Department of Agriculture, based at Mildura, from 1970 to 2008. His applied research involved biological control of red scale, management of grape phylloxera, and integrated pest management for drying and wine grapes. In 1991, he was appointed to lead the Plant Protection programs for the Riverlink network, which involves CSIRO and "agricultural" Departments in Victoria, NSW, and SA. From 1991 to 2008, he was a research manager for several large projects, initially in horticulture and then across the agriculture industries. Greg retired in 2008, and is a member of Horticulture Australia's advisory committees for table grapes, almonds, and dried grapes.

Speakers

Peter Clingeleffer

Group Leader, CSIRO Plant Industry

Peter Clingeleffer joined the CSIR0 Division of Horticulture in 1972 after graduating with B. Agr. Sci.(Hons) from the University of Tasmania and has been actively involved in the CSIRO's vine management and vine improvement research for almost 40 years. He has made significant contributions to development of modern wine, dried fruit and table grape industries. Mr Clingeleffer is a group leader in CSIRO Plant Industry. His research interests include low input, economically sustainable management for wine and dried fruit production; development and evaluation of new table, drying, wine and rootstock varieties and quality for all grape commodities, including linkages between vineyard practices and wine quality attributes. His rootstock research has led to the release of three low-medium vigour rootstocks by CSIRO.

Michael Coates

PhD Candidate , Barbara Hardy Institute, School of Engineering, University of South Australia

Michael Coates is a graduate of University of South Australia. He has a Bachelor of Engineering (Mechanical and Mechatronic) with Honours and is currently pursuing a PhD with the Barbara Hardy Research Institute.

Saul Cunningham

Group Leader, Ecology Program, Ecosystem Sciences/Sustainable Agriculture Flagship

Dr Saul Cunningham is a research scientist with CSIRO Ecosystem Sciences, based in Canberra.

He began his research in 1989 as an honours student at Monash University with a project on pollination of Banksia. Since then he was awarded a PhD in the USA, and now 20 years on, pollination continues to be his focus, but with an emphasis on crop pollination.

With collaborators he has worked on orchard and broadacre crops, with beekeepers and with wild pollinators, and on extensive reviews and analysis of the global crop pollination literature.

Trevor Dennis

Chief Executive Officer, HAIFA Australia

Trevor has been involved in the fertiliser industry for over 20 years, originally completing his Agricultural Degree with Melbourne Uni (Dookie) in the early 90s. He has moved on to be passionate about Agriculture in Australia. In the past 20 years Trevor has worked in every state of Australia in many capacities, from fertiliser, irrigation and GPS guidance to now heading up HAIFA Australia, the premium supplier of water soluble nutrients, in particular Potassium Nitrate to Australian farmers. It is with the support of the almond industry that HAIFA and its team have been the major sponsor of the Almond conference for the past four years.

Dean Dinicola

2011 Phil Watters Award Winner, Mandole Orchard

Dean Dinicola started farming on his family almond property "Mandole Orchard" of 230ha at Lake Wyangan at the age of 16, after completing year 10 at St Gregorys College, Campbelltown in Sydney. Dean also manages the family's three rice properties comprising of 260ha of rice and 500ha of cereals.

Dean has completed a Almond Best Practice Agronomic Management Training Program and has run trials and field days in conjunction with Ben Brown and Brett Rosenzweig of the Almond Board of Australia.

In 2011 Dean was the recipient of the Phil Watters Award at Australian Almond Conference.

Roger Duncan

Pomology Advisor & Viticulture Advisor,
University of California Cooperative Extension

Roger Duncan is a Farm Advisor in Stanislaus County, California with over 20 years experience. Stanislaus County includes 150,000 acres of almonds, 8000 acres of peaches (mostly processing clings) and 10,000 acres of winegrapes. Roger's major role is to conduct applied research and extension education programs in the area of commercial pomology (fruit & nut trees) and viticulture. Research emphases are in the areas of integrated pest management, improved cultural practices, development of new varieties and rootstocks and increased labor efficiency.

Roger obtained his Bachelor of Science degree in plant science with an emphasis in plant pathology from UC Davis in 1987. He then obtained a Master of Science from CSU Fresno in 1990. Roger began his career as a UC farm advisor in Sacramento County in 1994 before transferring to Stanislaus County as the pomology and viticulture advisor in December 1995. He began his appointment as director on January 1, 2011. Roger is a member of the American Society for Horticultural Science, The American Society of Enology & Viticulture and the American Phytopathological Society. He is a native Modestan and graduate of Beyer High School.

Joseph Ebbage

Market Development Manager
Almond Board of Australia

Joseph Ebbage is engaged on a contract basis to manage the Almond Marketing Program. Based in Melbourne, Joseph has been working with the ABA since 2003. He is the principal of "Consumer Insights", a market research and consultancy agency specialising in the Fast Moving Consumer Industry and has developed innovative solutions for companies including Select Harvests, the Nuts for Life Program and Horticulture Australia Limited.

Dr Chin Gouk

Senior Plant Pathologist,
Department of Primary Industries, Victoria

Dr Chin Gouk is a senior plant pathologist with the Department of Primary Industries, Victoria. DPI has a lead agency role for almond research, development and extension in the National Horticultural Research Network. Chin has a Bachelor of Horticultural Science (1st Class Honours) and a PhD in Plant Pathology (Lincoln University, New Zealand).

Chin has over 20 years R&D and consultancy experience working with agricultural industries in Australia and New Zealand. She has led national and international collaborative projects in microbial ecology and detection, disease epidemiology and prediction, and development of integrated disease management systems for temperate horticultural crops. Chin has held the role of Program Manager for research projects, and was Section Leader for DPI's crop health diagnostic service, managing quality assurance for ISO and AQIS accreditation. She has ten years research and consulting experience on almond plant health and production issues. She currently leads a Horticulture Australia Limited/ABA research project on almond food safety.

Bruce Lampinen

Integrated Orchard Management, Walnut & Almond Specialist
University of California Department of Plant Sciences

As Integrated Orchard Management/Walnut and Almond Specialist, Bruce's responsibilities include the coordination of extension teaching and research activities for almonds and walnuts on a statewide basis. He cooperated on three regional almond variety trials in Butte, San Joaquin and Kern Counties. Current research interests include investigating the role of water and nitrogen management in spur longevity in almond, canopy management approaches in high density walnut plantings and water management as it relates to insect and disease susceptibility in walnut and almond.

Speakers

Rod Luke

Product Development Manager, Kilter Rural

Rod has worked with Kilter Rural since 2008, originally managing the agricultural and horticultural operations associated with the Future Farming Landscapes (FFL) investment. Rod has recently shifted focus to work in the water section of the business which manages nearly 70,000 megalitres of irrigation entitlement in the southern connected Murray Darling Basin. Rod's main focus is now on expanding this holding to provide innovative Water Solutions for irrigators to help them access capital in their business or manage supply and price risk.

FFL is a superannuation backed investment project which also has 10,000 hectares under management between Kerang and Lake Boga. Major activities in this landscape includes irrigated summer crops such as tomatoes, maize and lucerne with cotton trials in 2013, irrigated winter crops, native pasture restoration, biofuel production, stonefruit production, annual horticulture production and forestry establishment.

Rod has 24 years' experience gained in private industry, government, and industry associations. His experience ranges from analysing business performance for over 1000 farms across ten agricultural industries to managing agricultural R&D investment programs for government.

Prior to joining Kilter Rod spent four years managing R&D investment portfolios for DPI (Victoria) in the grains industry, in community engagement and sustainable agricultural development. Rod also managed the coordination of the Victorian Government's drought response and lead the grain industry extension program.

Rod's exposure to a variety of farming systems was developed through his work as an agricultural consultant and earlier as a Farm Management Economist. Export marketing work for chilled meat to Japan and horticultural products to Europe also provided Rod with experience in shipping negotiations and chilled freight management.

Rod spent time in Canberra as an economist with the Housing Industry Association, where he was involved in developing the policy to establish the Federal Government's First Homebuyers Grant scheme.

Gerald Martin

Chairman, Pollination Industry Research & Development

Gerald grew up in God's country at Willunga, helping his parents and brothers grow prime lambs and almonds.

For the first 20 years Gerald combined almonds, lamb and beef production with various off farm roles. Initially representing farmers in livestock forums at a state and national level, then to a number of national Boards. More roles kept coming so in 1986 he and his wife sold the SE grazing property, moved back to Willunga and 1991 he formed Agresults Pty Ltd consultancy. Gerald's roles have included: SAFF Livestock Committee, the Premiers Food Council, Waite & SARDI Advisory Boards, Meat Food Safety Council, LAMBPLAN Advisory Committee, National Lamb Strategy Team, Meat & Livestock Australia Board and RIRDC Pollination R & D Advisory Committee. Gerald has held the position of Chair on a number of these committees.

With his Willunga farm, a couple of Chairman's roles and project management jobs, Gerald now tries to find time to head off with his mates on his motorbike and is trying to keep fit on a bicycle or kayak.

David Moore

General Manager, Research & Development Services, Horticulture Australia

David oversees the investment of A$80 Million of matched government funds into key Research and Development priorities, on behalf of 44 diverse industry groups and manages a team of 17 subject matter experts and administrators within Horticulture Australia Limited.

David has wide experience at both ends of the agricultural spectrum, from production to corporate strategy and management. He also has a deep understanding of biotechnology commercialisation challenges, valuation and strategy.

Brett Rosenzweig

Industry Development Officer, Almond Board of Australia

Brett Rosenzweig was appointed as a full-time Technical Officer in April 2007, following previous contract employment with the ABA since August 2006. In this role Brett was responsible for day-to-day management, data collection and operations of the CT Optimisation Trial, located at Clark Taylor Farms' almond property in the Riverland. As of July 2010, Brett's role transitioned into Industry Development Officer (IDO) assisting industry uptake of research findings.

Kevin Sanders

Sales Manager, H & LM Sanders

Kevin Sanders is an apple grower from Victoria and has worked within the apple and pear industry for 40 years. Kevin is a third-generation orchardist who with two brothers and his father, grows 42 hectares of apples in Victoria's Yarra Valley. Together they also operate a nursery to supply all their own trees. Mr Sanders is an active member of the apple and pear industry. He is a member of the Yarra Valley Fruit Group and a former member of the Victorian Apple and Pear Growers Council. He also sits on the Melbourne water committee for stream diversions, is a chairman of YV Marketing and is a member of Fruit Growers Victoria and Gippsland Fruit. Mr Sanders was awarded the 2010 Victorian DPI Science Award Innovation in Agriculture / Hugh Mc Kay award and has been an APAL Director since 2002.

Ross Skinner

Chief Executive Officer, Almond Board of Australia

Ross Skinner is Chief Executive Officer of the Almond Board of Australia, holding this position since November 2010. He has qualifications in Economics and Accounting but has worked in horticulture for 30 years, including Assistant General Manager of the Australian Dried Fruits Association and General Manager of the Dried Fruits R&D Council and the statutory export marketing body, the Australian Dried Fruits Board. Ross joined Horticulture Australia in 2002 and his role involved developing and implementing strategic plans for the Murray Valley horticultural industries.

John Slaughter

Director of Breeding Program, Burchell Nursery

John Slaughter was raised on a cattle and hog farm in the Mid-West. With his father and grandfather actively breeding livestock and serving as Agricultural Extension Agents, John grew up in the trenches of production agriculture. When he was 13 years old a neighbour farmer broke an arm and John helped him with his peach orchards and tree nursery. It was in this period of time that John really began to appreciate trees and orcharding. John majored in biology and geology in college and graduated with a teaching credential. He met a girl in college from Fresno and began working in commercial orchards. In 1982 an opportunity opened to work at The Burchell Nursery. Some of his early responsibilities were evaluating new selections at various breeding programs and visiting with and serving orchard growers' needs. John helped start the breeding program at Burchell in 1984 and became the manager in 1989. Along with fruit, nut, and rootstock breeding over 90 US and foreign variety patents have been granted from this effort.

Tony Spiers

Director, Lindsay Point Almonds

Tony has worked in the almond industry for over 30 years. Tony has been a grower for the past 22 years and has been a Director of Lindsay Point Almonds since 2002. Between 1997 and 2002, he held positions for the Riverland region of the Australian Almond Growers' Association (AAGA). He has also assisted in managing the Varietal Breeding program based at Lindsay Point. Tony currently Chairs on the Plant Improvement Committee (PIC).

SHAKERS AND MOVERS OF THE AG INDUSTRY FOR OVER

SHOCKWAVE — 100 YEARS — AFTERSHOCK

MATERIAL HANDLING SYSTEM
SE-180 ELEVATOR

WESCO by OMC

SUPER HOPPER

MATERIAL HANDLING SYSTEM
SD-36 FIELD ELEVATOR

MAGNUM
SPRINT SERIES V

FAST Fully Automated Shaker Technology

MATERIAL HANDLING SYSTEM
AR-400SD

MATERIAL HANDLING SYSTEM
AR-450 SERIES II

OMC™

ORCHARD MACHINERY CORPORATION

2700 Colusa Highway Yuba City, CA 95993 Tel: (530) 673-2822 Fax: (530) 673-0296

www.ShakerMaker.com

Paul Thompson

Managing Director, Select Harvests Limited

Paul Thompson joined Select Harvests as Managing Director in June 2012. He is an experienced executive with over 30 years of management experience. Before joining Select Harvests Paul was President of SCA Hygiene Australasia responsible for a $600 million turnover business across all of its divisions (FMCG, Pharmacy, Industrial/Foodservice & Healthcare) and overseeing leading brands including Sorbent and Handee. Paul is a member of the Australian Institute of Company Directors and has formerly held positions as a Director of the Australian Food & Grocery Council and on other industry bodies.

Dr Grant Thorp

Senior Scientist, The New Zealand Institute for Plant & Food Research Ltd

Dr Grant Thorp is a Senior Scientist with Plant & Food Research Australia, based in their Brisbane office. He completed his PhD studies at The University of Adelaide researching avocado tree architecture. He has since worked with the apple, avocado, kiwifruit and persimmon industries in New Zealand examining the role of plant architecture, canopy management and rootstocks in determining productivity and fruit quality.

Grant currently leads programmes researching causes of low productivity in avocado, including the development of "small tree" high density planting systems, development of new growing systems and rootstocks for kiwifruit and the global commercialisation of kiwiberry, the baby kiwifruit.

David Williams

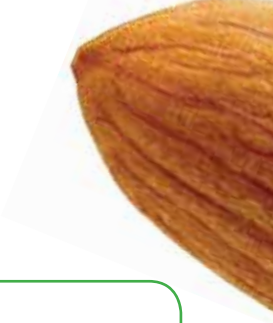
Principal Research Scientist- Invertebrate Sciences, Biosciences Research Division, Department of Environment and Primary Industries VIC

David leads the Chemical Ecology team based at DEPI Tatura. This team conducts applied research into chemical communication systems utilised by invertebrates, such as insects and mites, to locate mates and suitable host plants. Research conducted by the team has been instrumental in the development of wide area pest management programs that resulted in reduced reliance on pesticides for the management of codling moth in apples and pears, oriental fruit moth in pome and stone fruit, and carpophilus beetles in stone fruit. David has been conducting research and extension in horticultural production systems for 37 years, specialising in the development of integrated pest management (IPM) in the pome and stone fruit industries.

Dr Michelle Wirthensohn

Horticulture Research Fellow, University of Adelaide

Dr Michelle Wirthensohn is the Horticulture Australia Research Fellow with the University of Adelaide. Michelle has been involved in horticultural breeding and research since graduating from the University of Adelaide where she gained her Bachelor of Agricultural Science (Hons), Graduate Certificate in Higher Education and a PhD in Horticulture. Michelle is the Program Leader of the Australian Almond Breeding Program which is funded through HAL and the ABA. She is a member of the ABA's Plant Improvement Committee and lectures in Production Horticulture at the Waite Campus.



Peter Botta

Director, PCB Consulting

Abstract **Stored Pest Management – Lessons to learn from the Grains Industry**

Peter Botta, PCB Consulting Pty Ltd, Benalla Australia, e-mail: pbotta@bigpond.com

Managing insects and quality in the central and on-farm grain storage system is important to minimise any cross contamination of the grain pipeline, and minimise any negative impacts on the local receival sites ability to do the same.

Choice of system, insect and quality management are all decisions which will directly affect stored pest and quality management, and are crucial to ensure integrity of the supply chain is maintained. There are many challenges for growers to manage; including managing existing facilities, investing in new facilities, managing insects, managing grain quality , ensuring treatments are used in accordance with best practice and meeting future requirements from the market.

An integrated approach to insect management ensures management goals can be achieved. Managing product and system hygiene, understanding insect ecology, managing moisture and temperature with aeration, pesticide application and monitoring are all equally important in ensuring a quality product can be stored and delivered.

Phosphine fumigation is widely used to kill grain insect pests in on-farm and central storage systems in Australia. Phosphine's continued effectiveness is essential to the sustainability of grain biosecurity and market access for Australian grains. In the past 10-15 years, resistance to phosphine in target insect pests has increased in both frequency and strength such that it now threatens effective control.

Ensuring fumigations are conducted in gas-tight sealed structures which meet a standard pressure test, in combination with best practice integrated pest management will ensure the long term sustainability of phosphine.

Fumigation is the most cost effective way to kill insects in silos and grain bag stacks. However, to work effectively structures need to be sealable to a gas tight standard. If structures do not meet this standard poor results lead to insect attack, infestation and poor grain quality for markets.

The almond and grain industries co-exist geographically, and cross contamination of insects from the grain industry is happening. Grain insect pests have been reported to infest almonds in storage, and can do significant damage. Ensuring the almond industry manages these pests effectively is vital. The almond industry has a unique opportunity to adopt best practice from the grain industry and ensure it can effectively manage stored insect pests and avoid repeating mistakes made and still being made by the grains industry.

This paper discusses stored pest management in the grains industry, a whole of industry extension program, and key messages for the almond industry in managing storage pests and quality.

The author has been involved in an extension project to improve on farm and industry practice including:

- Introduction of Strategy to Manage Resistance to Phosphine in the Australian Grain industry
- Introduction of the Australian Standard AS 2628-2010 for sealed silos
- Whole of industry extension program
- Grower and industry workshops and field days
- Information packages and booklets
- Label changes to Phosphine
- Media releases and targeted campaigns
- Recommending policy and regulatory changes for Phosphine access and use

Ben Brown

Industry Liaison Manager, Almond Board of Australia

Abstract **Productivity: More from Less or More from More?**

Ben Brown, Almond Board of Australia, e-mail: bbrown@australianalmonds.com.au

The Australian almond industry, like all its horticultural counterparts, is under constant pressure to increase productivity. With the almond industry entering an enviable period of increased R&D investment it has prioritised a significant investment into researching the complex factors that contribute to yield, profit and ultimately productivity.

Whilst the Australian industry has plenty to learn from California, we manage different risks such as a wetter summer and harvest period; we have different economic pressures and more acutely sensitive costs of labour, water, fertiliser and electricity; sensitive to exchange rates; and at the end of the day we are a small alternative producer trying to produce consistently higher quality product attracting premium returns.

We know almonds have a maximum possible yield determined by biotic and abiotic constraints but have a realised yield each year which is far less. This can be illustrated by our knowledge that almond trees achieve a commercial crop from a fruit to flower conversion of just 30-40%.

In order to optimise yield and productivity it will take an integrated approach of researching factors including but not limited to: tree architecture; light management; vigour control; flower load; return bloom, pollination, fruit to flower conversion ratio, fruit size; tree resource demand, timing and applications; soil health; and functional root systems.

This session is aimed to provide the almond industry and research community with inspiration by hearing from researchers and other industries who have journeyed down the path of increased productivity.

Peter Clingleffer

Group Leader, CSIRO Plant Industry

Abstract **Tolerance of almond rootstocks to root knot nematodes and lessons learnt from the grape industry.**

Peter Clingeleffer, Norma Morales and Brady Smith (deceased March 2013) -
CSIRO Plant Industry, Waite Campus, e-mail: peter.clingeleffer @csiro.au

Glasshouse screening techniques are being used to assess the resistance of almond rootstock genotypes against root knot nematodes found in Australian orchard soils. Knowledge generated will enable more informed decisions to be made in regard to almond rootstock selection. The study has identified a number of rootknot nematode species *Meloidogyne* species. i.e. *M. arenaria, M. hapla, M. incognita* and *M. javanica* in Australian almond orchard soils. Glasshouse screening studies have been adapted from techniques used for assessing the resistance of grapevine rootstock genotypes to root knot nematodes. The preliminary screening studies to test rootstock resistance against two nematode species (*M. javanica, M. incognita*) indicate that more than half of the available rootstock genotypes (14 tested) showed resistance although the results were not always consistent across the rootstocks. Susceptible rootstocks which developed egg masses of one or both nematode species on the roots included GF557, GF649, GF677, Nickels, Monegro and Kuban 86. To complete the study, further glasshouse screening studies are being undertaken with rootknot nematodes isolated from almond orchards. Examples will be drawn from the grapevine rootstock studies to demonstrate the importance of knowing the nematode species and to understand the potential for the development of aggressive nematode pathotypes; the need to address biosecurity issues and minimise the spread of rootknot nematodes; and the potential to breed and develop new rootstocks which combine desired production and quality traits with rootknot nematode resistance.

Michael Coates

PhD Candidate , Barbara Hardy Institute, School of Engineering,
University of South Australia

Abstract **Effective storage, aeration and dehydration of almonds**

Michael Coates, Barbara Hardy Institute, School of Engineering, University of South Australia
e-mail: michael.coates@mymail.unisa.edu.au

Increasingly unpredictable harvest-time weather is prompting the Australian almond industry to investigate ways of moving away from drying on the ground using natural convection and explore alternate forced convection methods such as aeration drying of bulk almonds.

Aeration is used widely in other industries. Each product has its own set of properties that determine the rate at which it loses moisture. Hence, it is necessary to determine the drying properties associated with in-hull almonds, in-shell almonds and kernels to create specific drying solutions.

At UniSA a wind tunnel was designed and built that is able to monitor a 3 m high stack of almonds of 300 mm diameter to monitor the:-

- bulk properties of bulk density, porosity, shrinkage, moisture content.
- air properties of humidity, temperature, pressure loss and air flow rates, at the inlet and within the stack.

Data logging and thermal imaging will also be used to record the progress of dehydration.

Preliminary tests using the previous year's crop rehydrated to 35% MC (hull, shell and kernel) showed a reduction of a 3m high stack of almonds to 15% MC (7% kernel moisture) in four days using air at 60% RH and 16.5°C at an entry and exit speed of 0.85 m/s. The stack reduced its height from 3 m to 2.5 m (17% volume reduction) whilst the bulk density (0.32 t/m3) and porosity (67%) remained similar when wet and dry. The fan used for the test was rated at 5.2kW/m2 of entry area but no power measurements (actual power will be less than motor rated load) were made at this stage.

Dr Saul Cunningham

Group Leader, Ecology Program,
Ecosystem Sciences/Sustainable Agriculture Flagship

Abstract **Honeybee pollination for maximum yield**

Dr Saul Cunningham, CSIRO Sustainable Agriculture Flagship, e-mail: Saul.Cunningham@csiro.au

For the past three flowering seasons we have been studying interactions between almond flowers and honeybee pollinators with the goal of helping the industry get the best from its annual investment in hives. In this talk I will provide an update on research progress and some ideas for future directions. To understand if a shortage of pollination reduces fruit set our experiments have compared fruit set from hand pollinated flowers to fruit set from bee pollinated flowers. When hand pollination leads to better fruit set than bee pollination we can say there is a gap between potential and actual fruiting, which might be fixed by better pollination. This gap (i.e. pollination shortfall) appears to be greatest when almond trees are isolated from hives by a belt of open ground or bushland. The gap is smallest (i.e. actual fruit set is closer to potential) when trees are closer to hives. This suggests an important role for good hive placement in improving pollination. During the most recent flowering season we focused on improving our understanding of these patterns. We also assessed the rate of pollen removal from flowers over the course of a day, to help understand if shortfalls result from pollen not being collected, or from poor cross -pollination in spite of a high collection rate. We observe that many other factors interact with pollination to determine fruit set. We are assessing whether fruit set is constrained by the size of the branch that supports the flowers. We believe that getting pollination right is a critical component of maximising yield, but research is required to better understand how much yield variation is attributable to pollination, and how much is due to other causes. Maximising yield will require managing multiple factors, not any single factor in isolation.

Roger Duncan

Pomology Advisor & Viticulture Advisor,
University of California Cooperative Extension

Abstract **High Density Planting and Minimal Pruning Increases Yield, Reduces Costs and Possibly Lengthens the Productive Life of an Almond Orchard**

Roger Duncan, Pomology Farm Advisor, University of California Cooperative Extension, Modesto, California

When establishing an almond orchard, the goal should be to maximize production as early as possible without reducing long term profitability. To maximize yield potential, one must maximize tree sunlight interception on each hectare. This can be accomplished through an integration of proper tree density and minimal pruning.

In September 1999, a 14.5 hectare field experiment was initiated to document the long and short term effects of tree planting density and minimal pruning on almond tree growth, yield and orchard profitability. Nonpareil and Carmel varieties were planted on Nemaguard or Hansen (peach x almond hybrid) rootstocks at in-row x across row spacings of 3.0 x 6.7m, 4.3 x 6.7m, 5.5 x 6.7m or 6.7 x 6.7m. Trunk circumference and canopy width, and to a lesser extent, tree height, are reduced on more closely planted trees compared to widely planted trees. Midday light interception and cumulative per hectare yield of both varieties on nemaguard has increased as tree density increased. However, cumulative yield has been similar at all tree spacings for Nonpareil on the highly vigorous Hansen rootstock so far in this trial.

Through the first 13 years of the experiment, Carmel trees on nemaguard planted 3 meters apart (489 trees per hectare) have accumulated 4770 kg / ha more than trees planted 6.7 m apart (222 trees per hectare). At a price of $3.31 U.S. per kg (average price paid to growers during the time of the trial), the yield difference in Carmel equated to an increase in gross income of over $14,120 per hectare to date. At current prices, the increase in gross income would be more than $30,000 U.S. per hectare through the first half of the orchard's life.

In addition to potentially increasing yield, closely planted trees are smaller. Therefore they have had fewer problems with scaffold breakage and are easier to harvest. Closely planted trees have fewer almonds remaining after harvest (mummies), potentially reducing overwintering navel orangeworm larvae and bacterial spot inoculum. Closely planted trees have also suffered less trunk injury during mechanical harvest and have required fewer replacement trees due to tree death. This study suggests that high density almond orchards may be productive longer than orchards with more widely spaced trees.

There has been no yield benefit to annual pruning in this trial. In most years Nonpareil yields have been statistically similar in annually pruned, minimally pruned and unpruned trees. Cumulatively, unpruned Nonpareil trees have yielded 1345 kg/ha more than conventionally trained & pruned trees through the 13th leaf. Cumulatively, untrained & unpruned Carmel trees have yielded 3218 kg/ha more than conventionally pruned trees. Conservatively, the cost of pruning, stacking brush and shredding every year, plus the value of lost yield would have cost the grower over $15,000 U.S. per ha to date. Pruning has not affected kernel size. It appears that pruning may not be necessary to improve or maintain almond yield, at least through the first half of an orchard's life.

PRIMARY INDUSTRIES & REGIONS SA
PIRSA

Primary Industries and Regions SA

proudly supporting the production of premium almonds from our clean environment.

Premium Food and Wine from our Clean Environment is one of the South Australian Government's seven strategic priorities. It helps to drive the focus of Government efforts to secure our position as a producer of premium food and wine from our clean water, clean air and clean soil.

The Premium Food and Wine from our Clean Environment Action Plan is a framework of activities that the Government and industry are undertaking to address challenges and opportunities in the food and wine sectors.

It describes what we mean by 'premium' and 'clean', and lists collaborative work by Government, industry and the wider community.

For more information on how we are doing this download the Action Plan from **www.foodwine.sa.gov.au**

PREMIUM
FOOD AND WINE FROM OUR
CLEAN
ENVIRONMENT

SOUTH
AUSTRALIA

Government of South Australia
Primary Industries and Regions SA

Dr Chin Gouk

Senior Plant Pathologist,

Department of Primary Industries, Victoria

Abstract

Understanding factors influencing microbial colonisation of almonds

C. Gouk[1], B. Emmett[2], S. Kreidl[1], N. Tran-Dinh[3], D. Zabaras[3], M. Rohanidezfouli[3]

[1]Department of Environment and Primary Industries (DEPI), AgriBio Centre, Bundoora, Victoria 3083;

[2]DEPI, Mildura Centre, Irymple, Victoria 3502;

[3]CSIRO, Riverside Corporate Park, North Ryde, NSW 1670

Research was conducted to improve the understanding of factors impacting on food safety and to develop measures to limit the potential for development of *Aspergillus* species in almonds. Findings from the second year of the investigation are reported.

More than 7000 Nonpareil almond nuts and mummies, and samples of soils and trash from two orchards were monitored from December 2012 to March 2013, to gain an understanding of *Aspergillus* ecology, abundance and infection levels.

Aspergillus spp. were not detected in nuts, mummies, soils or trash in December 2012 (pre-hull split stage. After hull split, mummies harboured 17 times more *Aspergillus* than new crop nuts on the tree. Windfall nuts had three times more *Aspergillus spp*. than nuts on the tree, indicating greater exposure risks to the fungi when nuts are on the ground. Despite the presence of high levels of *Aspergillus* inoculum, only 1 out of 1732 kernels of new crop nuts on trees and the ground was infected.

Rhizopus spp. were not detected on green nuts in December 2012. Mummified nuts on the tree and ground had the highest *Rhizopus* populations. Preventing hull rot infection and removing mummies are critical for reducing the inoculum sources for *Rhizopus* and *Aspergillus spp.*, and infestation sites for carob moth (*Ectomyelois ceratoniae)*.

Aspergillus growth and aflatoxin production are influenced by temperature and relative humidity (T&RH). RH affects water activity (aw), which is a measure of the availability of water in a food product, and is the dominant environmental factor governing food stability or spoilage.

A network of smart sensors linked to a data-logger were used to monitor microclimatic conditions of stockpiles covered with either a clear or black and white (B&W) tarp. The surface layers of nuts under the clear tarp had greater fluctuations in T&RH than those under the B&W tarp. Nuts in the deeper layers (1-2 m) were subject to more constant T&RH than those in the surface layers. The surface layers of the stockpile had more *Aspergillus* infections, and are one of the key critical control points for reducing microbial infection.

After stockpiling for 11 weeks, hulls and kernels in the top layers of stockpiles had gained twice the amount of moisture, reaching 17% and 6.5% respectively, compared with the initial respective levels of 7.2-10% and 3.3-4.3%. The re-absorption of moisture by hulls during stockpiling provides a suitable environment for growth of micro-organisms in close proximity to the kernels.

Gamma irradiated almond kernels of cv. Carmel, Nonpareil and Price were inoculated with *A. flavus*, incubated at 28°C and 33°C, and held at 0.80, 0.85 and 0.90 aw. *A. flavus* was able to infect and sporulate on kernels at higher aw (0.85 and 0.9) 5 days after inoculation. Whereas, kernels held at 0.8 a_w had no visible fungal sporulation until after 4 weeks at 33°C.

Recommended strategies targeted at critical control points to reducing *Aspergillus* infection risks include: remove mummies, reduce exposure to Aspergillus, maintain dry conditions, shorten stockpile duration, avoid mixing of nuts from different stockpile depths, and segregating moist, mouldy nuts.

Bruce Lampinen

Integrated Orchard Management, Walnut & Almond Specialist

University of California Department of Plant Sciences

Abstract **Almond Yield Potential - How much is too much?**

Dr. Bruce Lampinen, Integrated Orchard Management/Almond and Walnut Specialist,
Dept. of Plant Sciences, UC Davis, USA

A mobile platform for measuring midday canopy light interception has been developed. The device consists of a bar with photodiodes mounted on a Kawaski Mule utility vehicle with a datalogger to acquire the light data as well as GPS to give positional data. Additional sensors collect ground temperature data as it relates to light interception data to help evaluate food safety risk with different levels of canopy cover. The data can be stored on a datalogger at intervals of less than 30 cm down the row at a travel speed of about 6 km per hour giving us a much better spatial resolution in much less time than was possible in the past. The mobile platform was used extensively for mapping midday canopy light interception in almond orchards in the 2009-2013 seasons. Data collected with the mobile platform lightbar over the past several years has provided a rough upper limit to productivity in almond based on the percentage of the available midday canopy photosynthetically active radiation (PAR) that is intercepted by the canopy. We have found that about 50 kernel pounds per acre of almonds can be produced for each 1% of the total incoming light that is intercepted. This would result in about 4650 kernel pounds per acre for an orchard intercepting 93% of the incoming light. However, our data suggests that light interception levels above about 80% (4000 kernel pounds per acre yield potential) result in increased food safety risk due to cool, moist conditions on the orchard floor during the growing season and difficulties in drying nuts at the time of harvest. There are a number of other potential uses for this technology. The first is for providing a baseline for assessing how an orchard is performing relative to other orchards of similar age and variety. Another is for separating out the effects of rate of canopy growth from productivity per unit canopy light intercepted in different clones or varieties. A third potential use is for assessing the efficacy of different fumigants by again separating out the effects of canopy size from productivity per unit light intercepted. A fourth use is for evaluating the impacts of different pruning regimes on canopy growth, light interception and productivity per unit light intercepted.

Rod Luke

Product Development Manager, Kilter Rural

Abstract **Untapped Potential – Water Opportunities in the MDB**

Rod Luke, Kilter Rural, e-mail: rluke@kilter.net.au

Reduced water entitlement ownership in the almond industry since 2010-11 has been an effective strategy for managing down water costs through spot market purchases, but not without difficulty. Many growers have lamented the job of constantly sourcing water in a tight spot market. The key observation about the water market since unbundling is that every year is different so will reliance on the allocation market be the best strategy for tomorrow's success?

Against a background of environmental water purchases over the last three years capital value of entitlements has varied but allocation prices have remained relatively low with most entitlements receiving full allocations. Despite full dams the volume of allocation water offered for sale is consistently falling short of demand. Buy offers remain lower than gross margins returns (in $/ML) for the lowest production options so such water owners are slow to release water to the spot market. The net result is that total supply is maximised but spot prices are rising.

Sourcing water in a timely fashion at critical periods of the year has recently provided most growers with cause for concern. Added to more stringent requirements for allocation accounts to hold water before irrigating highlights the lack of spot market supply which could have expensive ramifications for non-conforming irrigators who cannot secure water as required (for example $2,000/ML overuse fees in G-MW).

Strategies for successful water management will rely on an understanding of the diverse range of irrigation entitlements available across the southern connected Murray Darling Basin (SMDB) for almond growers to access. Trading rules provide access to the various entitlements and their different attributes provide options for growers to manage allocation water supply and price risk. The combination of different irrigation industries and the diversity of entitlement owners within the SMDB will also continue to provide opportunities for purchasing water in the spot market. Growers can also manage risks through a number of market mechanisms for water allocation sales within seasons. Combining this understanding in a portfolio approach to managing water requirements can balance timely water supply, surety of water supply, fix part or all of the annual water budget and provide opportunities to access cheaper spot market water.

Gerald Martin

Chairman, Pollination Industry Research & Development

Abstract **RIRDC & HAL - Pollination R&D Advisory Committee**

Gerald Martin, Rural Industries Research & Development Corporation

Overview

In partnership with a number of horticultural industries within Horticulture Australia Ltd, the Pollination Program was developed, in part, to fund projects consistent with the 'Pollination research' objective in the 2007-2012 Honeybee R&D Plan. More than $1 million has been invested in the Pollination Program over the last 5 years. Funding from HAL for the Program is from the apple and pear, almond, avocado, cherry, vegetable and summer fruit levies and voluntary contributions from the dried prune and melon industries with matched funds from the Australian government.

Through RIRDC's Honeybee Program, beekeepers contribution to the Pollination Program has been $100,000 per year, with industry levies matched by funds provided by the Australian Government.

R&D Plan

The Pollination Five Year Plan establishes the profile of investments that will comprise the RIRDC Pollination R&D Program, which is administered as a sub-program of RIRDC's existing Honeybee Program.

Honeybee pollination provides a critical underpinning to Australian horticulture and agriculture, with an estimated 65% of agricultural production involving pollination from honeybees. Honeybee populations around the world, including in Australia, are increasingly compromised by pests, diseases, insecticides and exclusion from vital floral resource areas. The R&D activities in this RIRDC Program are a response to these issues.

Goal

To support research, development and extension activities that will secure the pollination of Australia's horticultural and agricultural crops into the future on a sustainable and profitable basis.

Objectives

Plan objectives that underpin the 2009-2014 R&D Program, with anticipated shares of the annual Program budget are:

- Incursion risk minimisation – for early detection of a threat to pollination service supply.
- Improving the effectiveness and economic return from pollination – living with Varroa.
- Resource access – landscape and nutrient management for effective pollination.
- Pest and disease management – to ensure the ongoing supply of pollination services.
- Reducing crop dependence on honeybees – native pollinators and self-pollinating crops.
- Communication – including pollination education, extension and capacity building.

RIRDC expects the Pollination Program to continue following the end of the 2009-2014 Pollination Program R&D Plan.

Examples of Completed Projects

- Simulation Exercise for Pollination Industries
- Pollination Australia - Comprehensive Risk Management Strategy Consultancy
- Non-chemical and minimum chemical use options for management of Varroa
- Pollination - Pesticides and Bees Booklet
- Remote sensing of beehives to improve surveillance
- Pollination Aware: -35 industry case studies profiled the yield and quality benefits
- BeeForce: developing the regional model

Priorities for 2013–14

- Facilitate the roll-out of the National Bee Pest Surveillance Program focused on high risk ports.
- Continued roll-out of the communications strategy for the Pollination Program with a specific focus on preparing industries should Varroa mite become established in Australia.
- A comparison of the impacts of using non-enclosed and enclosed screened bottom boards in honeybee hives.
- An estimate of the relative likelihood of establishment of pest bees and bee pests at various Australian ports to allow more efficient allocation of surveillance resources.

Examples of Current Projects

- Understanding practice in key pollination industries
- Model for industry planning & preparedness for incursion of Varroa
- National Bee Pest Surveillance Program (2013-15) and facilitator

Brett Rosenzweig

Industry Development Officer, Almond Board of Australia

Abstract **OrchardNet®**

Brett Rosenzweig, Industry Development Officer, Almond Board of Australia,
e-mail: brosenzweig@australianalmonds.com.au

"If you can't measure it, you can't manage it". Now whilst there are also unmeasurable aspects to farming we should also try and manage, there is a great deal we can measure, none more important than yield and quality.

So, how do we manage or enhance our yield and quality? Well, a successful and proven way is to appeal to the natural human instinct of competition. Whilst we love thy neighbour, I'm sure we all love to beat them, and the only way to know if you're 'winning' is to measure each other's performance. Now this is easier said than done as each orchard, region, block, variety and season is 'different'. In addition, there are varying economies of scale, costs of production, location to huller and sheller, post harvest costs, preferred markets, sale price, and the list goes on.

So, how do we compare your performance against your peers? Well, we are developing an almond version of OrchardNet, an online orchard database system designed by AgFirst Ltd, a leading independent New Zealand based company specialising in horticultural consultancy and tools of grower empowerment.

OrchardNet is an orchard data management tool designed to give growers and their industry partners the ability to optimise individual block and variety results, and provide an accurate picture of their total business operation.

OrchardNet also collates other data such as leaf tissue data, soil and fruit nutrient data, water use, production forecasts, actual production results, physical tree metrics, production costs and returns, and a range of physical input data to produce customised reports. Very little data is required to generate initial reports and growers can selectively enter data for the specific reports that interest them, providing quick feedback.

Growers can set up the optimum performance parameters for each block at the start of each season. Key data is then collected at key times through the season to either make sure goals will be met, or allow early indications of changes that will not allow potential optimums to eventuate.

Data security and privacy is a key focus in OrchardNet. Grower data may only be shared with industry partners through growers explicitly assigning permission on a block by block basis, and data is limited to relevant performance, keeping actual grower cost structures and returns confidential.

Various reporting options allow growers to compare their performance to other growers within the database. In every case, data from other growers is anonymous and contributes to average and upper quartile data, ensuring grower privacy is maintained at every stage.

Once limiting factors in a block are identified, whether seasonal or structural, these can be analysed and action taken to improve them, minimise their impact, or in the case of non-viable blocks, look at how they can be replaced. To assist with this process and to know what a good block looks like, the ABA will arrange extension activities. This will include timely articles, field days, orchard walks, etc.

The ABA has obtained funding from the Department of Environment and Primary Industries (DEPI) of Victoria to develop the almond version of OrchardNet and will facilitate this project over the next three years.

Kevin Sanders

Sales Manager, H & LM Sanders

Abstract **Past to Present: Revolutionizing Australian Apple Orchards**

Kevin Sanders, H&LM Sanders, email: colonel@yvapples.com.au

In the late 1980s the family orchard in Victoria's Yarra Valley was approximately 18 hectares, cropped eight varieties, had an average tree age of 28 years, planting densities of 250 trees/ha and produced 570-670 tonnes per annum at an average yield of 39 T/ha. Orchard prices were under pressure at the time and we had an annual turnover of approximately $550,000.

It was during this period that new management programs were becoming available and we thought something needed changing to remain sustainable and ensure future profitability, particularly given the remaining two of the three brothers had decided to come home to work in the family business and we needed to find space for all of us.

Consequently, it was decided we needed to change varieties and we either had to develop more land or improve the results from our current holding, and thus it was an opportune time to reinvent ourselves.

The existing management system was running into trouble with lower availability of staff, harvest issues, pruning, training and quality issues. The new system had to deliver lower costs of production, reduced pest and disease pressures, improved environmental outcomes, improved fruit quality, adopt new varieties and improved strains, and deliver a quick early return on investment.

This first change began in 1990 and was timid. It involved: local knowledge from local agronomists, chemical resellers, and local department agriculture advisors; intermediate rootstocks and poor quality trees from local nurseries; new varieties at higher densities, moving from 330 trees/ha to 1,250 trees/ha; and a trellising system for supporting structure in the early years of production.

In hindsight, we didn't have an intimate knowledge of our own business, we had a poorly resourced industry association not delivering for industry and consequently we lacked confidence to make significant change. We are still having ongoing issues with all those blocks planted in the 1990s and these blocks will all be removed in the next three to four years.

In 1999 we travelled to Europe as part of an industry contingent of 45 growers, researchers and resellers and experienced a "light bulb moment". This began our second transformation period that made the stepwise changes that continue to this day. On this trip we visited eight countries (Italy, Switzerland, Austria, Germany, Britain, France, Belgium and Holland); visited the most modern planting systems in the world at the time; and met the most progressive growers, grower organisations, researchers, advisors, chemical resellers, government officials, chemical companies, distribution outlets, and packing houses.

Many came back from this trip making the comment they were doing just as well and did nothing new. Our reaction was at the other end of the scale; we came home and did everything different.

This trip was so valuable that I returned again in 2002, 2004, 2006, and 2008 to expand on the ideas they first challenged us with, and my brothers and I have also visited South Africa and the United States of America on numerous occasions.

In addition to this trip the industry began to resource its R&D program. In my role on the national Research and Development committee I've seen the implementation of many valuable R&D programs such as the FutureOrchards™, the formation of great friendships and relationships with local and overseas experts, and the adoption of world leading best management practice.

We now own and manage over 42ha of apples with an average yield of 49 T/Ha across the entire farm not just the bearing acreage, with a goal to reach 60 T/ha by 2016. Planting is now on the dwarfing rootstock M9, trellis trained and supported, and tree densities of 4,162 trees/ha. To improve our response to changing market preferences we decided to grow our own nursery trees which are the best in Australia and in the top five in the world for quality. As a result, we can crop our trees up to 13 T/ha in the year of planting on some varieties.

Our fruit quality is excellent with a class one packout now 75%, up from 62%. Our pest and disease profile is now under total control on a very regular basis, and the cost of labour per tonne of fruit from the farm has diminished 20% this past year alone.

So in conclusion, the main thing to remember is if you see something on the web, at a meeting, in a newsletter, over the fence, or in discussion with a colleague, chase it up, it may change your life and the way you do things. The chances of you doing it next week are zero if you don't begin it today.

David Williams

Principal Research Scientist- Invertebrate Sciences, Biosciences Research Division,
Department of Environment and Primary Industries VIC

Abstract **Evaluation of pheromone-mediated mating disruption for managing carob moth in almonds**

David Madge[1], Cathy Taylor[2], and David Williams[3]
[1] Department of Environment and Primary Industries, Biosciences Research Division, Irymple, Victoria
[2] Department of Environment and Primary Industries, Farming Systems Research Division, Irymple, Victoria
[3] Department of Environment and Primary Industries, Biosciences Research Division, Tatura, Victoria
david.williams@depi.vic.gov.au

The level of almond kernel damage attributed to carob moth Ectomyelois ceratoniae in Australia appears to have increased over recent years. Local almond processors have low tolerance of kernels with insect damage and there is also a possible association between insect damage and increased risk of fungal infection. Carob moth infests a wide range of crop species around the world and in almond production it affects marketable yields, and increases costs related to pesticide applications (costs of chemicals, labour and machinery, and potential secondary pest outbreaks resulting from impact on beneficial predators). Most of the overseas research on carob moth has been on crops other than almonds, and very little has been done in Australia on any crops. HAL project AL12004 commenced in 2012 with the aims of (i) developing a good understanding of carob moth as an almond pest and (ii) developing strategies to minimise nut infestation. Moth pests such as codling moth and oriental fruit moth in other tree crops have been successfully controlled by pheromone-mediated mating disruption, usually without the need to intervene with pesticide applications. Infestations of carob moth in Californian date crops have been controlled by mating disruption. In the 2012-13 Australian almond growing season preliminary trials were conducted to evaluate the potential of mating disruption to control carob moth under Australian conditions. The mating disruption treatments successfully shut-down carob moth pheromone traps, indicating that the treatments reduced the ability of male moths to find female moths. As with most mating disruption trials for other pests, the size of experimental plots is important because female moths that mated outside of the treated area can migrate into the treated area to lay eggs. This appears to have been the case in 2012-13 since the level of damage in the pheromone treated plots was slightly higher than that expected from the level of trap shutdown. For 2013-14 the size of experimental plots will be increased and different rates of pheromone application will be compared. Lower rates of application should allow greater areas to be treated for the same cost while reducing the potential for migration of mated females into the treated areas.

Dr Michelle Wirthensohn

Horticulture Research Fellow, University of Adelaide

Abstract **The Upside of Almonds Downunder**

Dr Michelle Wirthensohn, University of Adelaide

The Australian almond breeding program began in 1997 and to date the program has used 84 parents from Australia, Europe and USA and produced 34,177 progeny for evaluation from 315 different crosses. The direct crosses have now completed and the projects main focus will be the evaluation and commercialisation of promising selections. Those crosses from the late 90s have now passed the secondary evaluation period and five superior selections have been chosen to date to enter the tertiary phase of evaluation. Three of the selections carry the self-fertile gene and the results from the bagging of these trees to exclude pollinators show a moderate to high self fruit set which is promising. The tertiary evaluation phase will involve semi-commercial trials of approximately 100 trees of each selection grafted to rootstocks and planted on three different commercial orchards in at least two different growing regions. 2013 was the first year of harvest for the second of the secondary trials and two selections are showing promise with yields greater than Nonpareil. Further harvests will be required to establish their long-term productivity. The research is expected to fine tune the evaluation of key characteristics such as nut seal, self fertility, kernel quality and yield.

NUTS? WE UNDERSTAND.

Stoller Australia has been working with the almond industry for more than 15 years.

We're committed to investing in on-farm research and development – our programs are perfected in real-life systems and specifically designed for almond growers.

Visit our team at the Stoller Australia exhibit and test their nut knowledge.

Stoller Australia, Silver Sponsor of the Australian Almond Conference 2013 and nut enthusiasts.

CONTACT STOLLER ON FREECALL 1800 337 845 OR EMAIL INFO@STOLLER.COM.AU

Gallard Services

Shaping your trees future






AFRON

GB-36R

AIR-O-FAN

D-40R

FAE

G3-536

GALLARD SERVICES - LEADING THE WAY WITH EXCITING NEW SHREDDING EQUIPMENT.

The Flory WS 900 just completed the first season with outstanding results. It has allowed Almond Growers first time to mulch their prunings in the orchard with no need to push and burn. The success of the Flory has meant the purchase of a second machine ready for the upcoming almond season. The clearing of standing orchards and stump grinding has proven successful in most cases with the clearing of large orchards ready for re-plant.

GALLARD MACHINERY – LEADING THE WAY WITH SALES & SERVICE OF AIR-O-FAN SPRAYERS

If you are looking for the very best in quality & performance, Air-O-Fan has been providing superior equipment since 1945. Manufactured in 2,000, 2,500 & 4,000 Litre tank configurations, gives our growers the ability to travel faster while providing better coverage. Our PTO driven product lines provide big features in small packages like our “reverse fan technology” (also found on the D-40R engine drive) which eliminates leaf plugging, DK turning hitch (for tight controlled turning), Centrifugal or Diaphragm pump options, top quality rate controllers as well as electric, hydraulic, or manual spray control valves, dry camlock fills, large flotation tyres. Our equipment can be fitted to suit your tractor for optimum performance without taxing your tractor and we also offer a full line of herbicide units from conventional boom assemblies to fully automatic weed seeker units.

Contact Gallard Services for all of your spraying, shredding, mulching & service needs!

Contact: John Gallard
Phone: (08) 8582 1671 Fax: (08) 8582 1075
Email: sales@gallardservices.com.au
www.gallardservices.com.au
20 Pennyfield Road Glossop 5344

Sponsors & Exhibitors

Platinum

Haifa

Gold

Bianchi Orchard Systems LLC
The Complete Orchard Harvesting System

Silver

Stoller
Unleashing The Power Of Plants

TAYPER

Bronze

YARA

KILTER RURAL

omnia NUTRIOLOGY
Omnia Specialties Australia Pty Ltd

Dinner

E.E. Muir & Sons

Welcome

JACK RABBIT

Exhibitors

Haifa
Bianchi Orchard Systems LLC
E.E. Muir & Sons
TAYPER
Stoller
Unleashing The Power Of Plants
DOW Dow AgroSciences
ZADCO for quality gro. pty. ltd.
wilchem
AGRICROP Products for Plants
WM
NETAFIM
OMC
MAIT Industries
NELSON
JACK RABBIT
MEA
FLORY
GALLARD MACHINERY
MELPAT INTERNATIONAL PTY. LTD.
SPRAY GRO LIQUID FERTILIZERS
Orchard-Rite USA • Australia
SHC
Exact Harvesting Systems
Chemtura

Supporting Sponsors

Government of South Australia
Primary Industries and Regions SA
KILTER RURAL
BEN THOMAS CONSULTING
FLORY
SPRAY GRO LIQUID FERTILIZERS
GrowSmart TRAINING
WM
LARAGON PTY. LTD. ALMOND PROCESSORS
omnia NUTRIOLOGY
madec
Seasol
MOSSMONT NURSERIES
BankSA SA's No. 1 Business Bank.
YARA

Complete Line of Quality Nut Harvesting Equipment

- Fewer Moving Parts
- Easy Maintenance
- High Resale

- Self-Propelled Harvesters
- P.T.O. Harvesters
- Self-Propelled Air Cab Sweepers
- Self-Propelled Sweepers
- Tractor Mount Sweepers
- P.T.O. Blowers

MORE HARVEST PROFIT AT A LOWER COST

Call for Closest Dealer and a Demonstration:

(530) 891-6214

Weiss McNair

NUT HARVESTING EQUIPMENT

100 Loren Avenue, Chico, CA 95928 | (530) 891-6214 | Fax (530) 891-5905 | www.weissmcnair.com

Participants

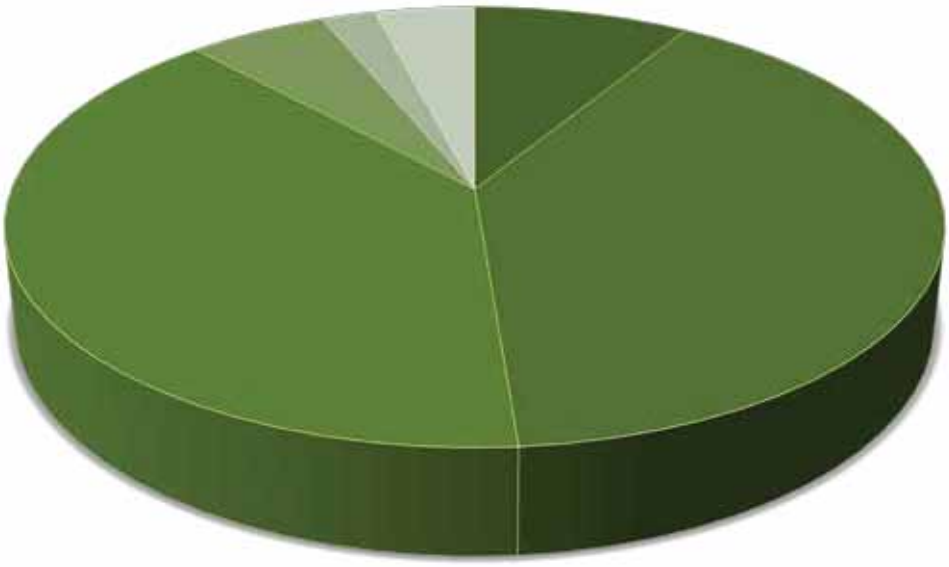
Surname	First Name	Organisation	Type
Alevras	Mike	Seasol International	Sponsor
Andersen	Brian	Orchard Machinery Corporation	Sponsor
Andrews	Paul	Wilchem	Sponsor
Angel	Peter	MADEC	Sponsor
Arai	Shota	JPP Australia	Sponsor
Arioli	Tony	Seasol International	Sponsor
Backus	Wayne	Olam Orchards Australia Pty Ltd	Grower
Bailey	Aaron	Select Harvests	Grower
Barker	Sam	GBC Motors	Sponsor
Barrington-Case	Angus	Colliers International	Sponsor
Bell	Cameron	Olam Orchards Australia Pty Ltd	Grower
Bennett	Deb	Cowanna Almond Harvesting	Grower
Bennett	Neale	Cowanna Almond Harvesting	Grower
Bennett	Richard	Horticulture Australia	Speaker
Berger	Tom	ICMI Speakers & Entertainers	Speaker
Blackwood	Simon	Spraygro Liquid Fertilisers	Sponsor
Boddy	Charles	Borrell USA Corp	Sponsor
Bollerud	Hans	Orchard Rite USA	Sponsor
Botta	Peter	PCB Consulting	Speaker
Bradshaw	Dianne	Tayper Enterprises	Sponsor
Bratis	Tony	Statewide Bearings	Sponsor
Brooks	Kevin	Strmiska Consulting	Researcher
Brown	Andrew	Olam Orchards Australia Pty Ltd	Grower
Brown	Chris	DowAgrosciences	Sponsor
Brown	Andrew	MAIT Industries	Sponsor
Brown	Ben	Almond Board of Australia	Staff
Buchanan	Greg	Horticulture Australia Ltd	Speaker
Burgess	Stuart	Horticulture Australia Ltd	Speaker
Burns	Michael	Walker Flat Almonds	Grower
Byrne	Rob	Jubilee Almonds	Grower
Byrne	Judy	Jubilee Almonds	Grower
Callipari	James	Callipari Syndicate	Grower
Callipari	Sonia	Callipari Syndicate	Grower
Campbell	David	Walker Flat Almonds	Grower
Carroll	Wayne	Carroll Partners	Retailer
Carruthers	Jim	Select Harvests	Grower
Cavallaro	Peter	Walker Flat Almonds	Grower
Cavallaro	David	Stoller Australia	Sponsor
Cavallaro	Domenic	Cavallaro Angle Vale Almond Trust	Grower
Chase	John		Speaker
Cheung	Thomas	Sunbeam Foods	Retailer
Clarke	Rob	Omnia Specialities Australia	Sponsor
Clements	Michael	Clemco Pty Ltd	Grower
Clingeleffer	Peter	CSIRO Plant Industry	Researcher
Coates	Michael	University of South Australia	Speaker
Coates	Mrs	University of South Australia	Researcher
Condo	Frank	Swan Almonds	Grower

Surname	First Name	Organisation	Type
Constable	Fiona	Department of Environment and Primary Industries	Researcher
Cordoma	Joshua	Agrichem	Sponsor
Costa	Phillip	Costa Produce Pty Ltd	Grower
Costa	Michael	Costa Produce Pty Ltd	Grower
Costa	Tony	Costa Produce Pty Ltd	Grower
Cox	Robert	Bright Light AgriBusiness	Grower
Cox	Simon	Elders Rural Services Ltd	Sponsor
Crawford	David	CMV Farms	Grower
Cresswell	Geoff	Nu-Edge Solutions Australia Pty Ltd	Sponsor
Cunningham	Saul	CSIRO	Researcher
de Jager	Jan	Omnia Specialities Australia	Sponsor
de Oliveria	Rodrigo	IRTA	Researcher
Demmer	Larry	Weiss McNair LLC	Sponsor
DeMont	Bob	JackRabbit	Sponsor
Dennis	Trevor	HAIFA Chemicals Australia	Sponsor
Di Giorgio	Nick	Rabobank Berri	Sponsor
Dinicola	Denis	Dinicola Management Pty Ltd	Grower
Dinicola	Annette	Dinicola Management Pty Ltd	Grower
Dinicola	Dean	Dinicola Management Pty Ltd	Grower
Doecke	Andrew	Omnia Specialities Australia	Sponsor
Donkersley	Mike	SACOA Pty Ltd	Sponsor
Douglas	Julie	Outback Almonds	Grower
Douglas	Sholto	Outback Almonds	Grower
Dowdy	Lachlan	Swan Hill Chemicals	Sponsor
Downes	Nick	MWT Foods	Retailer
Duncan	Roger	University of California	Speaker
Ebbage	Joseph	Almond Board of Australia	Staff
Emery	Richard	Stoller Australia	Sponsor
Emmett	Bob	Department of Environment and Primary Industries	Researcher
Estes	Wes	Nelson Manufacturing Co Inc	Sponsor
Estes	Mike	Nelson Manufacturing Co Inc	Sponsor
Fielke	John	University of South Australia	Researcher
Finch	Jane	Select Harvests	Grower
Fletcher	Brent	Rabobank Berri	Sponsor
Flory	Marlin	Flory Industries Inc	Sponsor
Foster	Rebecca	Olam Orchards Australia Pty Ltd	Grower
Fourie	Jan	CMV Farms	Grower
Frahn	Rohan	Gallard Machinery	Sponsor
Fremder	Andrew	Almas Almonds Pty Ltd	Grower
Friday	Euan	Kilter Rural	Sponsor
Gadsden	Abby	Swan Hill Chemicals	Sponsor
Gallard	Sam	Gallard Machinery	Sponsor
Gallard	John	Gallard Machinery	Sponsor
Gallucci	Mario	GB-Commtrade Pty Ltd	Retailer
Gardner	Ian	Redox	Sponsor
Gilan	Shaul	HAIFA Chemicals Australia	Sponsor
Gilmour	John	DowAgrosciences	Sponsor

Surname	First Name	Organisation	Type
Goldsack	Mark	Bayer CropScience	Sponsor
Gouk	Chin	Department of Primary Industries Victoria	Speaker
Grewal	Cherry	Lake Cullulleraine Almonds	Grower
Grewal	Manjinder	Grewal Family Trust	Grower
Grigg	Natasha	National Australia Bank	Sponsor
Gulack	Robert	Olam Orchards Australia Pty Ltd	Grower
Gunawardena	Maddumage	BioAg Pty Ltd	Sponsor
Haines	Phil	Department of Environment & Primary Industries	Researcher
Hall	Nick	Nufarm Australia Limited	Sponsor
Harkins	Shannon	Almond Board of Australia	Staff
Harms	Tim	JackRabbit	Sponsor
Harrison	Ben	Nut Producers Australia	Marketer
Haynes	Richard	Elders Ltd	Sponsor
Henry	Peter	Netafim	Sponsor
Henshall	Phillip	Jubilee Almonds	Grower
Henshall	John	Jubilee Almonds	Grower
Hicks	Darren	AgVita Analytical	Sponsor
Hill	James	Point Farms	Grower
Hobbs	Andrew	CMV Farms	Grower
Hoben	Brett	Measurement Engineering Australia	Sponsor
Hockney	Peter	Toro	Sponsor
Houlahan	Damien	Olam Orchards Australia Pty Ltd	Grower
Hutchins	Deanna	Laragon Pty Ltd	Grower
Ietto	Anthony	Ietto Contracting Services	Sponsor
Iwaniw	Michael	Select Harvests	Grower
Izzard	Dean	Zadco For Quality Gro Pty Ltd	Sponsor
Jackson	Tim	Almondco Australia Limited	Grower
Jain	Tapish	RJB	Grower
James	Jack	Riverland Horticultural Supplies	Sponsor
Jeans	Gary	Swan Hill Chemicals Pty Ltd	Sponsor
Johansson	Asma	Zadco For Quality Gro Pty Ltd	Sponsor
Johns	Graham	Almond Investors Limited	Grower
Johnson	Mark	Sunraysia Ag Centre	Sponsor
Jones	David	SACOA Pty Ltd	Sponsor
Joyce	Chris	Nut Producers Australia	Marketer
Judd	Graeme	EE Muir & Sons Pty Ltd	Sponsor
Katis	Nicholas	MacQuarie Agricultural Services	Grower
Kay	Caroline	Strmiska Consulting	Researcher
Kearsley	Brett	Spraygro Liquid Fertilisers	Sponsor
Keir	Ben	Olam Orchards Australia Pty Ltd	Grower
Kelly	Kevin	MacQuarie Agricultural Services	Grower
Kennedy	John	JA Kennedy & Associates	Grower
Kennedy	Tim	Select Harvests	Grower
Knight	Andrew	Select Harvests	Grower
Koufalas	Bill	Waterfind Pty Ltd	Sponsor
Koutrikas	Nick	Select Harvests	Grower
Kreidl	Simone	Department of Environment and Primary Industries	Researcher
Kumar	Alok	Horticulture Australia	Researcher
Kupatt	Chuck	Crop Microclimate Management	Researcher
LaBella	Lucia	Elders Ltd	Sponsor
Lacey	Adrian	AH & V Lacey	Grower
Lacey	Andrew	Lacton Pty Ltd	Grower
Lacey	Virginia	AH & V Lacey	Grower
Lampinen	Bruce	University of California	Speaker
Langdon	Jake	Almondco Australia Limited	Marketer
Lean	Adam	Netafim	Sponsor
Lees	Denise	Brownport Almonds	Grower
Lees	Adrian	Brownport Almonds	Grower
Linsdell	Greg	EE Muir & Sons Pty Ltd	Sponsor
Lloyd	Chris	BARMAC	Sponsor
Lloyd	Matt	Netafim	Sponsor
Lopez	Eliecer	IRTA	Researcher
Lorenz	Troy	Redox Pty Ltd	Sponsor
Luke	Rod	Kilter Rural	Sponsor
Lyons	Jim	Agricrop	Sponsor
Magarey	Peter	Magarey Plant Pathology	Researcher
Manna	Robert	Select Harvests Ltd	Grower
Manning	Walter	Orchard Rite Australia	Sponsor
Maragozidis	John	Goanna Produce Pty Ltd	Grower
Maragozidis	Anastasia	Goanna Produce Pty Ltd	Grower
March	Russell	Silvan Australia P/L	Sponsor
Marshall	Lyle	Select Harvests	Grower
Martin	Brent	Nutwood Orchards	Grower
Martin	Cheryl	Nutwood Orchards	Grower
Martin	Gerald	Pollination Industry R&D	Speaker
Martin	Jan	Omega Orchards	Grower
Martin	Paul	Nutwood Orchards	Grower
Martin	Tom	TGP Almonds	Grower
Mason	David	Jakad Almonds	Grower
Mason	Allyson	Jakad Almonds	Grower
Mathur	Deepak	Agrichem	Sponsor
McClintock	Rachael	R&D Viticultural Services	Grower
McDonald	Shannon	Air-O-Fan Products	Sponsor
McKenzie	Scott	Century Orchards	Grower
McLaren	Ryan	Riverland Horticultural Supplies	Sponsor
McMahon	Debbie	Almond Board of Australia	Staff
McMaster	Jamie	SLTEC - Sustainable Liquid Technology	Sponsor
McMichael	Prue	Scholefield Robinson Horticultural Services	Researcher
Mead	Ian	National Harvesters	Sponsor
Menegazzo	Jason	Indigo Farm Pty Ltd	Grower
Millen	Tim	Tol Tol Almonds	Grower
Moir	Cathy	CSIRO	Researcher
Monks	Dave	Department of Primary Industries Victoria	Researcher
Montgomery	Marty	Nufarm Australia Limited	Sponsor
Moore	David	Horticulture Australia	Sponsor
Moriconi	John	Nu-Edge Solutions Australia Pty Ltd	Sponsor
Morton	Stephen	Almondco Australia Limited	Grower
Moss	Ian	Mossmont Nurseries P/L	Grower
Moss	Valerie	Mossmont Nurseries P/L	Grower
Mousley	Brian	Tayper Enterprises	Sponsor
Muir	Ian	EE Muir & Sons Pty Ltd	Sponsor
Muir	Ric	EE Muir & Sons Pty Ltd	Sponsor
Muller	Brett	Select Harvests	Grower
Murnane	Luke	Progressive Green Pty Ltd	Sponsor
Nish	Mark	SLTEC - Sustainable Liquid Technology	Sponsor
Orr	Robert	Lake Cullulleraine Almonds	Grower
Orth	Al	Flory Industries	Sponsor
Packer	Colin	Sentek	Sponsor
Paltridge	Steve	Select Harvests	Grower
Pathania	Narender	Rmonpro Developments Pty Ltd	Grower
Peterson	Philip	Yara Australia	Sponsor
Pettigrew	Stuart	Ag Dynamics	Sponsor

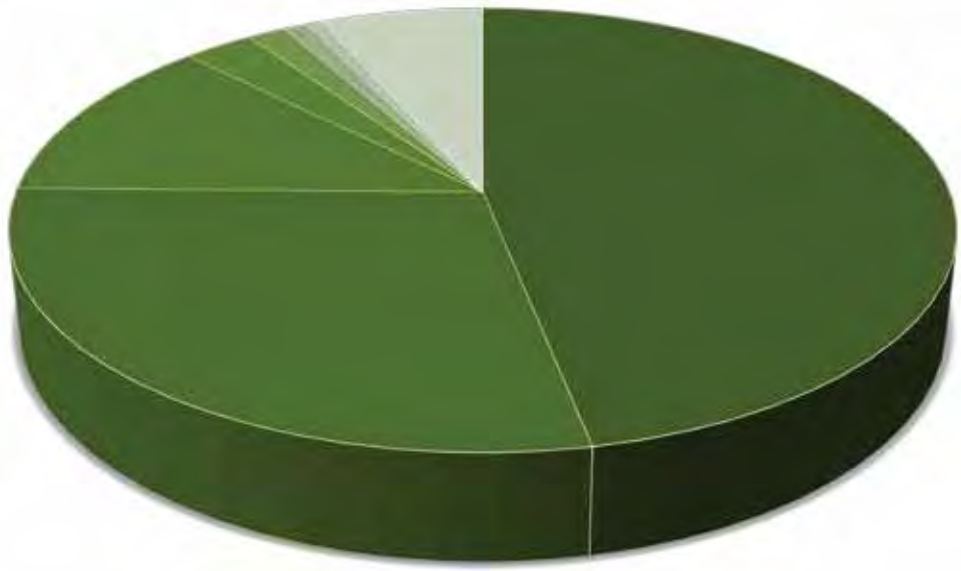
Surname	First Name	Organisation	Type
Pezzaniti	Nick	N & WA Pezzaniti	Grower
Phillips	Steve	Tanuki Pty Ltd	Sponsor
Pierson	Jim	AJS Pierson & Son	Grower
Pierson	Benjamin	AJS Pierson & Son	Grower
Pippos	Jo	Almond Board of Australia	Staff
Pitt	Tim	SARDI Water Resources	Sponsor
Prinsloo	Johan	Omnia Specialities Australia	Sponsor
Puleio	Michael	Olam Orchards Australia Pty Ltd	Grower
Read	Tony	Jubilee Almonds	Grower
Reed	Ken	Elders Ltd	Sponsor
Reichstein	Ian	National Residue Survey	Researcher
Richman	Troy	Olam Orchards Australia Pty Ltd	Grower
Rigden	Justin	Adelaide Research & Innovation Pty Ltd	Researcher
Ringeisen	Tony	Exact Corp	Sponsor
Roberts	Kaylan	Burchell Nurseries	Speaker
Robinson	Ben	Scholefield Robinson Horticulture	Guest
Rohrlach	Peter	Nutwood Orchards	Grower
Rosenzweig	Brett	Almond Board of Australia	Staff
Ross	Richard	Marubeni Corporation	Researcher
Ross	Peter	Select Harvests	Grower
Ruggiero	Vince	S & V Ruggiero	Grower
Ryan	Dan	Plant & Food Research	Researcher
	Saini	Select Harvests	Grower
Sanders	Kevin	H & LM Sanders	Speaker
Sarkis	Michelle	Rural Funds Management	Grower
Sarkis	Michael	Rural Funds Management	Grower
Scholefield	Peter	Scholefield Robinson Horticultural Services	Researcher
Schwarz	Alan	Chemtura	Sponsor
Scott	Bruce	EE Muir & Sons Pty Ltd	Sponsor
Shahzad	Zubair	Olam Orchards Australia Pty Ltd	Grower
Sharpe	Wendy	Sharpe Almonds	Grower
Sharpe	Andrew	Sharpe Almonds	Grower
Shaw	Chloe	Jubilee Almonds	Grower
Sheffield	Peter	TW & RD Falting	Grower
Sherriff	Matt	SACOA Pty Ltd	Sponsor
Sidhu	Brendan	Jubilee Almonds	Grower
Simes	Craig	EE Muir & Sons Pty Ltd	Sponsor
Singh	Tony		Grower
Singh	Tony	Tony's Son	Grower
Skinner	Andrew	Measurement Engineering Australia	Sponsor
Skinner	Ross	Almond Board of Australia	Staff
Slater	Brian	MacQuarie Agricultural Services	Grower
Slaughter	John	Burchell Nursery	Speaker
Smith	Toby	Olam Orchards Australia Pty Ltd	Grower
Smith	Daniel	Olam Orchards Australia Pty Ltd	Grower
Smith	Nathan	SJB Ag-Nutri Pty Ltd	Sponsor
Spiers	Maureen	AJ & MH Spiers	Grower
Spiers	Tony	AJ & MH Spiers	Grower
Strange	Pam	Elders Ltd	Sponsor
Stretton	Darryl	Bayer Crop Science	Sponsor
Strout	Graham	TGP Almonds	Grower
Sutton	Clay	Chemtura	Sponsor
Taylor	Dean	MAIT Industries	Sponsor
Taylor	Cathy	Department of Primary Industries Victoria	Researcher
Teitz	Leigh	SJB Ag-Nutri Pty Ltd	Sponsor
Thomas	Ben	Ben Thomas Consulting	Researcher
Thompson	Paul	Select Harvests	Grower
Thornton	Danny	EE Muir & Sons Pty Ltd	Sponsor
Thorp	Grant	Plant & Food Research Australia	Researcher
Trezise	Kelvin	Simarloo Aust Pty Ltd	Grower
Trinick	Natalie	Tayper Enterprises	Sponsor
Tsiros	Jim	Peter Tsiros & Sons	Grower
Tsiros	Evan	Peter Tsiros & Sons	Grower
Turner	Craig	Seasol International	Sponsor
Turner	Melanie	Melpat International Pty Ltd	Sponsor
Turner	Hamish	Melpat International Pty Ltd	Sponsor
Van Driel	Laurence	Select Harvests	Grower
Vandenberg	Tim	Olam Orchards Australia Pty Ltd	Grower
Wachtel	Anthony	Century Orchards	Grower
Wager	Shane	Stoller Australia	Sponsor
Wang	Wei-Chun	Olam Orchards Australia Pty Ltd	Grower
Ward	Michael	Jubilee Almonds	Grower
Wardle	Anne-Maree	Select Harvests	Grower
Weatherald	Simon	Waterpool Trading	Sponsor
Webber	Mark	Laragon Pty Ltd	Grower
Weckert	Nick	DuPont Crop Protection	Sponsor
Wells	Brad	Horticulture Australia	Sponsor
Wentz	RJ	Bianchi Orchard Systems Australia	Sponsor
Wetherall	Matthew	Yara Australia	Sponsor
Wheatley	Robert	Olam Orchards Australia Pty Ltd	Grower
Wheaton	Derek	Rabobank	Sponsor
Whitelegg	John	Rabobank	Sponsor
Wickstein	Russell	Almondco Australia Limited	Grower
Wilhelm	Brenton	Wilchem	Sponsor
Willcock	Graham	Orchard Rite Australia	Sponsor
Williams	David	Department of Environment & Primary Industries	Speaker
Willmott	Peter	Department of Primary Industries and Regions	Sponsor
Winter	Carol	Rural Funds Management	Grower
Winter	Daryl	Rural Funds Management	Grower
Wirthensohn	Michelle	University of Adelaide	Researcher
Wittwer	Scott	National Australia Bank	Sponsor
Woolston	Brenton	Almondco Australia Limited	Grower
Wright	Joe	Spraygro Liquid Fertilisers	Sponsor
Zady	Joseph	Zadco For Quality Gro Pty Ltd	Sponsor
Zhu	Ying	University of Adelaide	Researcher

Delegates by Type



Researchers	28	9%
Grower	128	40%
Suppliers/Sponsors	126	39%
Other	18	6%
Staff	7	2%
Speaker	13	4%
	320	100%

Delegates by Origin



SA	150	47%
VIC	91	28%
NSW	39	12%
QLD	9	3%
WA	5	2%
TAS	3	1%
ACT	2	1%
International	21	7%
	320	**100%**

Today's Challenges Tomorrow's Success

AAC 2013

15th Australian Almond Conference

Stamford Grand Hotel Glenelg, South Australia

October 29-31, 2013

The Almond Board of Australia is continually striving to improve the quality and relevance of the annual industry conference program it provides - to do this we need your feedback and comments. Remember, this is YOUR conference and we strive to provide what YOU want! Please take a moment to reflect on this year's event and help us by honestly completing these few questions.

Please complete the attached form and return to by clicking the 'Submit by Email' button, by fax on +61 8 8582 3503 or post to PO Box 2246, Berri SA 5343 by November 15th.

Your Name: *(optional)*

Company: *(optional)*

1. Conference preparation & administration	Excellent	Good	Fair	Poor	Very Poor
Pre-conference organisation & registration					
Conference Venue (ie visibility, comfort, acoustics)					
Audiovisual equipment (ie could you hear speakers presentations)					
Catering					
Conference support staff					

What do you think we could do to improve the pre-conference preparation & administration?

2. The conference, content and presenters	Excellent	Good	Fair	Poor	Very Poor
Balance and mix of topics					
Relevance of presentations & topics to your needs					
Conference structure *(ie mix of speakers, discussion, social events)*					
Quality of key-note speakers & their presentations overall					
Conference value for money					

What do you think we could do to improve the conference content & presentations?

3. Did we get the conference format right?	Excellent	Good	Fair	Poor	Very Poor
Number of speakers & sessions					
Length of each session					
Length of conference					

What do you think we could do to improve the conference format?

4. What are the main reasons you attend the Australian Almond Conference (tick as many as apply)

Key-note speakers & program

Networking

Training & professional development

Other: (please describe)

5. Did the change in days (Tue - Thur) for the 2013 conference suit you: Better Worse Not sure

Please rate the individual components & speakers below giving a score between 1 and 5 (where 1=Poor & 5=Excellent)

Tuesday, October 29th

Conference Welcome Reception

Day 1 - Wednesday, October 30th

Annual Levy Payers' Meeting
Dr Greg Buchanan - Almond IAC & Stuart Burgess - HAL

Trendy Californian Almond Orchards - Varieties & Other Bling
John Slaughter - Burchell Nursery, USA

The Up Side of Almonds Downunder
Dr Michelle Wirthensohn - University of Adelaide &
Tony Spiers - Lindsay Point Almonds

What Lies Beneath: Root Knot Nematodes & Rootstock Choice
Peter Clingeleffer - CSIRO Plant Industry

Shining a Light on Canopy, Yield & Food Safety
Bruce Lampinen - University of California

What is Plan Bee? Protecting Pollination
Gerald Martin - Pollination Industry Research & Development

AAC Gala Dinner & Hall of Fame Induction
Wednesday, October 30th

Comments:

Horticulture R&D - Program Update
David Moore - Horticulture Australia

Honeybee Pollination for Maximum Yield
Dr Saul Cunningham - CSIRO Group Leader, Ecology Program

Carob Moth - Eating Your Profits?
David Williams - Dept. of Environment & Primary Industries VIC

Aeration, Cooling & Dehydration - On Farm Storage Options
Michael Coates - University of South Australia

Aspergillus - Protecting Your Crop & Your Reputation
Chin Gouk - Dept. of Environment & Primary Industries VIC

Telling Storage Pests to "Bug Off" - A Grains Industry Perspective
Peter Botta - PCB Consulting

Day 2 - Thursday, October 31st

Industry Reflections: Transforming Apple Orchards
Grant Thorp - Plant & Food New Zealand

Past to Present: Revolutionizing Australian Apple Orchards
Kevin Sanders - H & LM Sanders

Beyond Tomorrow: Investigating High Density Orchards
Roger Duncan - University of California

Evolution of Australian Almond Marketing
Joseph Ebbage - Almond Board of Australia

Comments:

Untapped Water Opportunities in the MDB
Rod Luke - Kilter Rural

OrchardNet - How Does Your Orchard Stack Up?
Brett Rosenzweig - Almond Board of Australia

Almond Industry Macro Trends
Paul Thompson - Select Harvests

What sessions or topics would you like to see included at future conferences?

7. How did you hear about the conference (tick as many as apply)

Email

Website

Colleague

In a Nutshell Newsletter

Australian Nutgrower

Other:

If you did not receive direct notification of the conference, and would like to for future conferences, please provide your email address here:

8. What was the best part of your conference experience?

9. What was the worst part of your conference experience?

10. In a few words please give us a quote that we may use for future promotion of our conferences:

Thank You

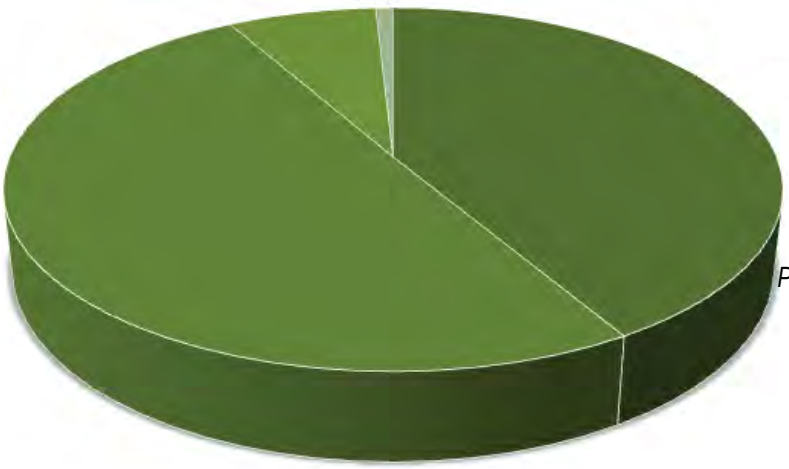
Your feedback helps to ensure we provide the conference you want!

Evaluation

Conference feedback was gained through a number of means including an interactive survey emailed to all participants at the conclusion of the conference (see appendix), telephone feedback and verbal comments. Evaluations are used to gauge effectiveness of the conference program, venue and speakers and used to make changes and improvements for future grower events.

A summary of the ratings by delegates is provided below:

Overall Conference Rating



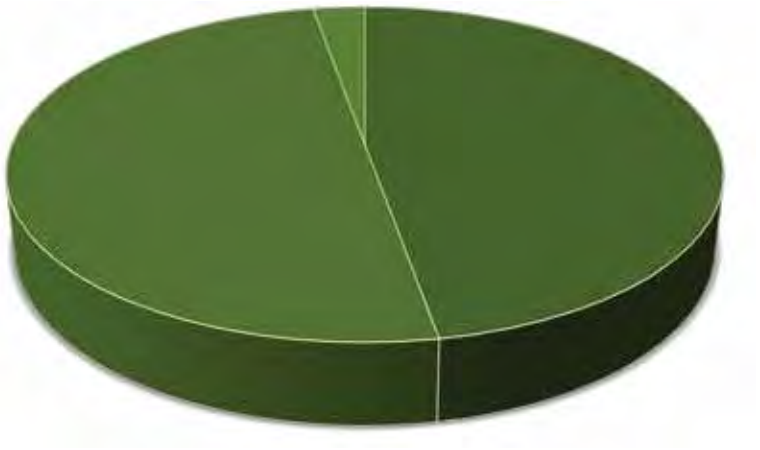
Excellent
42%
Good
50%
Fair
7%
Poor or Very Poor
1%

92% of respondents rated this year's Conference in the range of 'Good' (50%) & Excellent' (42%) overall. A 3% drop from 2012.

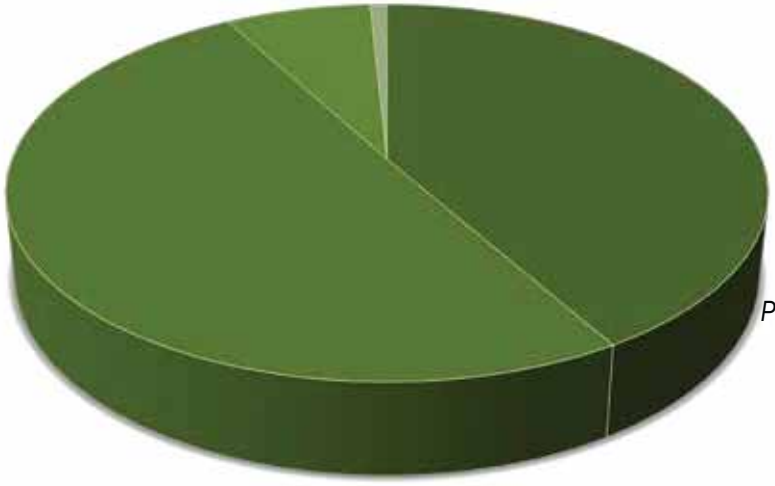
Topics & Sessions

97% of delegates responded that the topics and sessions during the 2013 conference were 'Excellent' or 'Good', with the remaining 3% of respondents stating that the sessions were 'Fair'.

Excellent
47%
Good
50%
Fair
3%



Management, Venue & Organisation



Excellent
41%
Good
50%
Fair
7%
Poor or Very Poor
1%

Conference management, venue and organisation feedback indicated that 99% of delegates agreed that these aspects of the conference were 'Excellent', 'Fair' or 'Good'.

In A Nutshell

ALMOND BOARD OF AUSTRALIA

Summer 2013

AUSTRALIAN ALMONDS

www.australianalmonds.com.au

www.bayercropscience.com.au

Bayer CropScience

Bayer CropScience Pty Ltd ABN 87 000 226 022391-393 Tooronga Rd, Hawthorn East, Vic. 3123
Technical enquiries: 1800 804 479 enquiries.australia@bayercropscience.com

* When used as directed.

BCH0406

ALMOND BOARD OF AUSTRALIA

Almond Board of Australia Inc.
ABN 31 709 079 099
9 William Street, PO Box 2246
Berri South Australia 5343

P + 61 8 8582 2055
F + 61 8 8582 3503
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

Find us on.....

AustralianAlmonds
AmazingAlmonds
@AusAlmonds
AussieAlmonds

Board Members

Circulation: With a circulation of more than 650 and readership of over 2000 the 'In A Nutshell' newsletter is available to the general public and interested parties via the Almond Board of Australian website www.australianalmonds.com.au, and high quality printed copies distributed to: Almond Board of Australia members, industry contacts within Australia and overseas, nut producing, distributing and marketing companies.

In a Nutshell

The Almond Board of Australia is the peak industry body representing the interest of almond growers, processors and marketers in Australia in matters of national importance including regulation, legislation, marketing research and development. In a Nutshell is published quarterly by the ABA to bring news to all industry contacts and members.

Advertising/Editorial

The Almond Board of Australia (ABA) acknowledges contributions made by private enterprise through placement of advertisements in this publication. Any advertising and/or editorial supplied to this publication does not necessarily reflect the views of the ABA and unless otherwise specified, no products and/or services are endorsed by this organisation.

Editor

Jo Pippos
Communications Manager
Almond Board of Australia
9 William Street, PO Box 2246
BERRI SA 5343
t +61 8 8582 2055
f +61 8 8582 3503
e jpippos@australianalmonds.com.au
w www.australianalmonds.com.au

Some of these projects were facilitated by HAL in partnership with the Almond Board of Australia. They were funded by the R&D levy and/or voluntary contributions from industry. The Australian Government provides matched funding for all HAL's R&D activities.

HAL
Horticulture Australia

Contents

ABA Membership

Why Become a Member?

As a member you have a direct say about the future of the industry and direct access to our organisation.

The ABA has undertaken industry-wide consultation to develop an Industry Strategic Plan which establishes funding priorities for the industry's R&D and marketing programs.

We aim to support our rapidly increasing industry by encouraging effective communication and co-operation between industry members.

The ABA aims to keep members informed through a range of activities including:

- Presentation of the Annual Almond Industry Conference.
- Distribution of the ABA's quarterly newsletter "In a Nutshell"
- Regular field days and regional meetings
- Technical articles and ABA news in the "Australian Nutgrower" Journal
- Collection and distribution of industry statistics
- Access to regularly updated information via the ABA website

To join the ABA please visit our website and download a membership form, or contact our office on 08 8582 2055 or email admin@australianalmonds.com.au

Wishing everyone a

Very Nutty Christmas

from the ABA Board members and staff

Please Note

The Almond Board of Australia Office will be closed from: **Tuesday, 24th December** and re-opens on **Monday, 6th January**

EXECUTIVE update

Chairman's Report

The Almond Conference was held at the end of October and was a great two days with an increase of 80 delegates over last year, and pleasingly 45 of these were growers. The wonderful co-operation of the Californian industry continued with John Slaughter, Bruce Lampinen and Roger Duncan making the journey to present at Conference and undertake field days in the producing regions following the event.

The ABA Board also honoured two very worthy inductees into the Australian Almond Industry Hall Of Fame in Tony Read and Ben Robinson. I urge you to read their tribute profiles on page 14 and to recognise the contributions of these industry members towards making our industry much stronger.

The Annual General Meeting of the ABA was held on the first morning of Conference at which an Amendment to the ABA Constitution was passed to rescind the Grower Director position for the Swan Region in WA and to increase the number of Marketer Directors from three to four. At its November meeting the Board extended an invitation for Laurence Van Driel of Select Harvests to join the Board until elections are held at the 2014 AGM.

The Board welcomes the new Grower Director for the Riverland, Peter Cavallaro who takes the Board position vacated by Tony Spiers. The Board's thanks go to Tony who served as the Riverland Grower Director for three terms since from 2007 to 2013. Before this, Tony was Secretary and then Chairman of the Riverland Region of the Australian Almond Growers Association. For the past 18 years, Tony has assisted Michelle Wirthensohn with the varietal breeding program and he will continue on as a member of the Plant Improvement Committee.

2013 has been a successful one for our industry and on behalf of the ABA Board, I would like to wish you all a prosperous new year and a rewarding harvest.

Neale Bennett
Chairman

CEO's Report

2013 has been a significant year for the Australian almond industry. It has been highlighted by a large increase in tonnage, a return to high quality product, a 20% increase in domestic consumption, investments in processing facilities, improved global prices, a weaker A$, record export shipments and a significant jump in grower returns.

There was also more good news from health studies on nuts which is helping to drive the continued strong growth in demand for almonds around the world.

All of these things were positive for the industry. Some were beyond the control of industry to influence but the efforts of many working for the industry across the supply chain have been rewarded in 2013. This year's production, that nearly reached 80,000 tonnes, was a record crop and the processors and marketers have met the challenge of selling this 60% increase in tonnage.

By mid year, Australian product had returned to the shelves of major supermarkets who had switched to imported pasteurised product following our product safety issues with bacterial contamination. The installation of bacterial treatment equipment was a major step for the industry's largest marketers to take and one that has reduced the risk to the product integrity of Australian almonds. In an attempt to eliminate the risk completely the ABA Board agreed to seek an amendment to the FSANZ Food Safety Standards to require all product sold in Australia to be treated.

Not all events have been positive. There have been continuing delays to free trade agreements with major Asian countries that would remove the tariff disadvantages that reduce the returns from the Chinese, Japanese and Korean markets.

Despite this, almonds are Australia's leading horticultural export industry in 2013 with overseas sales in excess of $300 million. This figure should increase to above $350 million for the marketing year for almonds which runs from March 2013 to the end of February 2014.

The 30,000 tonne increase in production in 2013 has doubled the supply available for export which combined with the significant rise in the global price for almonds has led to the enormous jump in export earnings. The Australian Bureau of Statistics figures as at the end of September show the tonnage of exports having increased by 43% but the value of that tonnage having increased by a staggering 112%.

The growth in consumption in the domestic market has remained strong with the consumption figure in the first seven months of the 2013/14 marketing year showing a growth of 6.6% over the previous year.

A further pleasing aspect of 2013 is the heavy crop hanging on the trees to be harvested in 2014. Early assessments show kernel size will be excellent which will be a major selling point as other global supplies are smaller in size than usual.

With favourable weather through to harvest's conclusion, the slightly larger 2014 crop should provide increased grower returns again next year if the price which has risen through 2013 remains high throughout the selling season and the Aussie dollar remains near or below US$0.90. Should this occur the farmgate value of the Australian industry will be closer to $600 million than this year's estimated figure of $500 million.

The above contains a lot of projections but should 2014 provide as many positives as 2013 the industry will again be well placed entering a new year.

On behalf of the ABA staff we wish all our members a joyful festive season and great year in 2014.

Ross Skinner
CEO

5

Marketing Matters

Joseph Ebbage Market Development Program Manager

2013-14 Production and Sales

Production The 2013 crop represents a major break-through event for the Australian almond industry. It is forecast to reach 78,000 tonnes which is 56% higher than the previous year's crop of 50,000 tonnes. The value of the 2013 crop is expected to exceed $500 million.

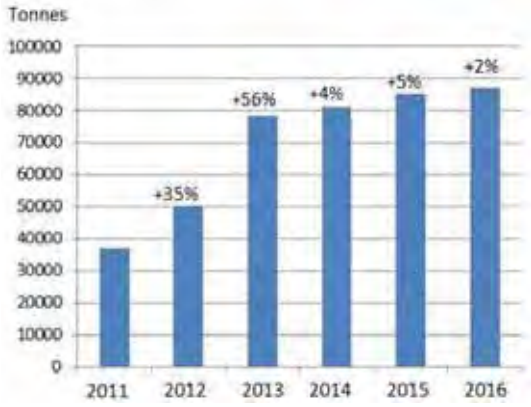
Export sales The table below looks at our export sales of Australian almonds for the first six months of our marketing year - March to August - and compares them to the export sales for the same period last year:

Exports	March - August	Sept - Feb	Total
2013	27,225		
2012	19,874	11,173	31,047
Incr (T)	**7,351**		
Incr %	**37%**		

Our 2013 export sales were 27,225 tonnes for the six months to August. This is a 37% increase over the same period last year, which were 19,874 tonnes.

Note that this period in 2012 represented 64% of the total marketing year's exports. It is envisaged that the March-August 2013 results will represent a significantly lower share of the total 2013 export sales.

From a regional sales perspective, the 'top 3' markets of Western Europe, India and the Middle East-Africa represent 83% of total export volume. The 2013 market shares of the key regions were consistent with the 2012 results.



Export Marketing Program

Anuga

The Australian almond industry exhibited at the Anuga Fine Food Fair in Cologne from October 5 to 9, 2013.

All four Australian almond marketing companies were present at the stand: Damien Houlahan and Toby Smith from Olam, Brenton Woolston and Tim Jackson from Almondco, Nigel Carey from Nut Producers Australia and Laurence Van Driel from Select Harvests.

Our stand was located in Hall 10.2 - Fine Foods - adjacent to the USA pavilion.

The organisers have released their key metrics for Anuga 2013: there were 155,000 trade visitors from 187 countries and 6,777 exhibitors. It remains one of the largest food fairs in the world.

The stand design and creative communicates a modern, professional image for the Australian almond industry.

It was designed to welcome both current and new customers to our industry.

While total traffic through the stand over the five days of the fair seemed lighter than previous Anuga experiences, there has been positive feedback about the sales results achieved.

A discussion took place relating to the role of these trade exhibitions for the Australian almond industry.

They serve as an efficient meeting place for the Australian marketers to catch up with customers from numerous countries.

They also serve as an opportunity for traders who have never purchased Australian almonds to meet with some of the Australian marketers 'face-to-face'. Over the last 10 years, the response from visitors to our stand has changed from "I didn't know that Australia grew almonds" to "I've heard about Australian almonds, but have never bought any - only buy from California'. These types of trade exhibitions allow these almond buyers to meet with our Australian marketers and form relationships that are more difficult via 'cold-call' email enquiries.

2014 New Season exhibitions

During the 2013-14 marketing year the ABA will organise exhibitions at the below major international trade expos. Two of these exhibitions are in our key markets of Western Europe and the Middle East-India-North Africa and two exhibitions are in markets with a high potential growth: Russia and Japan.

Anuga, Cologne, Germany – serving Western and Eastern Europe. Australian almond sales to this market in 2012-13 were 10,246 tonnes;

ProdExpo, Moscow – serving the Russian and Eastern Europe: Australian almond sales to this market in 2012-13 of 261 tonnes;

Gulfoods, Dubai, UAE – serving the Middle East, North Africa and Central Asia: Australian almond sales to this market in 2012-13 of 13,591 tonnes;

Foodex, Japan – serving East Asia and South-East Asia: Australian almond sales of 1920 tonnes to this market in 2012-13.

Domestic Driver Program

One of the key objectives of our 2014 marketing program is to more closely connect our consumers and customers with our growers. We know that Australians hold farmers in a high degree of trust. Our 2014 marketing campaign will bring our growers to 'centre-stage'.

A suite of creative applications is being developed for 2014 including the use of video for media rich content within online advertising as well as posters and shelf-talkers for in-store point of sale.

A schedule of advertising and PR is being prepared with our advertising and media buying agencies.

Planning is also underway for a new suite of almond recipes to be developed for 2014 with a focus on gluten-free options.

A key objective will be to take the recipes created and presented on our consumer website - amazingalmonds.com.au - and convert them into recipe leaflets used in-store.

Health professional program

Australian almonds were promoted at two major health conferences during the past three months: the New Zealand Dietitians Conference (September 1-4), and the Royal College of General Practitioners Conference (October 17-19).

New Zealand Dietitians Conference: The New Zealand Dietitians Conference was the first New Zealand health professional event in which the Australian almond industry has exhibited.

It was attended by 200 dietitians, half of whom requested our educational packs of brochures and almond snack tins. We will work with Dietitians NZ to distribute these packs.

Royal College of General Practitioners Conference: The RACGP Conference was held on October 17-19 at the Darwin Convention Centre. We received a positive reaction to our key health messages: namely a handful of almonds everyday to reduce LDL cholesterol, assist in improving heart health and help in the prevention of diabetes. We also presented material on almonds as a recovery snack after sport and exercise. More than 200 doctors have requested our educational packs of brochures and snack tins.

Events for December 2013:
Planning and preparation are underway for two other exhibitions in December: the International Diabetes Congress and the South Australian Fitness Expo.

The World Diabetes Congress was held at the Melbourne Convention and Exhibition Centre, Melbourne, Australia from 2 to 6 December 2013. The Australian almond industry co-exhibited with Nuts for Life. Our focus was to highlight the positive role of almonds in preventing and managing diabetes and developing relationships with professional leaders from Australia and key export countries within South-East and North-East Asia.

The inaugural Adelaide Sport, Fitness & Health Festival was held on the 7th and 8th of December 2013 during the Adelaide Ashes Test match, with activity zones staged throughout the Elder Park Precinct.

The focus of the Australian almond exhibition was the promotion of almonds as a 'natural sports recovery' snack. We gave away our sports nutrition brochures and our cricket-themed snack tins.

OMC

Serving the Australian nut industry for more than 35 years

SHOCK WAVE MAGNUM SERIES IV

SERIES IV ***SPRINT***

When down the row efficiency and speed is important the Shock Wave Magnum Series IV Sprint will deliver.

SERIES IV ***MONO BOOM***

The Shock Wave Magnum Series IV Mono Boom has the power and reach to shake even the biggest trees.

ORCHARD MACHINERY CORPORATION

2700 Colusa Highway Yuba City, CA 95993

Tel: (530) 673-2822 Fax: (530) 673-0296

www.shakermaker.com

Riverina almond producer wins Phil Watters Award

The 2013 Australian Almond Industry Phil Watters Award was awarded to Riverina almond grower James Callipari at this year's Australian Almond Conference held in Glenelg, South Australia, at the end October.

"The Award is an opportunity to assist industry members with an interest in an area of production or processing to enable them to increase their knowledge and then to share this with the wider industry." said Almond Board of Australia CEO Mr Ross Skinner.

Mr Skinner said the Award is presented every two years and that past recipients had undertaken overseas study tours to learn about soil biology, irrigation technology and supply-chain improvements.

The Phil Watters Award recognises service to the Australian almond industry, in particular a dedication to research, development and the improvement of almond production, adoption of best practice and promotion of horticulture to the community.

In accepting the Award, James advised the conference delegates that he felt very honoured to be the 2013 recipient of this industry Award which also carries with it a bursary of $10,000.

"It is a privilege to receive this award in honour of a person whose dedication and hard work contributed significantly to the Australian almond industry" said James.

After completing his Bachelor of Science in Agriculture at the Charles Sturt University in 2002 James returned to the family farm producing winter cereals, rice, vegetables and citrus. In 2006, James and his father Jim made the decision to enter into the almond industry and jointly purchased a property, completely transforming it with plantings over the next three years.

James really embraced the new challenge and resulted in several innovations. James liaised with harvest equipment manufacturers to produce a cost effective sweeper capable of reducing passes, fuel and labour inputs. James also adapted and implemented GPS auto-steer equipment for installing sub-surface drip; and designed and manufactured equipment to form and reshape tree mounds.

James has interacted with industry and promoted it at every available opportunity, hosting field days, undertaking media interviews and other activities.

The Almond Board of Australia selection committee for the Award noted James' drive and innovation had contributed significantly to him achieving his goal of excellence in his almond orchard.

James will use the prize to fund travels domestically and abroad where he will investigate more advanced production systems that deliver an earlier and more attractive return on investment through increased yield, improved quality and reduced costs of production.

The Award is part funded from a trust administered by the Almond Board of Australia (ABA) and is part funded by Horticulture Australia. It is dedicated to the memory of Phil Watters, a respected individual and dedicated technical officer in the almond industry.

To make donations to the Phil Watters Award or for more information about the Award, please contact the ABA office on 08 8582 2055 or visit the industry section of australianalmonds.com.au to download the forms.

Today's Challenges

15th Australian Almond Conference

Serving as a centre for communication, the Australian Almond Conference offers presentations on almond production related topics that directly impact grower decisions and activities in the orchard and marketplace. With technical experts from across the globe, it's no surprise that every year, Australian almond growers and allied industry members gather for the only conference in Australia dedicated entirely to the almond industry.

Growers and industry converged on the Stamford Grand in Glenelg SA, from October 29th – 31st to attend the 2013 Australian Almond Conference (AAC) and Trade Exhibition. The most successful conference for a number of years in terms of attendees, speakers and topics covered, growers benefited from the ongoing networking opportunities with their peers, presenters and suppliers. It is wonderful to see that despite difficult seasons over the past few years, this is still a well supported event.

The Conference is one of the best opportunities for processors and growers to sharpen their knowledge to foster the long-term sustainability of the industry.

The highlight of the information-transfer calendar, the program included both international and domestic keynote speakers presenting the latest advances in production and pest and disease management, along with almond marketing strategies in Australia and internationally.

The conference was an ideal setting for face-to-face communication of research and development (R&D) project results to National Levy payers and those that service the industry.

"Today's Challenges – Tomorrow's Success", the theme for the 2013 event looked at moving forward from past challenges, and facing our new position as the world's second largest almond producing country.

The first day's program included the Annual Levy Payers' Meeting, presentations on the advances in varietal breeding of Australian almonds, rootstock choice, food safety, pollination and storage pests, whilst the second day's proceedings included a look at comparative industry advances in tree spacing from New Zealand and Australian apple orchards, and high density almond

Tomorrow's Success

Stamford Grand Hotel Glenelg, South Australia

orchard trials being conducted in the United States.

Keynote speakers at the 2013 event included John Slaughter, Director of Breeding Program at Burchell Nursery in California; Bruce Lampinen, Integrated Orchard Management (walnut & almond specialist) from the University of California Department of Plant Sciences; Gerald Martin, Chairman of Pollination Industry Research & Development Council and Roger Duncan, Pomology & Viticulture Advisor from the University of California Cooperative Extension.

There were many opportunities for delegates to network and chat in a relaxed and social environment and the conference trade exhibition featured trade displays showcasing the latest innovation, and R&D from agricultural suppliers, machinery companies, transport and logistics companies and chemical suppliers.

Acclaimed as the biggest night of the conference, this year's annual Conference Dinner sponsored by EE Muir & Sons, paid tribute to the sixth and seventh inductees into the Australian Almond Industry Hall of Fame, Mr Tony Read & Dr Ben Robinson.

With a record 320 delegates, the conference has once again confirmed itself as a landmark event for the Australian almond industry. This highlights the importance of a national event to encourage networking and unity between growers, researchers, supply chain and service providers across Australia.

The ABA would like to thank sponsors and presenters for making this year's event a showcase that the Australian almond industry can be proud of, with special thanks to Horticulture Australia for its co-funding.

Copies of photos and presentations are available from the ABA website www.australianalmonds.com.au

Many thanks to everyone for their never ending enthusiasm and support and for making the conference a great success!

Sponsorship, exhibition and conference enquiries for 2014 should be directed to:

Jo Pippos, Communications Manager
Almond Board of Australia
P 08 8582 2055 F 08 8582 3503
E: jpippos@australianalmonds.com.au

Thanks to our Sponsors & Exhibitors....

Platinum

Haifa

Gold

Bianchi Orchard Systems LLC
BOS
The Complete Orchard Harvesting System

Silver

Stoller
Unleashing The Power Of Plants

TAYPER
Your global supply chain partners

Bronze

YARA

KILTER RURAL

omnia NUTRIOLOGY
Omnia Specialties Australia Pty Ltd

Dinner

E.E. Muir & Sons
"INNOVATORS IN AGRIBUSINESS"

Welcome

JACK RABBIT

Exhibitors

Haifa

Bianchi Orchard Systems LLC
BOS

E.E. Muir & Sons

TAYPER

Stoller
Unleashing The Power Of Plants

DOW Dow AgroSciences

ZADCO
for quality gro. pty. ltd.

wilchem

AGRICROP
Products for Plants

WM

NETAFIM
GROW MORE WITH LESS

OMC

MAIT Industries

NELSON

JACK RABBIT

MEA

FLORY

GALLARD MACHINERY

MELPAT INTERNATIONAL PTY. LTD.
ABN 18 066 067 507

SPRAY GRO
LIQUID FERTILIZERS

Orchard-Rite
USA • Australia

SHC

Exact
Harvesting Systems

Chemtura

Supporting Sponsors

Government of South Australia
Primary Industries and Regions SA

KILTER RURAL

BEN THOMAS CONSULTING

FLORY

SPRAY GRO
LIQUID FERTILIZERS

GrowSmart
TRAINING

WM

LARAGON
PTY. LTD.
ALMOND PROCESSORS

omnia NUTRIOLOGY
Omnia Specialties Australia Pty Ltd

madec

Seasol

MOSSMONT NURSERIES

BankSA
SA's No. 1 Business Bank.

YARA

ALMOND BOARD OF AUSTRALIA

HAL
Horticulture Australia

Haifa

Don't load your soil with salt

Haifa fertilisers are low in sodium and chloride, high in soluble nutrients

AUST. ALMOND CONFERENCE 2012-2014 Platinum SPONSOR

Haifa produces world renowned, fully water soluble fertilisers consisting entirely of high quality, pure plant nutrients and generous quantities of essential trace elements.

Haifa's potassium nitrate is 100% used by plants, contributing to significantly higher yields and improved quality – with no residual remaining in soils.

For further information, contact your Haifa team

Trevor Dennis, Managing Director
E: trevor.dennis@haifa-group.com **M: 0400 119 852**

Shaul Gilan, Southern Agronomist
E: shaul.gilan@haifa-group.com **M: 0419 675 503**

Haifa Australia T: 03 9583 4691 E: info@haifa-group.com

Haifa

Australian Almond Industry Hall of Fame

The Almond Board of Australia recognises that occasionally we should stop to consider the contribution people make to our industry. This industry has developed and come a long way over the last fifty years, and many people have contributed to these changes. Importantly, many of course continue to do so. Industry needs these people, needs their vision, their courage, their support. Without them it will neither develop as quickly nor as well.

Providing direction, pushing the boundaries, taking calculated risks and trying new techniques, technology and even new varieties are instrumental in helping to develop infrastructure. Whether processing or marketing, this allows the industry to both expand and to remain competitive. These people keep the industry focussed and cohesive, and assist through providing advice to others or serving on committees. All of our pioneers, in their own way, have helped make the industry what it is today.

In 2013 Mr Ben Robinson and Mr Tony Read were chosen to be publicly recognised for the significant contributions they have made to transforming a fledgling industry into the modern, vital and proactive force that it has become and has helped lay the foundation for today's industry.

The induction tribute videos are available to watch on the ABA Youtube Channel.

Tony Read

Tony Read has contributed to the Australian industry in several leadership roles during periods of transition for the industry and its representative bodies. He has also been a significant figure in the pioneering of large broad acre almond orchards, on which the modern Australian industry has progressed rapidly to become the world's second largest producing country.

Tony is highly regarded for his commercial acumen and management skills relating to both organisational governance and to project development and implementation. Irrigators have benefitted from his engineering skills in designing orchard systems and from his commitment to sound management of the Murray Darling Basin's water resources throughout his 20 year involvement as a consultant to, and director of, Murray Irrigation Limited in NSW.

Tony was educated at Norwood High School in Adelaide and undertook his tertiary education at Adelaide University, completing a Bachelor of Engineering with first class honours in 1961. Tony went on to study a Masters of Engineering in 1974 and a Masters of Business Administration in 1980. In 1962 Tony married Jenny, and he acknowledges that she has played a major role in his achievements.

Tony gained experience with irrigation projects working for consulting engineering company Kinnaird Hill de Rohan and Young, later to become Kinhill and more recently KBR. Tony was involved in a number of projects in the Riverland including Sunlands, Golden Heights, Tolley Scott and Tolley, Cottees and Angoves before moving to almond projects.

In 1972 Tony became associated with the almond industry through establishing the irrigation infrastructure for new orchards at Lindsay Point for the Almond Co-op. This ignited his interest in almond production. In 1985, Tony and Paul Martin reviewed the lessons learned from the Lindsay Point development and commenced plans for a major project that developed into Jubilee Almonds, established at Waikerie in 1987. Tony's role in the Jubilee Almonds project involved him as an investor, project manager for the 464 hectare planting, and Chair of the Jubilee Almonds Board for 27 years from its inception until October 2013.

Tony was also heavily involved in the establishment of Century Orchards, a company operating an almond and wine grape enterprise of 650 hectares located at Loxton. He was Chair of the Century Orchards Board from 1997 until 2013.

The almond hulling and shelling facility at Lindsay Point, known as Laragon, started with humble beginnings and expanded as Jubilee Almonds and Century Orchards became members. Tony became a director in 1978, and in 1990 became Chairman, a position he still holds.

Tony has played a major role in the Australian almond representative bodies, serving as a Director of the Australian Almond Growers Association from its inception in 1996, and held the position of Chair from September 1998 until 2002.

Tony, together with the AAGA Committee Chairs, developed the Almond Board of Australia Constitution and saw it successfully adopted in November 2002, moving the almond peak body from a grower organisation to one that represents the entire Australian almond industry, including processors and marketers.

During his period of leadership, the statutory almond research levy was passed by growers and government, Marketing Committee and voluntary marketing levy for generic promotion established, the need for export market development recognised, linkages to international nut bodies, research organisations and scientists put in place, and first full time staff employed. The foundations for the Almond Board of Australia structure and expanded industry development role were also put in place under Tony's period of stewardship.

Known for his humble manner and altruistic nature, Tony Read's commitment to the industry has been both long and productive.

Ben Robinson

Ben Robinson was widely recognised throughout his career as a horticulturist of great knowledge and expertise but importantly it was his service to industry that is celebrated, a role often embarked on in a volunteer capacity, and characterised by personal anonymity.

Ben received his Bachelor of Agricultural Science with honours in 1963. In 1964, he was granted a Barr Smith Travelling Scholarship in Agriculture from the University of Adelaide and was awarded his Ph.D. in Botany at Cambridge University in 1967.

After returning to Australia Ben was employed as a Horticultural Research Officer with the South Australian Department of Agriculture. His aspirations for continued learning and great admiration for Californian agricultural research saw Ben undertake Post Doctoral study with Professor G.G. Laties from the Department of Biological Sciences, University of California Los Angeles.

In 1971, Ben returned to the Department of Agriculture where he held several senior horticultural research roles until 1989. Ben spent the majority of his time investigating fertiliser use and plant nutrition in perennial horticultural crops, vegetables and floriculture; and soil acidification in orchards and vineyards. It was during this period that Ben undertook the first leaf tissue analysis survey in Australian almond orchards to develop a set of bench-mark standards; and Australia's first nitrogen experiment on almonds at Adrian Lacey's property in Nildottie. This was the beginning of a long working relationship with Adrian and many other almond growers.

In the late 1980s the Department of Agriculture proposed commercialising its Extension Service, at which time Ben and a colleague, Dr. Peter Scholefield, saw difficulties with the change. In 1989 Ben and Peter decided to partner and form what became the highly successful horticultural consultancy company, Scholefield Robinson Horticultural Services Pty. Ltd.

It wasn't all smooth sailing as shortly after commencement there was a very quiet period in horticulture, but consultancy work in Asia got them through this period until the wine grape boom. This was followed by the rapid expansion of almond and olive plantings across Australia.

Particular highlights through this period for Ben included: Strategic Planning for the winegrape, perennial horticulture and vegetable industries; technical problem solving for fruit and nut growers; international consultancy visits in China, India and the Middle East; collaborative R&D; and the development, authoring and co-editing of lectures, training programs and publications, including the widely recognised CSIRO publication: 'Plant Analysis: An Interpretation Manual', co-authored with Doug Reuter.

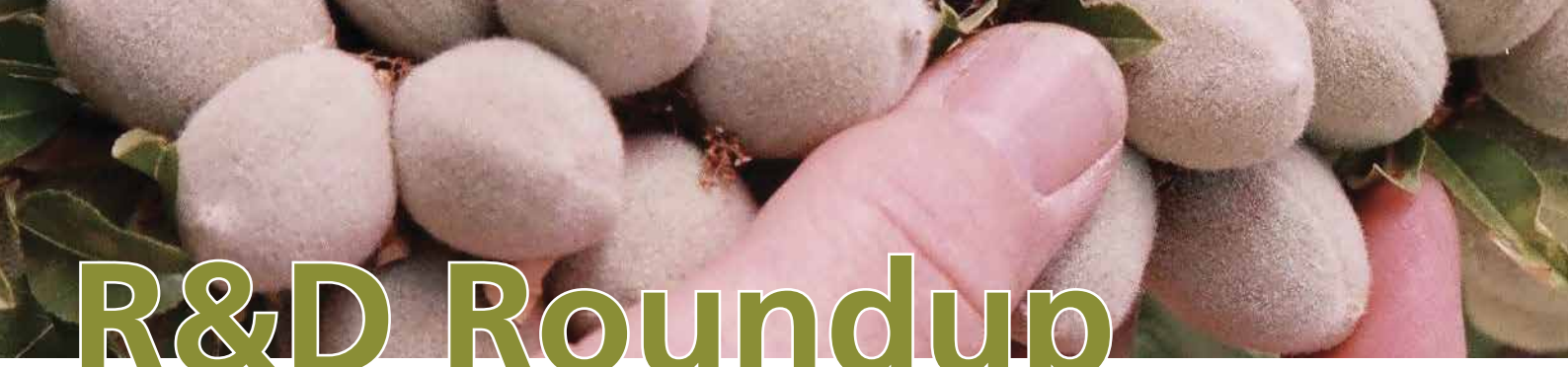
In 2004, Ben retired from Scholefield Robinson to pursue his interests in sailing and travelling, but continued his significant involvement with horticultural industries, none more so than the almond and pistachios industries.

Ben's passion for collaboration, R&D and developing the technical skill set of industry was most certainly one of his greatest contributions to the almond industry. This included his Chairmanship of the Industry Advisory Committee; regular and generous reviews and recommendations for R&D programs and publications; mentoring ABA staff; significant development and editorial contributions to the almond history book, 'Almonds in Australia: From Pioneer Planting to Prime Production'; and contribution to the Production R&D Sub-Committee.

Ben's greatest achievement was his commitment to collaboration, always promoting and actively pursuing partnerships for the common good. Most notable was in the late 1980s early 1990s after the formation of Horticultural Research & Development Corporation (HRDC). Ben and other key stakeholders met with industry factions to establish an R&D levy, and then in 1990 he was engaged by industry to prepare a draft discussion paper on 'Research and Development Funding for the Australian Almond Industry'. This work was a significant contribution that began the development of a strong and united almond industry which resulted in the Almond Board of Australia.

Ben is a man characterised by generosity, honesty, sincerity and integrity.

Thank You & Congratulations



R&D Roundup

Ben Brown - Industry Development Manager

Light Interception, Higher Density Almond Plantings and the Trade-Off between Yield and Food Safety

Imagine an almond orchard with smaller trees that are easier to shake, incur less trunk shaker injury, result in less mummies and overwintering sites for carob moth and hull rot inoculum, achieve better spray coverage, have less scaffold splitting and replants, precocious yields with over 3T/ha at 4 years of age, facilitates an earlier return on investment and, has the ability to quickly come in and out of production with new growing trends and varieties. Sounds pretty good? Well, these are some of the benefits found with higher density orchards in Australia and California over recent times. The only question is, what are the impacts on food safety and how long will the orchards last, or more accurately how long do they need to last?

For those that were present at the recent 15th Australian Almond Conference and the field days that followed, you would have had the fortunate experience of hearing the learnings of higher density almond orchards from Roger Duncan (Farm Adviser, UC Davis) and Andrew Hobbs (Group Horticultural Manager, CMV Farms), and light interception and food safety from Bruce Lampinen (Integrated Almond Orchard Specialist, UC Davis). With such great interest in these topics, I thought I would summarise the information offered.

Light interception, yield and food safety

Before embarking on a discussion about tree density, it is important to keep in mind that the foundation to yield is canopy coverage or light interception. The more canopy or light intercepted, the greater potential for more leaves, more buds, more flowers, more fruit and ultimately more yield. Thus, regardless of the tree density you need to fill-out the canopy to optimise yield, it's just a matter of when not if.

Bruce Lampinen has conducted four years of research investigating the relationship of midday light interception and yield, indicating potential almond yield is equal to 1% midday light interception x 56 kernel kg/ha (Figure 1). This relationship indicates the maximum theoretical almond yield in conventional almond orchards is 5,600kg/ha; however, Bruce's research also indicates 100% light interception has its risks. Those orchards with close to maximum light interception have an ideal micro-climate on the orchard floor that increases the risk of food safety, in particular Salmonella. Thus, the recommendation is an orchard with 80% light interception or 4,500kg/ha.

Another interesting finding of Bruce's is the distribution of light is an important feature related to food safety risks. Those orchards with dense shade under the tree row created by high tree densities and practices such as hedge pruning may also lead to an increased food safety risk. In contrary, those orchards with more varied light and orchard floor temperature patterns may lead to decreased food safety risks. These findings suggest there is another level of detail when considering the relationship between light interception and either food safety or yield; it's not just quantity but it's also distribution and quality of light.

It's worth noting the relationship between the amount of light portioned to support floral bud development and fruit growth is of particular interest to industry and is currently being developed into a new R&D project.

Higher tree densities

Keeping in mind that it's just a matter of when not if you need to fill-out the canopy to optimise yield potential; consideration should be given to the role of tree density in completing this equation. There are only three scenarios that lead to achieving optimum light interception, you either plant fewer trees (e.g. 250 trees/ha) and rapidly grow them with excessive amounts of water and fertiliser;

or moderately grow fewer trees with moderate amounts of inputs; or you plant more trees (e.g. 500 to 550 trees/ha) and let the tree numbers do the work rapidly filling the canopy.

Roger Duncan has a 14 year old, 15 hectare, tree density trial overlaid with four pruning strategies and two rootstocks. Tree densities range from 222 trees/ha (6.7m x 6.7m) to 489 trees/ha (6.7m x 3.0m). CMV Farms, in their more recent plantings, have tree densities of approximately 357 trees/ha (7.0m x 4.0m), 555 trees/ha (6.0m x 3.0m) and 833 trees/ha (6.0m x 2.0m).

Findings from Roger's trial and CMV's plantings indicate the following:

- In comparison to conventional densities, higher tree densities have a greater water and fertiliser requirement in the earlier years due to increased canopy area and yield.
- Smaller canopies such as Price, Wood Colony, Carmel, etc benefit from tighter spacings.
- Large, vigorous trees may not have increased yields, even in the early years.
- No yield disadvantage to close spacing of vigorous trees (yet).
- Tree size is kept smaller with tighter spacings.
- Tighter spacings and smaller tree sizes have benefits of less scaffold splitting, less trunk shaker injury, less replants over the life of the orchard, less impact on yield from trees dying as the quantity of missing canopy or light interception is reduced, less unharvested nuts (mummies), less over-wintering sites for carob moth and hull rot inoculum, better spray coverage, and greater cumulative yield (so far).
- Quicker to shake trees, but marginally more expensive due to the higher number of trees.

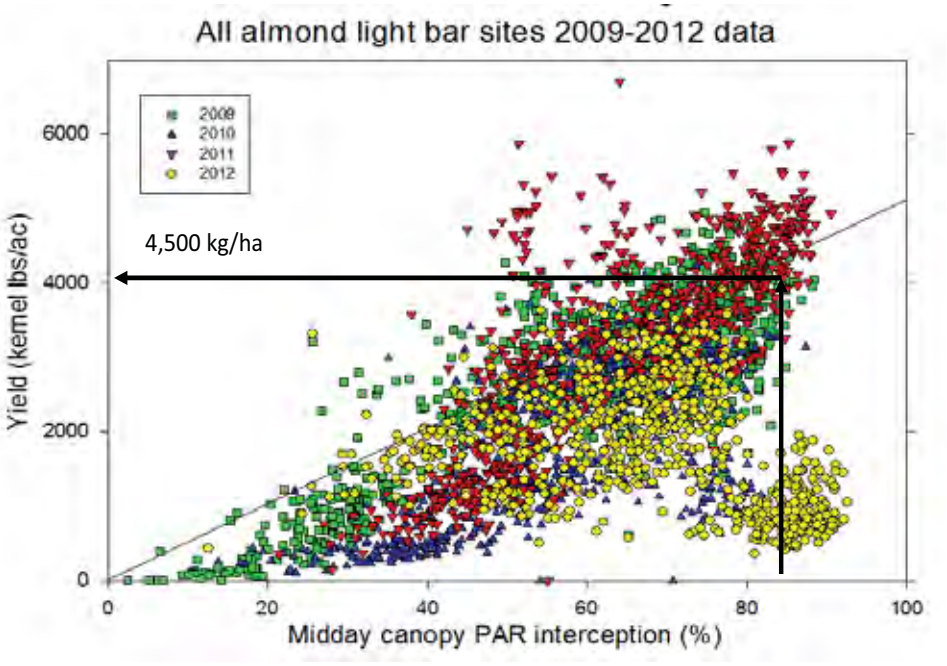


Figure 1: Almond yield potential relationship with midday canopy PAR interception (Lampinen, 2013).

It was also noted by Bruce and Roger that higher density orchards would benefit from north/south row orientations. This would facilitate easier orchard floor drying of harvested fruit and reduced food safety risks. North/south rows are also more likely to facilitate more uniform fruit maturation throughout the tree canopy.

To prune or not to prune?

A hot topic of discussion over the conference and field days was the benefits of pruning, particularly for the higher density plantings. There was unanimous agreement that pruning should be undertaken for reduced food safety risks and maintenance of access (machinery, weedicide, etc), vision (e.g. shaking) and worker safety. However, the benefits (versus the costs) of pruning for managing light distribution with respect to maximising longevity of fruiting spurs, renewal of fruiting wood, reducing alternate bearing, etc was less convincing or very expensive and you end 'fluffing around the edges'.

Roger's early conclusions from his pruning trial are:

- Pruning has not increased yield but it has however led to increased costs and lower gross margins.
- Trees trained to more than three scaffolds are more prone to blow-over, scaffold breakage and consequently you need to rope them.
- Scaffold selection (training) is less important in closely planted trees as trees stay smaller and there's less weight on each limb.
- Slightly more hull rot incidence in unpruned trees.
- No difference observed in other diseases.
- No difference observed in stick tights.
- No difference in tree height.

Whilst it appears there are several reasons to prune an almond orchard, yield does not appear to be one of them. In fact, non-discriminate hedge pruning leads to a vicious cycle where pruning one limb will produce several limbs and a denser canopy that continually requires maintenance. This continual maintenance performed by hedge pruning decreases the canopy size and quantity of light interception leading to reduced yield.

With respect to pruning higher density plantings, it was suggested that other than for reasons of access, vision and worker safety, all other pruning should be minimised and left for as long as possible – capitalising on the natural growth habit of the tree and more varied light and orchard floor temperature patterns. As soon as you begin hedge pruning you will fall into the same vicious cycle mentioned earlier and you could even reduce yield further due to the increased number of rows and consequently increased amount of area removed from production following the hedge pruning.

Summary

In summary, based on the current availability of knowledge, rootstocks, training systems and management programs neither conventional or higher density orchards are perfect; but it appears higher densities have several advantages and warrant serious consideration, in particular spacings of approximately 6.5m x 3.0m (513 trees/ha). It also needs to be highlighted that regardless of tree densities, food safety requires due consideration at the expense of maximum canopy coverage and light interception.

For further information contact:

Ben Brown
Industry Development Manager
Almond Board of Australia
P 08 8582 2055 or 0447 447 223
E: bbrown@australianalmonds.com.au

In The Orchard

Brett Rosenzweig - Industry Development Officer

General orchard activities

- The temperatures during spring have been relatively mild so far. Sooner or later the weather will get hotter and crop water use will increase accordingly. Keep an eye on the weather forecast or your favourite weather site for impending heatwaves. If you don't have adequate capacity in your irrigation system to react quickly to increased water demand then start increasing irrigations before a heatwave arrives. It is also important to maintain adequate subsoil moisture reserves before heatwaves. The lack of rain during spring has meant mid-row moisture levels may be quite dry and this can have an impact on the subsoil moisture levels. The same applies for sprinkler irrigated orchards – check your subsoil moisture levels to make sure past irrigations have been effective.

- Is your orchard canopy dense with minimal airflow? Will you be at risk of an infection of hull rot at hull split? Californian research has indicated that applying a slight irrigation deficit to the orchard at hull split can help reduce the incidence of hull rot and may also accelerate the rate of hull split. Hull rot infection occurs when the suture on the green fruit starts to split (Fig 1) which leads to the hull 'butterflying'. If the rate of hull split can be accelerated, the window of opportunity for hull rot to strike will be reduced. Only a slight irrigation deficit is needed as any large amounts of deficit (resulting in tree stress) will impact on kernel quality and bud fruitfulness for the following crop. The level of irrigation deficit needs to be monitored using plant or soil moisture monitoring equipment. When using a pressure bomb (plant based monitoring) an irrigation deficit of 14 bar for two weeks at the onset of hull split is sufficient followed by a normal irrigation regime. If you have neither of these forms of monitoring, I would recommend not attempting any form of irrigation deficit.

- Fertigation programs will have concluded by now. It is now time to turn your attention to leaf sampling in January to confirm your tree nutrient status. Remember to collect 100 leaves from 25 trees from representative areas of the orchard i.e. stay away from stunted trees or replants. These trees should be tagged so future leaf samples can be taken from the same trees. The next period of fertilisation will be post harvest and I would turn my attention to making sure it is applied efficiently. This means applying fertiliser when there is sufficient leaf retention and adequate soil moisture levels to ensure adequate fertiliser uptake. If there are no leaves on the tree, there will be minimal uptake and that puts the fertiliser at risk of being leached past the effective rootzone! If premature defoliation is a concern it will pay to start fertigating after the Nonpareil harvest is finished and not wait until the total harvest is completed. The aim is to start fertigation by mid March. Californian research has shown that almond trees draw on their carbohydrate reserves for flowering and early growth until fruit set. Very little nutrition uptake from the soil occurs until after fruit set. Post harvest fertigation is therefore very important to ensure good carbohydrate reserves for the following season.

- In addition to leaf sampling in January, consider sampling fruit prior to harvest for either Boron levels or total nutrition exported from the orchard. Fruit should be sampled the same as leaves, preferably from the same trees. Once 100 fruit are sampled crack them into their three components i.e. hull/husk, shell and kernel. Make sure there is no blank or aborted kernel. Send each of the three samples to a laboratory for testing. Make sure you specify Boron testing on the hulls and wet and dry weights for each of the three samples. Hull Boron is a better indicator of the Boron status in the tree than leaf Boron. A full nutrient analysis of the hull, shell and kernel is a useful starting point for determining the following season's fertigation program. After all, when a crop is harvested, the nutrient is 'exported' from the orchard and in a basic fashion should be replaced by the following season's fertigation program.

- Earlier this year there was a pre-harvest study tour looking at almond orchards in Robinvale, Griffith and Hillston. Due to the success and popularity of the last study tour, there will be another study tour held in late January. Lookout for further notifications.

For further information contact:

Brett Rosenzweig
Industry Development Officer
Almond Board of Australia
P 08 8582 2055 or 0429 837 137
E: brosenzweig@australianalmonds.com.au

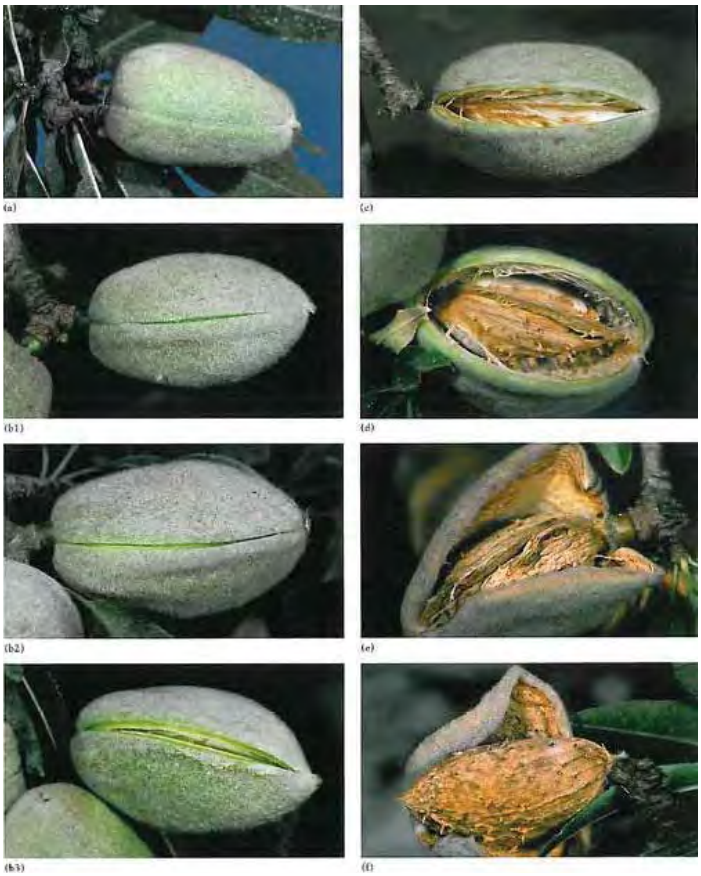


Figure 1: Stages of Hull Split (Image from David Doll, UC Davis

2013 Social Networking Stats

Social media has taken over the world.... or so it seems! Wherever you turn there are links Facebook, Twitter, Pinterest, LinkedIn and many other platforms. It's not only personal users, but nearly every business worth their salt has an interest in social media; from Coke to Huggies, from Ford to Hungry Jacks.

With the advent of all of these platforms there are myriad of apps and sites for growers and horticulture to take advantage of.... don't be scared - give it a go! You might be surprised by what you find to make your day to day decision making easier!

Here are just some fun facts from 2013 about the rise and rise of the online social world!

- 62% of adults worldwide now use social media
- Social networking is the most popular online activity, with 22% of time online spent on channels like Facebook, Twitter and Pinterest
- 56% of social media users have admitted to using channels to spy on their partners
- Brazil has the highest online friends – average of 481 per user
- Japan has the lowest average online friends – average of just 29 friends per user (this is a result of a nationwide Facebook ban!)
- Smartphone owners now spend as much time using social networking apps such as Twitter and Facebook as they do playing games
- Users log an average of 77 minutes per day using apps on their smartphone

Social commerce

- Social commerce sales are expected to climb to $14.25 billion in 2013 and $30 billion in 2015
- Some 167 million people will shop online this year, which will increase to 192 million by 2016 (spending an average of $1,800 per person per year)
- 60% are willing to post about products/services in FB if they get a deal or discount

Social media in business

- 65% of the world's top companies have an active Twitter profile
- 90% of marketers use social media channels for business, with 93% of these rating social tools as "important"
- 43% of marketers have noticed an improvement in sales due to social campaigns
- 72% of marketers who have worked in social media for three or more years said that they saw a boost in turnover due to social channels (the longer you're working in it the better you get)
- 91% of experienced social marketers see improved website traffic due to social media campaigns and 79% are generating more quality leads
- The average time spent by marketers on social media is 1-5hrs per week for those just getting started and 6+ hours per week for those with 3+ years of experience
- The most popular social networking tool for marketing is Facebook – being used by 92%, followed by Twitter (84%), LinkedIn (71%) and blogs (68%)
- Only 22% of businesses have a dedicated social media manager
- 58% of Fortune 500 companies have an active corporate Facebook account, and 62% have an active corporate Twitter account
- 47% of customers are somewhat likely to purchase from a brand that they follow or like
- 80% of social network users prefer to connect with brands through Facebook
- 53% of small businesses are using social media
- 88% believe exposure is the biggest benefit
- 19% use Facebook, 15% LinkedIn and 4% Twitter
- 12% think it's a must, 24% do it when they have the time and 14% say they don't know enough about it

Pinterest

- Pinterest is now the third most popular social network, behind Twitter and Facebook (in the US)
- 60% female audience
- Over 20% of Facebook users are on Pinterest daily
- The Pinterest app has been downloaded nearly 250,000 times
- Pins with price information are just as likely to be shared as those that don't
- The average time spent on Pinterest is 14.2 minutes
- Pinterest is projected to account for 40% of social media driven purchases (Facebook 60%)
- Buyers referred from Pinterest are 10% more likely to buy something and spend an average of 10% more than visitors from other social networks
- The US is the biggest country on Pinterest (accounting for almost 50% of users), followed by India (4.4%) and Canada (3.6%)

Twitter

- The average Twitter user has 126 followers
- Over 40% of Twitter users do not tweet anything
- About 0.05% of the total twitter population attract almost 50% of attention on the channel
- 71% of the millions of tweets each day attract no reaction
- 25% of Twitter users have no followers
- Twitter now has more than 140 million active users, sending 340 million tweets every day
- Twitter users send over a billion tweets every 72 hours

Facebook

- 137.6 million unique visitors per month
- 7:45:49 = time spent per person per month on Facebook
- 54% of monthly users access it via a mobile device
- Facebook has 901 million monthly active users

YouTube

- 106.7 million unique visitors per month
- 1:41:27 = time spent per person per month on Facebook
- There are 4 billion views per day on YouTube

General Internet

- Every month the online population spends equivalent to 4 million years online
- On average a global internet user spends 16 hours online (vs 32 hours for USA)
- China has the most people online – 456 million (only 34% of population)
- Chinese users spend more than 5 hours a week shopping online

Mini Cherry & Almond Trifles

Ingredients

500 grams fresh (or frozen) cherries
70 grams dry roasted almonds
¾ cup water
½ Panetonne cake
1¼ cup thickened cream
30 grams slivered almonds

Instructions

Reserve six of best looking cherries and set aside.
Remove pits from rest of the cherries with a cherry stoner. Make sure you wear an apron when you do this to avoid staining of your clothes.
Place stoned cherries in small saucepan with water.
Bring to boil and then simmer for 10 minutes. Leave to cool.
Meanwhile, whip cream with a stand or hand mixer until firm but not stiff.
Cut panettone into 4 cm slices.
Using a cookie cutter, or the rim of a glass, cut six circles of cake from the slice and use it to line four serving glasses or bowls.
Spoon over cherry mixture including juices, diving equally.
Sprinkle almonds on top and then spoon cream on top. Decorate each glass with a fresh cherry and garnish with slivered almonds

MEDIA RELEASE

Nominations sought for 2013 Phil Watters Award

7 August 2013

The Almond Board of Australia is calling upon industry members who wish to undertake study of a topic that will contribute to improving industry production or processing practices to nominate for the 2013 Phil Watters Award. The winner of the Award will receive a bursary of up to $10,000 that can be used to attend workshops, conferences or symposiums, undertake training or participate in a study tour.

Almond Board of Australia CEO Mr Ross Skinner said the nomination period for the 2013 Phil Watters Award is open until Friday, September 7th.

"This Award is an opportunity to assist industry members with an interest in an area of production or processing to enable them to increase their knowledge and then to share this with the wider industry."

Mr Skinner said the Award is presented every two years and that past recipients had undertaken overseas study tours to learn about soil biology, irrigation technology and supply-chain improvements.

The 2011 Phil Watters Award winner was Griffith almond grower Dean Dinicola. Mr Dinicola used the prize to fund a study tour to California where he investigated more efficient and effective ways of storing and drying almonds prior to delivery for processing. He also looked at self pollinator varieties and new techniques in fertilisation and irrigation to enhance Almond production within orchards.

“It was a privilege to receive the Award named in honour of Phil Watters, whose dedicated work contributed significantly to improving the Australian almond industry’s irrigation and tree nutrition practices” said Dean.

All award finalists will be invited to attend the Australian Almond Industry Conference (AAC) to be held October 29-31st at the Stamford Grand Hotel in Glenelg, where the winner of the Award will be announced.

Nomination forms, including selection criteria are available at the Almond Board of Australia website at www.australianalmonds.com.au or by calling (08) 8582 2055.

~~ENDS~~

For further information contact:
Ross Skinner, CEO Almond Board of Australia on 0448049202 or 08 85822055

The following local contacts are also available:
Adelaide: Dominic Cavallaro 0417839082
Riverland: Brendan Sidhu 0417893038 / Tony Spiers 0428836219
Sunraysia: Neale Bennett 0418990391 / Tim Orr 0417597191
Riverina: Dennis Dinicola 0417597191

For further industry information and local contact information please see the accompanying Press Kit.

The Almond Board of Australia (ABA) is a non profit, membership based organisation representing the interests of Australian almond growers, processors and marketers.

As the Australian almond industry’s peak industry body, the ABA facilitates further growth of the industry, seeks to maximise its profitability and ensure its sustainability, by providing a platform for industry members to collectively respond to industry-wide issues, invest in research and marketing, share knowledge and interact with government and other stakeholders.

Key almond growing areas are located in Sunraysia (Victoria), the Riverland and Adelaide (South Australia) and the Riverina region (New South Wales).

For more information visit www.australianalmonds.com.au or email: admin@australianalmonds.com.au

MEDIA RELEASE

Riverina Grower Wins Phil Watters Award

18 November 2013

High resolution copies of the above image are available by contacting Jo Pippos, Communications Manager at the Almond Board of Australia on +61 8 8582 2055 or email jpippos@australianalmonds.com.au

The 2013 Australian Almond Industry Phil Watters Award was awarded to Riverina almond grower James Callipari at this year's Australian Almond Conference held in Glenelg, South Australia, at the end October.

"The Award is an opportunity to assist industry members with an interest in an area of production or processing to enable them to increase their knowledge and then to share this with the wider industry." said Almond Board of Australia CEO Mr Ross Skinner.

Mr Skinner said the Award is presented every two years and that past recipients had undertaken overseas study tours to learn about soil biology, irrigation technology and supply-chain improvements.

The Phil Watters Award recognises service to the Australian almond industry, in particular a dedication to research, development and the improvement of almond production, adoption of best practice and promotion of horticulture to the community.

In accepting the Award, James advised the conference delegates that he felt very honoured to be the 2013 recipient of this industry Award which also carries with it a bursary of $10,000.

“It is a privilege to receive this award in honour of a person whose dedication and hard work contributed significantly to the Australian Almond industry” said James.

After completing his Bachelor of Science in Agriculture at the Charles Sturt University in 2002 James returned to the family farm producing winter cereals, rice, vegetables and citrus. In 2006, James and his father Jim made the decision to enter into the almond industry and jointly purchased a property, completely transforming it with plantings over the next three years.

~~ Continued overleaf ~~

ALMOND BOARD OF AUSTRALIA
Almond Board of Australia ABN: 31 709 079 099
9 William Street, PO Box 2246, BERRI SA 5343, Australia, T +61 8 8582 2055 F +61 8 8582 3503
admin@australianalmonds.com.au www.australianalmonds.com.au

James really embraced the new challenge and resulted in several innovations. James liaised with harvest equipment manufacturers to produce a cost effective sweeper capable of reducing passes, fuel and labour inputs. James also adapted and implemented GPS auto-steer equipment for installing sub-surface drip; and designed and manufactured equipment to form and reshape tree mounds.

James has interacted with industry and promoted it at every available opportunity, hosting field days, undertaking media interviews and other activities.

The Almond Board of Australia selection committee for the Award noted James' drive and innovation had contributed significantly to him achieving his goal of excellence in his almond orchard.

James will use the prize to fund travels domestically and abroad where he will investigate more advanced production systems that deliver an earlier and more attractive return on investment through increased yield, improved quality and reduced costs of production.

The Award is part funded from a trust administered by the Almond Board of Australia (ABA) and is part funded by Horticulture Australia. It is dedicated to the memory of Phil Watters, a respected individual and dedicated technical officer in the almond industry.

For further information contact:
Ross Skinner, CEO Almond Board of Australia on 0448049202 or 08 85822055

For further industry information and local contact information please see the accompanying Press Kit.

The Almond Board of Australia (ABA) is a non profit, membership based organisation representing the interests of Australian almond growers, processors and marketers.

As the Australian almond industry's peak industry body, the ABA facilitates further growth of the industry, seeks to maximise its profitability and ensure its sustainability, by providing a platform for industry members to collectively respond to industry-wide issues, invest in research and marketing, share knowledge and interact with government and other stakeholders.

Key almond growing areas are located in Sunraysia (Victoria), the Riverland and Adelaide (South Australia) and the Riverina region (New South Wales).

For more information visit www.australianalmonds.com.au or email: admin@australianalmonds.com.au

Weekly Times (Vic), Melbourne
16 Oct 2013, by Alex Sampson

General News, page 86 - 169.28 cm²
Rural - circulation 63,622 (--W---)

ID 218342543 BRIEF ALMONDAUST INDEX 1.1 PAGE 1 of 1

Almonds blossom

By ALEX SAMPSON

THE Australian almond industry is booming as Asia goes nuts for nuts.

This year the estimated Australian almond harvest increased to 78,000 tonnes, up from last year's record tonnage of 50,000 tonnes.

The Almond Board of Australia said this would see a doubling of the overall export tonnage this year.

The world almond price has also risen significantly, bringing the Victorian farmgate almond value to $350 million for the 2013-14 season.

"For the first four months of this marketing year our export sales volume has risen 9 per cent, but the value of exports has risen 50 per cent," ABA chief executive Ross Skinner said.

"We have also benefited from the lower Australian dollar on the 75 per cent of production that we are now exporting.

"The Australian almond crop this year will be worth $800 million farmgate value, with Victoria producing 66 per cent of this."

Mr Skinner said India was the major overseas market because of the demand for the high protein that was found in almonds.

According to the Australian Bureau of Statistics, domestic consumption of nuts grew 20 per cent in 2012-13 because of the health benefits of eating almonds. World almond consumption has also grown between 5 to 8 per cent a year for the past 10 years.

"China is a key driver for increased almond demand, soaking up much of the increased Californian crop," Mr Skinner said.

Last month almond producer Select Harvests said it anticipated additional sales of $1 million, and the Gourmet Nut Company — which exports nuts to many countries across the Asia-Pacific including China, Singapore, Malaysia, Thailand and New Zealand — said it anticipated additional sales of $1.5 million from its operations, based at Mordialloc.

Agriculture Minister Peter Walsh said the industry had been boosted by the Victorian Government's trade engagement work.

"This is helping reinforce to export markets that our horticulture produce is high-quality and very reliable in terms of supply," Mr Walsh said.

Boom: The Australian almond harvest is up 28,000 tonnes.

iSENTIA

Tasmanian Country, Hobart
18 Oct 2013

General News, page 21 - 360.63 cm²
Rural - circulation 18,334 (----F--)

ID 21873099 BRIEF ALMONDAUST INDEX 11 PAGE 1 of 1

Almonds blossom to a record

THE Australian almond industry is booming as Asia goes nuts for nuts.

This year the estimated Australian almond harvest increased to 78,000 tonnes, up from last year's record tonnage of 50,000 tonnes.

The Almond Board of Australia said this would see a doubling of the overall export tonnage this year.

The world almond price has also risen significantly, bringing the Victorian farmgate almond value to $550 million for 2013-14.

"For the first four months of this marketing year our export sales volume has risen 9 per cent, but the value of exports has risen 59 per cent," ABA chief executive Ross Skinner said. "We have also benefited from the lower Australian dollar on the 75 per cent of production that we are now exporting.

"The Australian almond crop this year will be worth $500 million farmgate value, with Victoria producing 66 per cent of this."

Mr Skinner said India was the major overseas market because of the demand for the high protein that was found in almonds.

According to the Australian Bureau of Statistics, domestic consumption of nuts grew 30 per cent in 2012-13 because of the health benefits of eating almonds. World almond consumption has also grown between 5 to 8 per cent a year for the past 10 years.

"China is a key driver for increased almond demand, soaking up much of the increased Californian crop," Mr Skinner said.

Last month almond producer Select Harvests said it anticipated additional sales of $1 million.

The Gourmet Nut Company, which exports nuts across the Asia-Pacific including to China, Singapore, Malaysia, Thailand and New Zealand, said it anticipated additional sales of $1.5 million from its operations, based in Melbourne.

– Weekly Times

China is a key driver for increased almond demand

BOOM TIMES: Australian almonds are in demand in Asia

Weekly Times (Vic), Melbourne
30 Oct 2013
General News, page 21 - 642.40 cm²
Rural - circulation 63,622 (~W~~)

Nuts on the right track

The drought has led to a new venture with promising results, writes LINDSAY HAYES

HARVEST is a year-long event for an enterprising farming family who produce rice, wheat, almonds and citrus on four properties in the NSW Murrumbidgee Irrigation Area.

The partnership comprises third-generation farmers Jim and Meredith Callipari and their son, James, who came on board in 2002 after graduating from Charles Sturt University with an agricultural science degree.

The Callipari's main focus now is on their 120ha almond orchard at Benerembah, near Griffith, where 30,000 nut-bearing trees receive daily attention in the lead-up to an anticipated top yield in the new year.

"The yields increase year on year and peak around year five or six," James said.

"The ultimate aim is 3.5-4 tonnes/ha and we're getting closer.

"We'll harvest the first week of January and run through to April."

In a giant leap of faith, the family added almonds to the mix during the drought seven years ago.

Further plantings followed in 2007 and 2009 and more expansion is on the radar.

"We put our minds together and came up with almonds," James said.

"The price was quite high at the time and there was a better return per megalitre of water than other crops."

Another factor in the decision was the relatively short timeframe of three years between planting and production.

"It is another level of diversity for our farming business and we thought with the three of us we could take it on," Jim said.

Long days and a can-do approach has enabled the Calliparis to succeed with their new enterprise while keeping abreast of other production demands.

Meredith said it was hard work with 6am starts every day except Sunday, but worth it.

Jim and James run the farms together.

They engage local casual labour to help with harvests and contractors to cart their produce to packing houses, grain facilities and grower co-operatives.

The Calliparis signed on with the growth industry after research and visiting pioneering almond grower Kevin Kelly's orchard at nearby Darlington Point. Despite the promising prospects, Jim said the nut venture was a gamble with high set-up costs for trees, irrigation infrastructure and harvesting equipment.

"It was a big outlay and the development costs are ongoing," he said.

They sourced the trees from nurseries in the Riverina and interstate, planting major almond variety non-pareil and pollinator varieties carmel, price and monierey in alternate rows.

The varieties mature at different times and the nuts are harvested consecutively.

The mechanised harvesting equipment came from California, the world's biggest almond producer, and comprises a shaker, sweeper, harvester and elevator to load the almonds for transport.

A large shed to house the equipment was part of the investment along with the installation of 360km of sub-surface dripper lines to irrigate the trees at the rate of 10-12ml/ha of water pumped from the local irrigation channel.

The almonds, most destined for export, are transported to Almondco of Australia's hulling and shelling plant near Renmark for processing.

The Callipari's nuts are pooled with those of other shareholder growers and marketed under the co-operative's name as produce of Australia.

The co-operative also supplies the domestic market.

Water and fertiliser costs are major inputs, with the quantities increased leading up to harvest.

Few chemicals are used in the production.

The first commercial harvest was in 2009 and, as expected from the then immature trees, yielded just 0.5-0.75 tonnes/ha.

The following year James went on a study tour to California organised by Almondco, returning home with some useful pointers from veteran growers.

"Production is becoming easier.

"Now we've got some harvests behind us, we know what we're doing and to what to expect," he said.

→

iSENTIA

Weekly Times (Vic), Melbourne
30 Oct 2013

General News, page 21 - 642.40 cm²
Rural - circulation 63,622 (--W----)

Leap of faith: Meredith and Jim Callipari (above) and (left) their son James started farming almonds to save water and diversify.

At a glance

Who: Callipari family
What: Almonds
Where: Benerembah, NSW
Why: Nuts about future

Area News (Griffith), Griffith NSW
08 Nov 2013, by Jack Morphet

General News, page 5 - 203.30 cm²
Regional - circulation 4,754 (M-W-F--)

ID 221877620 BRIEF ALMONDAUST INDEX 14

Going nuts for almonds

By JACK MORPHET

LOCAL almond growers are confident they can cash in on drought conditions in California crippling the US state which supplies 80 per cent of the world's almonds.

Californian almond growers are struggling with small kernels whereas local farmers predict a strong harvest in March.

Almond grower and Griffith councillor Paul Rossetto said global stocks of almonds have dropped and Griffith is in a position to capitalise.

"The 2013 crop price has gone up in order of $1500 per tonne and they're talking $6 a kilo whereas last year it was $4.50, which is also helped by the dollar drop," Cr Rossetto said.

"Thankfully we've survived the frost because the nuts were too big at the time to get seriously damaged.

"Local almond orchards are looking good compared to cherries and prunes that are looking like a failure."

Freight costs continue to provide a profit roadblock as plans to build a multimillion-dollar processing plant stay on ice.

Cr Rossetto said a catch-22 existed whereby the region didn't produce enough almonds to warrant an expensive hulling and shelling plant but without one prospective growers were turned off by the notion of trucking their crop to South Australia for processing.

"It's all a matter of getting enough hectares into the ground locally to justify the building of a $12 million processing factory," Cr Rossetto said.

"But last year the local crop acreage of almonds increased 10 per cent and there is plenty more room for local expansion."

Lake Wyangan almond farmer and Riverina representative on the Almond Board of Australia, Denis Dinicola said a plant was still on the cards.

"Almonds are still being restricted without a local hulling and shelling plant because it is a logistical nightmare to get them down to South Australia, not to mention the cost," Mr Dinicola said.

"Before a plant can be viable here we need to increase the acreage but the good news is it is increasing slowly and in another two years or so it may be viable.

"In the meantime, the Americans don't let on too much but we know the drought has effected the size of the nuts in California and if we get a good size of nuts there is likely to be a premium for them."

> Local almond orchards are looking good compared to cherries and prunes that are looking like a failure.
>
> ALMOND GROWER PAUL ROSSETTO

Almond Board of Australia Inc.

Almonds set at the top

Almonds are set to become Australia's first horticultural industry to earn in excess of $300 million in annual export revenue. This target will be achieved before the end of the 2013 calendar year with further sales occurring before February 28 which concludes the marketing year for almonds. The estimated final export figure will be between $350 and $400 million.

The 60% increase in production in 2013 has doubled the supply available for export which, combined with the significant rise in the global price for almonds, has led to the jump in export earnings. The Australian Bureau of Statistics figures as at the end of September show the volume of exports having increased by 43% but the value having increased by a staggering 112%. The growth in consumption of almonds in Australia has also been very strong. In 2012/13, consumption increased by 20% and in the new 2013/14 marketing year, the consumption figure year to date is showing a more constrained growth of 6.6% over the previous year.

The crop hanging on the trees to be harvested in 2014 is looking very good with heavier crops than this year predicted. Early assessments of kernel size indicate this aspect of the crop's quality will be excellent. Other quality factors depend heavily on the weather from now through to harvest, so everyone is hoping we can get the crop successfully into storage which should provide a farmgate value in excess of this year's figure of $500 plus million.

Almond Conference

The ABA conducted its 2013 Annual Conference in Glenelg at the end of October with 323 delegates attending, an increase of 85 on the previous year. A feature of the Conference Dinner was the inducting into the Australian Almond Industry's Hall of Fame of Tony Read and Ben Robinson. Tony's induction resulted from his involvement in developing and promoting investment in large scale orchards and his leadership of the almond grower association into an industry association (the ABA). Tony also was involved in the introduction of the voluntary marketing levy paid by growers to support market development programs for both the Australia and export markets, which he recognised would be a key to the industry's future.

Ben's induction was awarded following his long involvement in conducting research for the industry and leading the move to a statutory research levy to fund the investment in R&D projects. Ben also guided the funding program as the Chair of the Almond IAC and has continued to mentor those undertaking work for the almond industry.

Both men received the industry accolade at the Conference for their significant contributions to the development of the industry which as a half billion dollar industry, is providing great benefit to members and the communities in the production regions.

Ross Skinner, CEO

Responding to their induction into the Almond Hall of Fame at the Almond Conference are at left, Tony Read, and at right, Ben Robinson.

Australian Pecan Growers Association Inc.

Global Pecan Market Update

High pecan prices back in 2011-12 cut a hole in US domestic demand and led to a very large build-up of inventory in cold storage. It has taken some very significant price reductions to encourage US buyers back into the market and even now inventory levels are historically high, but falling. China stocked its shelves with pecans and then largely withdrew from the in-shell market after the 2012 US crop. In recent weeks they have returned –albeit somewhat tentatively – to the market, and their appetite for big, fat Desirable nuts from Georgia is undiminished.

Apart from the overall contribution to demand, one widely-reported effect of Chinese in-shell buying is the predominant focus on large, high yielding nuts which tends to deprive the kernel market of large, fancy grade halves whilst leaving surplus of pieces and choice grade kernel to be disposed of in the manufacturing sector. This dynamic is seeing the price of halves start to firm, yet at the same time pieces remain over-supplied and under-valued. Speculation about the US and Mexican crops is also impacting on the market right now. Overall estimates suggest a crop of around 220Mlbs, more than 100Mlbs down on 2012.

What does this all mean? It is nigh-on impossible to calculate the net effect of the range of supply and demand variables at play this year but the current dynamic suggests steady firming prices for halves, in particular with pieces and low grades still subject to volatility.

Richard Genest, Stahmann Farms

Seasonal Snapshots

Clockwise from top left: Macadamia growers discuss orchard floor management issues (Photo: AMS); Peter Clingeleffer, Michelle Wirthensohn and John Slaughter at the Almond Conferece (Photo: ABA); Walnut members on a farm walk at 'The Island' near Bathurst (Photo: C. Korsten);Chestnut growers on an orchard walk in September (Photo CAI); Philby Bigg and Maddy Maitri among the hazelnut trees (Photo: Good Fruit & Vegetables); David Batt with son Sam in their hazelnut orchard (Photo: Good Fruit & Vegetables); Sallianne Faulkner, President of HGA (Photo: Good Fruit & Vegetables); and a large chestnut tree in full flower in north-east Victoria (Photo: CAI).

Good Fruit & Vegetables Monthly
1/1/14 p 1
General News
National
Rural

news

To have your say email gfv@ruralpress.com

ENTERED

Big issues 'nutted out'

EVERY year, Australian almond growers and allied industry members gather for the Australian almond conference to listen to global technical experts discuss issues that directly impact decisions and activities in the orchard and marketplace.

This year was no different, except that it was held at a city venue for the first time to meet logistics of growing numbers.

The 15th annual Australian almond conference and trade exhibition, held at Stamford Grand in Glenelg from October 28 to 31, was well supported by attendees and speakers, despite some difficult seasons in the past few years.

Growers benefited from networking opportunities with peers, presenters and suppliers.

The conference is a good chance for processors and growers to sharpen their knowledge to foster the long-term sustainability of the industry. International and domestic keynote speakers presented latest advances in production and pest and disease management, and marketing strategies.

The conference was an ideal setting for face-to-face communication of R&D project results to national levy payers and those who service the industry.

Under the theme Today's Challenges – Tomorrow's Success, the event looked at moving forward from past challenges, and facing a new position as the world's second largest almond-producing country.

> The landmark event was attended by a record 320 delegates.

The annual levy payers' meeting on the first day included presentations on advances in varietal breeding of Australian almonds, rootstock choice, food safety, pollination and storage pests, while the second day's proceedings included a look at comparative industry advances in tree spacing from New Zealand and Australian apple orchards, and high-density almond orchard trials in the US.

Keynote speakers included John Slaughter, director of breeding program, Burchell Nursery, California; Bruce Lampinen, integrated orchard management (walnut and almond specialist), the University of California Department of Plant Sciences; Gerald Martin, chairman of Pollination Industry Research and Development Council; and Roger Duncan, pomology and viticulture advisor, University of California Cooperative Extension.

Displays at the conference trade exhibition showcased the latest innovation and R&D from agricultural suppliers, machinery companies, transport and logistics companies, and chemical suppliers.

The conference dinner sponsored by EE Muir & Sons paid tribute to the sixth and seventh inductees into the Australian Almond Industry Hall of Fame, Tony Read and Dr Ben Robinson. The landmark event was attended by a record 320 delegates and emphasised the importance of a national event to encourage networking and unity among Australia's growers, researchers, the supply chain and service providers.

Horticulture Australia co-funded the event.

● Conference pictures, p10

University of California's Bruce Lampinen and CSIRO's Saul Cunningham.

Almond Board of Australia marketing specialist Joseph Ebbage.

University of California's Roger Duncan

16th Australian Almond Conference

Stamford Grand Hotel, Glenelg, South Australia

October 28-30, 2014

Accommodation

Stamford Grand Hotel ★★★★☆

Moseley Square/2 Jetty Rd Glenelg South Australia 5045

Stamford Grand Adelaide Glenelg Hotel is one of the best luxury accommodations in Glenelg Adelaide.

Located on absolute beachfront in Glenelg, with all the facilities and services you expect from a Stamford Hotel. Stamford Grand Adelaide Hotel is an ideal base for you to discover all that Glenelg and Adelaide has to offer.

Our Glenelg accommodation is perfect for those who are looking for a beachside location that is close to Adelaide's special events, yet out of the city!

Rates & Bookings

The Almond Board of Australia has secured a discounted rate for our guests during the Almond Conference.

To receive this negotiated rate, please advise Reservations that you are attending the **Almond Board of Australia Conference** at the time of booking. A valid credit card number will be required to confirm your reservation.

To secure your room please contact the Stamford Grand
Reservations team on: Ph: +61 8 8376 1222
E: reservations@sga.stamford.com.au

Oaks Plaza Pier ★★★★☆

16 Holdfast Promenade Glenelg South Australia 5045

Superbly located on the beachfront of Adelaide's popular seaside suburb, Glenelg, Oaks Plaza Pier offers sensational ocean views and is adjacent to the popular Holdfast Marina.

Comprised of one, two and three bedroom fully self-contained apartments, Plaza Pier's luxurious facilities include an indoor heated lap pool, spa, plunge pool, sauna and a fully equipped gymnasium.

Whether it's breakfast, lunch or dinner, both leisure and business guests will enjoy the choices onsite with a fabulous selection of restaurants, cafés and bars.

Rates & Bookings

Please contact the Oaks Plaza Pier for current room rates.

Ph: 1300 551 111 OR +61 8 8350 6688
E: respier@theoaksgroup.com.au

Information

Conference Venue

With panoramic views of the ocean, city and Adelaide Hills, Stamford Grand Adelaide is one of Australia's leading resort-style hotels.

Located on absolute beachfront in the popular seaside suburb of Glenelg, the five star Stamford Grand boasts 220 spacious guest rooms and suites with spectacular views. The rooms are sleek and contemporary in style, with facilities to cater to your every need. In-house facilities include two restaurants, two bars, outstanding conference and event facilities, a pool, spa, sauna and gymnasium.

Just a 10-minute drive from the airport and a 20-minute drive from Adelaide's CBD, the hotel is a short stroll to the vibrant retail precinct of Jetty Road. Catch the Glenelg tram from the hotel doorstep into the city centre, or enjoy any number of leisure activities by the beach including bike riding, catamaran sailing, shopping, cinemas, restaurants and cafés.

Terms & Conditions

Refunds & Cancellations

All cancellations must be notified in writing to the Almond Board of Australia (details below). Cancellations after June 30th and before September 1st, 2014 will incur a $100 cancellation fee. Cancellations after this date cannot be accepted, however transfer of registration to another delegate will be accepted. All refunds will be paid at the conclusion of the Conference.

Hotel Cancellation Policy

Delegates wishing to make any changes to a reservation at any accommodation provider must notify the hotel directly. Please contact your hotel for more information.

Personal Details

In registering for this Conference, relevant details will be incorporated into a participant list for the benefit of all delegates (name, email and organisation only), details may be made available to parties directly related to the Conference including venue and accommodation providers (for the purposes of room bookings only) and to inform you of future Almond Board of Australia activities.

Disclaimer

The Almond Board of Australia, will not accept liability for any injury of any nature sustained by participants or for loss or damage to property as a result of the Conference or exhibition and related events.

This initiative has been facilitated by HAL in partnership with the Almond Board of Australia and has been funded by voluntary contributions from industry.

Almond Board of Australia Inc.
ABN 31 709 079 099
9 William Street, PO Box 2246
Berri South Australia 5343

P + 61 8 8582 2055
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

ALMOND BOARD OF AUSTRALIA

HAL
Horticulture Australia

16th Australian Almond Conference

Stamford Grand Hotel,
Glenelg, South Australia

Tuesday, October 28th - Thursday, October 30th 2014

DELEGATE REGISTRATION

ALMOND BOARD OF AUSTRALIA
HOSTED BY:
The Almond Board of Australia

HAL
Horticulture Australia
SUPPORTED BY:
Horticulture Australia

Delegate Registration

Early Bird Registration closes **Friday, 3 October 2014**

Please complete **one form per delegate** and return completed forms to:
Almond Board of Australia, PO Box 2246, BERRI SA 5343, or email admin@australianalmonds.com.au

Delegate Name:

Company/Organisation:

Position/Job Title:

Postal Address:

City State: Postcode:

BH Phone: Mobile:

Email:

Registration Includes

- Welcome Reception Ticket
- Entry to all Conference Sessions
- Access to Trade Exhibitions
- Morning & Afternoon Teas
- Daily Buffet Luncheons
- Gala Dinner Ticket
- Delegate Satchel & Name Badge
- Conference Proceedings CDROM

Conference Registration (Includes ALL events)	**Early Bird**	**Full Price**	**Tick**
Full Registration (ABA Member)	$ 300	$ 400	☐
Full Registration (Non Member)	$ 375	$ 480	☐

Day ONLY Registration (Does NOT include events)	**Price**	**Wed Oct 29**	**Thur Oct 30**
Single Day Registration (Please tick)	$200	☐	☐
Two Day Registration	$275	☐	

Event Only Registration (Included only in full registration)	**Price**	**Tick**
Welcome Reception only	$ 80	☐
Conference Dinner only	$ 100	☐

If you have any special dietary requirements please indicate here:

To qualify for ABA Member rates each delegate must be a current financial member of the Almond Board of Australia for 2014/15 .

16th Australian Almond Conference

For further details regarding the Conference please contact the ABA Office on +61 8 8582 2055 or admin@australianalmonds.com.au

Submit by Email

Print A Copy

For accommodation information please refer to section overleaf

Tuesday, October 28th

- Industry Exhibition Setup
- Welcome Function

Wednesday, October 29th

- Registration
- Trade Exhibition
- ABA Annual General Meeting
- Official Conference Opening
- Annual Levy Payers Meeting
- Keynote Addresses
- Pre Dinner Exhibition Drinks
- Annual Conference Dinner

Thursday, October 30th

- Trade Exhibition
- Keynote Addresses

Payment Details

☐ Cheque enclosed for $_____
(cheques made payable to Almond Board of Australia in AUD)

☐ Electronic Funds Transfer
Acc Name: Almond Board of Australia
Acc# 040339140 BSB# 105-052 **REF: Your Surname**

Credit Card: ☐ VISA ☐ Mastercard

Card Numbers:

_____ - _____ - _____ - _____

Expiry Date: _____/_____ CCV: _____
(Credit Card Verification Number)
Last 3 digits on reverse

Card Name: _____

Signature: _____

Total Payment Due: $ 0 AUD

A Tax Invoice will be sent following processing of your registration. Please retain a copy of this registration form for your records. All prices quoted INCLUDE GST.

16th Australian Almond Conference

Stamford Grand Hotel, Glenelg, South Australia

October 28-30, 2014

Official Program and Abstracts

ALMOND BOARD OF AUSTRALIA

HOSTED BY:
Almond Board of Australia

HAL
Horticulture Australia

SUPPORTED BY:
Horticulture Australia Ltd

WM

PROGRAM SPONSOR:
Weiss McNair

Pamper Today. Reap Tomorrow.

AUST. ALMOND 2012-2014 Platinum SPONSOR CONFERENCE

Haifa Multi-K

Potassium nitrate products for healthy crops

Optimise your crops with Multi-K potassium nitrate

Treat your crops with Multi-K cutting-edge products to improve tomorrow's harvests. Multi-K potassium nitrate fertilisers help you to enhance quality, boost yields and reduce labour costs. Haifa's potassium nitrate is 100% used by plants, with no residual remaining in soils. Our world renowned, fully water soluble fertilisers include:

- **Crystalline Multi-K** plain or enriched for Nutrigation
- **Haifa-Bonus npK** for foliar application
- **Multi-K Prills** for soil application

FOR FURTHER INFORMATION, CONTACT YOUR HAIFA TEAM

Trevor Dennis, Managing Director
E: trevor.dennis@haifa-group.com **M: 0400 119 852**

Shaul Gilan, Southern Agronomist
E: shaul.gilan@haifa-group.com **M: 0419 675 503**

Peter Anderson, Qld Sales Agronomist
E: peter.anderson@haifa-group.com **M: 0459 488 850**

Jason Teng, Customer Service/Logistics
E: jason.teng@haifa-group.com **M: 0488 036 528**

Haifa

Pioneering the Future

Contents

Information

Accommodation

The Almond Board of Australia are not responsible for any accommodation bookings for the 2014 Australian Almond Conference. All bookings/changes/cancellations must be made directly with the Stamford Grand Hotel in accordance with their accommodation terms and conditions.

Delegates wishing to make any changes to a reservation at any accommodation provider must notify the hotel directly. Please contact your hotel for more information.

Badges

Badges can be collected from the registration desk during opening hours.

Disclaimer

The Almond Board of Australia, will not accept liability for damage of any nature sustained by participants or guests for loss or damage to property as a result of the conference or exhibition and related events.

Internet

The Conference venue has facilities for wireless or cable internet services. Delegates who require internet services will need to arrange this at their own expense with their service provider or with the venue.

Insurance

Participants carry their own risk for personal injury or loss of property (including baggage) during the conference. The organisers are in no way responsible for any claims concerning insurance.

Liability

Whilst every precaution will be taken, neither the Almond Board of Australia nor the Conference Venue will accept responsibility for any loss or damage which may occur to persons or property at the Exhibition (from any cause whatsoever).

Parking

Stamford Grand Adelaide offers a range of secure and affordable parking options 24 hours 7 days a week.

Entrance and Exit is via St Johns Row. The maximum height restriction is 1.95 metres. Valet Parking, and self parking is available

For bookings and enquiries regarding car parking please call 08 8376 1222 or email sales@sga.stamford.com.au

Personal Details

In registering for this Conference, relevant details will be incorporated into a participant list for the benefit of all delegates (name and organisation only), details may be made available to parties directly related to the conference including venue and accommodation providers (for the purposes of room bookings only) and to inform you of future Almond Board of Australia activities.

Refunds & Cancellations

All cancellations must be notified in writing to the Almond Board of Australia (details below). Cancellations of paid delegates after June 30th and before September 1st, 2014 will incur a $100 cancellation fee. Cancellations after this date cannot be accepted, however transfer of registration to another delegate will be accepted. All refunds will be paid at the conclusion of the conference.

Registration

Please see the Conference registration desk at the venue if there are any questions in regard to your registration.

Smoking

Please note that smoking is not permitted inside the Conference venue.

Almond Board of Australia Inc.
ABN 31 709 079 099
9 William Street, PO Box 2246
Berri South Australia 5343

P + 61 8 8582 2055
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

ALMOND BOARD OF AUSTRALIA

HAL
Horticulture Australia

Welcome

Welcome to the 2014 Australian Almond Conference. Last year's was our largest ever and the first we have held in a capital city. The early registrations for this year's Conference have been very strong and we are on track to build on the success of 2013. The emergence of Australian almonds as the country's most valuable export product has triggered extraordinary interest in our industry, which we encourage and appreciate.

This event is hosted by the Almond Board of Australia (ABA) and provides a formal forum and chance for social interaction for producers, processors and marketers of the Australian almond industry, our major suppliers and members of the research community and government.

The industry is in a period of great momentum with strong global prices, increasing production, renewed orchard planting and growth in demand domestically and in overseas markets. The Conference program for 2014 covers all these facets that are of key importance to our industry.

The program also covers the areas of change occurring in the operating environment of the industry with the review of and changes to Horticulture Australia Ltd and the research levy system that have impacted on the Almond Board of Australia as the industry representative body.

This Conference will hear from researchers about their work to address the risks to production and quality. Our relationship with the Californian industry continues to develop and we are appreciative of Richard Waycott and Tim Birmingham of the Almond Board of California in making the trip to present at the Conference along with UC Davis researchers Jim Adaskaveg and Neal Williams. In addition, US researchers have joined Australian scientists in producing posters on their work for display at the Conference.

The Conference always provides many opportunities for socialising and networking with the Welcome Reception and the Annual Almond Conference Dinner. This year's Conference Dinner will honour the eighth and ninth inductees into the Australian Almond Industry Hall of Fame.

Our fully booked trade exhibition will showcase products and information from many different industry suppliers, allowing Conference delegates to browse and interact with exhibitors throughout the two days of Conference.

Sponsorship is critical to the success of this event and we gratefully acknowledge the support of our Conference sponsors once again this year.

On behalf of the Board and staff of the ABA we hope you enjoy the 2014 Australian Almond Conference.

Neale Bennett (Chairman) and Ross Skinner (CEO)

Hydro-PC & Hydro-PCND Drip Lines.

Manufactured by Rivulis Irrigation (formerly John Deere Water), and used in Australia for over 16 years, Hydro-PC & Hydro-PCND are names synonymous with performance and reliability.

Of course we could name a number of features that make them so popular; two outlets per dripper, a large labyrinth to help prevent clogging, but the most important feature is the many Australian almond growers who successfully grow crops year after year with Hydro-PC & Hydro-PCND.

D5000 Flow Regulating Drip Line with flat emitter also available.

Rivulis
Irrigation

Ph: 1800 558 009 | Rivulis.com

Conference Dinner Entertainment

Tripod

Since their earliest shows Tripod have made a consistent habit of juggling comedy, music and narrative in endless exhilarating combinations, consistently evading neat definitions whilst always striving to stay worthy of their fans' time.

The boys started out in the thriving Melbourne pub scene of the mid 90s, a strange anomaly even then, opening for cranking horn-driven party bands with a meager three voices and one guitar, harmonising quirky pop oddities before a largely nonplussed punter. Miraculously they gained a keen following, who happily stuck with them as they underwent the first of many metamorphoses – in this case, into regulars of the Melbourne International Comedy Festival.

Soon afterwards Tripod became an institution on national radio via their *"Song in an Hour"* segment on the JJJ morning show, where their facility to crank out a fully fledged tune complete with harmonies and middle eight – according to deliberately obtuse listener suggestions – endeared them to a generation, and provided an invaluable training ground for a rich career in songwriting of all shapes and sizes.

TV followed, including four seasons as writer/performers on network TV sketch show *"Skithouse"* – the album of which, *"Middleborough Road"*, won them an ARIA – as well as a year as regulars on the exuberant cabaret showcase *"Sideshow"* on the ABC, where they performed with everyone from the Cat Empire to Colin Hay.

The boys have had significant success on the international stage – including one particularly scorching season at the Edinburgh Festival where the Scotsman newspaper gushed *"..sometimes Five Stars isn't enough"*. They have created numerous musicals including the magical *"Tripod Versus the Dragon"* in collaboration with Megan Washington and featuring Elana Stone, and have toured the smash hit cabaret show *"Perfect Tripod: Australian Songs"* where they showcase their singing chops in a breathtaking a-capella quartet with Eddie Perfect.

They continue to compose and arrange, including a regular stint as songwriters for the Cartoon Network. Their album *Men of Substance*, produced by John Castle (Bamboos, Washington) is a singular example of Tripod's ability to bring an insane level of craft in both comedy and music, and combine them in a rich and satisfying way – an ability that has cemented them as a much loved cultural fixture in Australia.

Program

Tuesday, October 28th

6.30pm	Australian Almond Conference Welcome Reception Stamford Grand Hotel, Glenelg	Sponsored by:

Wednesday, October 29th

8.00am	AGM Sign In, Conference Registration and Trade Exhibition Open	
8.30am	Almond Board of Australia AGM	Neale Bennett - ABA Chair Ross Skinner - ABA Chief Executive Officer
9.30am	Annual Levy Payers' Meeting	Dr. Greg Buchanan - Industry Advisory Committee Chair, Stuart Burgess - Horticulture Australia Limited
9.50am	Horticulture Australia Limited Review	John Lloyd - Horticulture Australia Limited
10.10am	Morning Tea and Trade Exhibition	
10.30am	Official Conference Opening	The Hon Andrew Robb AO, MP Minister for Trade and Investment
10.45am	Brand Australia - A Meaty Topic	Dr. Peter Barnard - Meat and Livestock Australia
11.05am	Go Nuts for Nutrition	Dr. Sze Yen Tan - University of South Australia
11.25am	The Global Market - A Californian Perspective	Richard Waycott - Almond Board of California
11.55am	Market Development the Australian Way	Joseph Ebbage - Almond Board of Australia
12.15pm	Almond Markets of the Future	Panel session
12.30pm	Video on Nutrition Research for Poster Session	
12.35pm	Lunch and Trade Exhibition	
1.35pm	A Word from our Platinum Sponsor	Trevor Dennis - HAIFA
1.45pm	Agriculture - The Profits in Precision	Dr. Rob Bramley - CSIRO
2.05pm	Robots in the Orchard	Prof. Salah Sukkarieh - University of Sydney
2.25pm	Hulling and Shelling - Impacting the Boundaries	Assoc. Prof. John Fielke, Dr. Maryam Shirmahammadi - University of South Australia
2.40pm	Better Trees for Aussie Growers	Dr. Michelle Wirthensohn - University of Adelaide
3.00pm	Almond Orchard Productivity R&D Program	Ben Brown - Almond Board of Australia
3.15pm	Almond Orchards of the Future	Panel Session

Session Sponsor
Mossmont Nurseries

Session Sponsor
HAIFA

3.30pm	Afternoon Tea and Trade Exhibition	
3.50pm	Economic Impacts on Australian Horticulture	Marc Soccio - Rabobank
4.10pm	Almond Enterprises of the Future	Panel Session
4.30pm	Food Safety in Focus - The US Experience	Tim Birmingham - Almond Board of California
5.00pm	Aspergillus - A Threat to Crop and Reputation	Dr. Chin Gouk - DEPI Victoria
5.20pm	Cool Dry Almonds - Storage Solutions	Michael Coates - University of South Australia
5.30pm	Day Close	

Session Sponsor
Kilter Rural

Australian Almond Conference Dinner

Morphettville Racecourse, Glenelg

6.30pm	Pre-Dinner Canapes
7.00pm	Australian Almond Conference Dinner Including 2014 Almond Industry Hall of Fame Induction

E.E. Muir & Sons

Thursday, 30th October

8.00am	Registration and Trade Exhibition	
8.10am	Carob Moth - Eating Your Profits	David Madge - DEPI Victoria
8.30am	Carpophilus Beetle - A Hungry Pest	Dr. Mofakhar Hossain - DEPI Victoria
8.50am	Biology and Management of Almond Diseases	Prof. Jim Adaskaveg - University of California
9.20am	Insects Causing Serious Damage	Panel Session
9.40am	Bird Damage - Interaction with Ecosystems	Dr. Peter Spooner - Charles Sturt University
10.00am	Rootstocks and Nematodes (video)	Dr. Peter Clingeleffer - CSIRO
10.10am	Morning Tea and Trade Exhibition	
10.30am	Integrated Pollination in California	Assoc. Prof. Neal Williams - University of California
11.00am	Almond Pollination - Impact of Varroa Mite	Dr. Saul Cunningham - CSIRO
11.20am	BeeSecure - Surveillance for Varroa and more	Daniel Martin - DEPI Victoria Sam Malfroy - Plant Health Australia
11.40am	Orchard Productivity - A Population of Spurs	Dr. David Monks - DEPI Victoria
12.00pm	Almond Sensitivity to Salt Stress	Tim Pitt - SARDI
12.10pm	Phil Watters Award	James Callipari
12.30pm	Conference Close and Lunch	

Session Sponsor
Bayer Crop Science

Session Sponsor
Rivulis Irrigation

Stoller®
Unleashing The Power Of Plants

WHAT'S NEW IN NUTS?

Stoller's global network captures the latest nut research from around the world and we've been testing our programs in Australian almonds for almost 20 years.

Find out what's new in nuts – talk to our team at the Stoller Australia exhibit.

FEATURED PRODUCT

STOLLER'S SUGAR MOVER

Formulated to improve bud and nut development and maintain growth balance – moving sugars where they're needed most.

Stoller's Sugar Mover -
Good nut to leaf ratio +
even crop = increased profits.

Stoller Australia, Silver Sponsor of the Australian Almond Conference 2014.

CONTACT STOLLER AUSTRALIA ON FREECALL 1800 FERTILISER | INFO@STOLLER.COM.AU | WWW.STOLLER.COM.AU

Speakers

Dr. James Adaskaveg

Professor of Plant Pathology - Plant Pathologist, Mycologist and Epidemiologist, University of California

Jim's research team conducts investigations on the biology, ecology, epidemiology, and management of foliar fungal and bacterial diseases of tree crops grown in California. Their research is done on host-pathogen relationships, biological and molecular techniques for the detection and identification of fungi and bacteria, disease forecasting, development of innovative pre- and postharvest management practices and on fungicide resistance mechanisms and resistance management. Through the team's research, numerous new treatments have been registered in the United States, including several reduced-risk fungicides. Additionally, Jim has been involved in international trade agreements as a scientific advisor to industry and USDA-APHIS. Jim has worked on almonds for the past 28 years. Research has included the development of models for forecasting and managing anthracnose, brown rot, jacket rot, shot hole, scab, rust, and most recently hull rot. Currently, with the recent introduction of bacterial spot into California, his team are developing management programs for this disease. They have also worked on the identification of wood decay fungi and the management of Armillaria root rot of almond. Jim has received numerous national and international awards from fruit crop industries, including the Almond Board of California and recently became Fellow of the American Phytopathological Society.

Dr. Peter Barnard

General Manager - Trade and Economic Services, Meat and Livestock Australia

Dr. Peter Barnard is currently the General Manager, Economic Planning and Market Services for Meat and Livestock Australia (MLA). The Business Unit's focus includes activities including forming key links between MLA's activities in overseas markets and the Australian industry; delivering market support and researching for these areas and co-ordinating the planning of MLA programs. Previously to this role Peter managed the Economics, Market Information and Quota Administration Division for the Australian Meat and Livestock Corporation. Dr Barnard has also worked as a tutor, lecturer and research fellow at Adelaide and Macquarie Universities. He was employed for five years as a research Scientist by the Australian Road Research Board and was engaged as a consultant to the Very Fast Train Project. More recently Dr. Barnard was employed as the Director for Transport and Telecommunications for the National Farmer's Federation. Dr. Barnard has a PhD in Economics from Adelaide University. Economic papers authored or co-authored by Dr. Barnard have appeared in a number of international journals. Dr. Barnard continues to serve on several academic, transport and agricultural industry bodies.

Neale Bennett

Chairman and Sunraysia Region Grower Representative, Almond Board of Australia

Neale has been involved with almonds since converting his family farm from vines in 1992. Neale also operates a contract almond harvesting business Cowanna Harvesting. His appointment as Deputy Chairman and Sunraysia Region Grower Representative on the ABA Board follows positions as Secretary, Treasurer and Chairman of the Sunraysia region of the Australian Almond Growers' Association (AAGA). Neale's committee positions include the Audit, Remuneration and Conference Committees He is also a member of the Almond Industry Advisory Committee (IAC).

Speakers

Tim Birmingham

Director, Quality Assurance and Industry Services, Almond Board of California

Tim joined the Almond Board of California in 2007. His current efforts are focused on actions and programs to address emerging and existing food safety and quality issues from the orchard throughout processing and distribution. He serves as the staff liaison for the Almond Quality and Food Safety Committee, and is integral in execution of the food quality and safety program. He manages research efforts in these areas helping to ensure confidence in almonds as a safe, healthy, quality food product. Tim was integral in the implementation of the 2007 program for mandatory pasteurisation of almonds, and continues to be engaged in validation and verification of technologies and processes used for almond pasteurisation. Tim also serves as the staff liaison for the Industry Services Committee and oversees activities focused on communications and outreach to growers and handlers on programs related to quality, productivity, safety and sustainability of the almond industry. In this role he is directly engaged in outreach and education efforts related to the California Almond Sustainability Program. His professional career includes over eighteen year of experience in food processing, product and process quality, process validation, food safety and microbiology, and industry relations. Tim is a veteran of the United States Marine Corps, having served in Operation Desert Storm.

Ben Brown

Industry Liaison Manager, Almond Board of Australia

Ben Brown was appointed as Almond Industry Liaison Manager in May 2007. Ben is responsible for working with almond growers, ensuring industry issues are identified and addressed in the R&D strategic planning process. He oversees a broad range of communication activities to assist in the transfer and uptake of research outcomes. Ben also has management responsibility for the almond industry's budwood site located in Monash, South Australia.

Dr Greg Buchanan

Chairman Almond Industry Advisory Committee

Dr Greg Buchanan worked for the Victorian Department of Agriculture, based at Mildura, from 1970 to 2008. His applied research involved biological control of red scale, management of grape phylloxera, and integrated pest management for drying and wine grapes. In 1991, he was appointed to lead the Plant Protection programs for the Riverlink network, which involves CSIRO and "agricultural" Departments in Victoria, NSW, and SA. From 1991 to 2008, he was a research manager for several large projects, initially in horticulture and then across the agriculture industries. Greg retired in 2008, and is a member of Horticulture Australia's advisory committees for table grapes, almonds, and dried grapes.

Dr Rob Bramley

Senior Principal Research Scientist, CSIRO

Dr Rob Bramley is a Senior Principal Research Scientist in CSIRO's Agriculture Flagship and is the Site Leader for CSIRO Waite Campus in Adelaide. He has worked as a soil chemist, on land-use sustainability issues, and since 1996, has had a primary research focus on Precision Agriculture and the management of variability in agricultural production systems. He has just completed a significant multi-agency Precision Agriculture project in the Australian sugar industry and, since 1999, has been a pioneer in the development of Precision Viticulture for winegrape production systems, now leading a newly funded project on within-vineyard yield-grape quality interactions. He is the author of over 290 research articles including 46 in refereed international journals and has spoken on Precision Agriculture at numerous international conferences around the world.

Speakers

James Callipari

2013 Phil Watters Award Winner

James graduated from Charles Sturt University Wagga Wagga in 2002 with a Bachelor of Applied Science in Agriculture. Subsequent to completing his studies, he returned to the family farms in a full time capacity, together with his father, managing four properties producing winter cereals, rice, vegetables and citrus. In 2005 the decision was made to further diversify their business by developing an almond orchard to maximize returns on each megalitre of irrigation water. In 2013, James was presented with the Phil Watters award and has recently returned from a study tour of the almond industry in Spain where he investigated different types of production systems to evaluate their suitability and adaptability to the Australian industry in the future.

Peter Clingeleffer

Group Leader, CSIRO Plant Industry

Peter Clingeleffer joined the CSIR0 Division of Horticulture in 1972 after graduating with B. Agr. Sci.(Hons) from the University of Tasmania and has been actively involved in the CSIRO's vine management and vine improvement research for almost 40 years. He has made significant contributions to development of modern wine, dried fruit and table grape industries. Mr Clingeleffer is a group leader in CSIRO Plant Industry. His research interests include low input, economically sustainable management for wine and dried fruit production; development and evaluation of new table, drying, wine and rootstock varieties and quality for all grape commodities, including linkages between vineyard practices and wine quality attributes. His rootstock research has led to the release of three low-medium vigour rootstocks by CSIRO.

Michael Coates

PhD Candidate , Barbara Hardy Institute,
School of Engineering, University of South Australia

Michael Coates is a graduate of University of South Australia. He has a Bachelor of Engineering (Mechanical and Mechatronic) with Honours and is currently pursuing a PhD with the Barbara Hardy Research Institute.

Saul Cunningham

Group Leader, Ecology Program,
CSIRO Ecosystem Sciences/ Sustainable Agriculture Flagship

Dr Saul Cunningham is a research scientist with CSIRO Ecosystem Sciences, based in Canberra.He began his research in 1989 as an honours student at Monash University with a project on pollination of Banksia. Since then he was awarded a PhD in the USA, and now 20 years on, pollination continues to be his focus, but with an emphasis on crop pollination. With collaborators he has worked on orchard and broadacre crops, with beekeepers and with wild pollinators, and on extensive reviews and analysis of the global crop pollination literature.

Speakers

Trevor Dennis

Chief Executive Officer, HAIFA Australia

Trevor has been involved in the fertiliser industry for over 20 years, originally completing his Agricultural Degree with Melbourne Uni (Dookie) in the early 90s. He has moved on to be passionate about Agriculture in Australia. In the past 20 years Trevor has worked in every state of Australia in many capacities, from fertiliser, irrigation and GPS guidance to now heading up HAIFA Australia, the premium supplier of water soluble nutrients, in particular Potassium Nitrate to Australian farmers. It is with the support of the almond industry that HAIFA and its team have been the major sponsor of the Almond conference for the past four years.

Joseph Ebbage

Market Development Manager, Almond Board of Australia

Joseph Ebbage is engaged on a contract basis to manage the Almond Marketing Program. Based in Melbourne, Joseph has been working with the ABA since 2003. He is the principal of "Consumer Insights", a market research and consultancy agency specialising in the Fast Moving Consumer Industry and has developed innovative solutions for companies including Select Harvests, the Nuts for Life Program and Horticulture Australia Limited.

Assoc. Prof. John Fielke

Associate Head: Teaching and Learning , School of Engineering, University of South Australia

Associate Professor John Fielke is a researcher with the Barbara Hardy Institute and Associate Head, Teaching and Learning in the School of Engineering at the University of South Australia, Mawson Lakes campus. John has a Bachelor of Engineering in mechanical engineering (South Australian Institute of Technology), Master of Engineering Science in agricultural engineering (University of Melbourne) and a Doctor of Philosophy in Soil Science (University of Adelaide). His work has resulted in selection of steels and designs for tillage tools, 108 new models of tillage and seeding equipment for Horwood Bagshaw and improved dried grape processing factories throughout Australia. John has received over $8 million in grants and undertaken 42 design consultancies and 13 expert witness reports on machine failures. John currently teaches engineering drawing and mechanical design plus he supervises 2 PhD candidates. In 2011 John was contracted by the ABA to undertake a review of the Australian almond processing industry. As on outcome, in 2012 he was awarded a 4.5 year grant from Horticulture Australia Limited titled "Advanced Processing of Almonds". This grant is developing better methods for hulling, cracking, cleaning and storing of almonds

Dr. Chin Gouk

Senior Plant Pathologist, Department of Primary Industries Victoria

Dr Chin Gouk is a senior plant pathologist with the Department of Primary Industries, Victoria. DPI has a lead agency role for almond research, development and extension in the National Horticultural Research Network. Chin has a Bachelor of Horticultural Science (1st Class Honours) and a PhD in Plant Pathology (Lincoln University, New Zealand).

Chin has over 20 years R&D and consultancy experience working with agricultural industries in Australia and New Zealand. She has led national and international collaborative projects in microbial ecology and detection, disease epidemiology and prediction, and development of integrated disease management systems for temperate horticultural crops. Chin has held the role of Program Manager for research projects, and was Section Leader for DPI's crop health diagnostic service, managing quality assurance for ISO and AQIS accreditation. She has ten years research and consulting experience on almond plant health and production issues. She currently leads a Horticulture Australia Limited/ABA research project on almond food safety.

Dr. Mofakhar Hossain

Senior Research Scientist, Department of Environment and Primary Industries Victoria

Dr. Mofakhar Hossain gained his M. Sc. and Ph.D on Ecology, from the University of Bergen Norway. Dr. Hossain has more than 28 years' experience in entomology dealing with Integrated Pest Management Systems in Horticulture. At DEPI Victoria he was leading several projects involved with plant insect interactions and use of insect pheromone and plant volatiles to control key pests in stone and pome fruit in Australia. He has achieved international recognition for his work on pheromone and plant volatiles. His networks include research specialists in the USA, Israel, China, India, Bangladesh, Pakistan and many European countries.

David Madge

Senior Entomologist, Department of Environment and Primary Industries Victoria

David graduated from Adelaide University in 1981 with a Bachelor Degree in Agricultural Science. His areas of interest were entomology and horticulture and he subsequently joined the Victorian Department of Primary Industries at Mildura, initially researching alternative tree crops then joining the crop protection group. Much of David's time at Mildura has involved field research and extension in integrated pest management for the grape and citrus industries, including management of a national citrus IPM research project, producer workshops on pest identification and management, pest diagnostics for table grape export inspections and management of a seasonal pest and disease advisory service for those industries. He has also provided research, extension and industry development support for the organic industry. David has been investigating carob moth and its management as an almond pest through industry-funded projects since 2011

Speakers

Sam Malfroy

Project Officer, Plant Health Australia

Sam joined PHA in 2011, and since that time has managed many of the honey bee and pollination projects, including the coordination of the National Bee Pest Surveillance Program and the development of the BeeAware website. Sam was also Chair of the Australian Government funded Varroa Continuity Strategy, of which the Almond Board of Australia was a member. Sam has a Bachelor of Horticultural Science (Hons) from Sydney University in forestry pathology, and formerly worked with the Department of Agriculture in Plant Biosecurity.

Daniel Martin

Apiary Officer, Department of Environment and Primary Industries Victoria

Since 2009 Daniel Martin has been employed with the Department of Environment and Primary Industries (DEPI) as an Apiary Officer. Based in Bendigo, Daniel is one of two State Apiary Officers. Prior to working with DEPI he worked within the vocational education and training sector developing and delivering nationally accredited training courses in horticulture and apiculture. He holds a Bachelor of Horticultural Science from the University of Western Sydney (Hawkesbury), a Diploma in Vocational Education and Training Practice and has 25 years experience as a beekeeper.

Dr. Dave Monks

Research Scientist, Department of Environment and Primary Industries Victoria

Dr Dave Monks is a research scientist with DEPI and leads their physiology-based almond projects. He continues the work begun at the Department by Dr Karl Sommer. Dave has a Bachelors Degree in Horticultural Science and a PhD in crop physiology. His work with the Department to date has involved managing research in production and crop physiology of almonds and grains, including projects with HAL, GRDC and CMA and relationships with CSIRO, Plant and Food New Zealand, SARDI and PIRSA. Dave is currently working toward understanding the underlying mechanisms in almonds and how we can manipulate them to maximise profitability.

Tim Pitt

Senior Research Officer, SARDI Water Resources and Irrigated Crops

Tim Pitt is a senior research officer with SARDI Water Resources, based at the Waite Campus in Adelaide. After completing an honours degree in Agricultural Science, Tim spent eight years in the South Australian Riverland conducting field-based research for the dried tree fruit industry. He has since completed a Graduate Diploma in Groundwater Hydrology and worked across most of SA's irrigation districts exploring methods to improve the productivity and quality of horticultural crops irrigated with saline waters. Tim is currently investigating salinity management strategies in vineyards and almond orchards irrigated with recycled municipal wastewater in both McLaren Vale and the Northern Adelaide Plains.

Dr. Maryam Shirmahammadi

Postdoctoral Research Fellow, University of South Australia

Dr Maryam Shirmohammadi is a postdoctoral research fellow at the Barbara Hardy Institute, University of South Australia. She has joined the almond research group in April 2014, focusing on almond hulling and shelling advancement. Maryam has been involved with agricultural machineries and post harvesting operation since she finished her bachelors degree in Mechanical Engineering and has worked as a senior design and consultant engineer for over three years before starting her PhD at the Queensland University of Technology. Her PhD thesis focused on the mechanised agriculture and food industry and applying finite element and mathematical modelling in the study of damage on food tissues. In her current position Maryam is investigating the possibility of on-farm green hulling of almonds as well as impact huller/sheller equipment.

Marc Soccio

Senior Analyst, Food and Agribusiness Research and Advisory, Rabobank

Marc Soccio joined Rabobank Food & Agribusiness Research and Advisory in January 2010, as the senior analyst responsible for food, wine and horticulture. Rabobank's Food & Agribusiness Research and Advisory (FAR) team is charged with analysing developments in food and agricultural markets and industries, and advising the bank and its clients on strategic implications for their businesses. Comprised of a network of some 80 analysts spread across every major production and consumption region of the world, FAR is a central component of the banks capacity for informed credit decision making, product development, advisory services, and strategic client partnerships. Marc has a strong food and agribusiness sector research background within viticulture, wine, horticulture and associated processing industries covering Australia and the United States. Marc also has knowledge of many of Australia's major irrigation districts and has consulted to state and local government on the economic development needs of regional communities. He holds an Commerce Honours degree from the University of Melbourne, a Graduate Diploma in Oenology from the University of Adelaide, and is currently studying for a Masters of Business Administration at Melbourne Business School.

Dr. Peter Spooner

Senior Lecturer, Vegetation and Restoration Ecology and Postgraduate Coordinator, School of Environmental Sciences, Charles Sturt University

Dr Peter Spooner is an ecologist based at Charles Sturt University, Albury NSW. His research endeavours to make a major contribution to the field of biodiversity conservation in rural and other human-modified landscapes. Major research interests include disturbance and landscape ecology (specifically grazing management, environmental history, fragmentation effects on plants, and connectivity analyses), and plant dispersal processes. Peter had developed an expertise in the growing science of road ecology, which explores the relationship between road systems and the natural environment. This includes research on roadside vegetation and Travelling Stock Routes (TSRs), which make a significant contribution to biodiversity conservation targets in many rural areas.

Speakers

Ross Skinner

Chief Executive Officer, Almond Board of Australia

Ross Skinner is Chief Executive Officer of the Almond Board of Australia, holding this position since November 2010. He has qualifications in Economics and Accounting but has worked in horticulture for 30 years, including Assistant General Manager of the Australian Dried Fruits Association and General Manager of the Dried Fruits R&D Council and the statutory export marketing body, the Australian Dried Fruits Board. Ross joined Horticulture Australia in 2002 and his role involved developing and implementing strategic plans for the Murray Valley horticultural industries.

Prof. Salah Sukkarieh

Professor of Robotics and Intelligent Systems, School of Aerospace Mechanical & Mechatronic Engineering, Director of Research and Innovation at the Australian Centre for Field Robotics, University of Sydney

Professor Salah Sukkarieh is an international expert in the research, development and commercialisation of field robotic systems. He has lead a number of robotics and intelligent systems R&D projects in logistics, commercial aviation, aerospace, education, environment monitoring, agriculture and mining, and has consulted to industry including Rio Tinto, BHP, Patrick Stevedores, Qantas, BAE Systems, QLD Biosecurity, Meat and Livestock Australia, and the NSW DPI amongst others. Salah's work involves developing robotic devices and intelligent systems that can operate 24/7 in outdoor environments. These are devices that can perceive and understand their environment, make informed decisions about any actions required and then carry out those actions - all without direct human input.

Dr. Sze Yen Tan

Dietitian and Lecturer in Nutrition and Dietetics, University of South Australia

Dr Sze Yen Tan is an Accredited Practicing Dietitian and a Lecturer in nutrition and dietetics at the University of South Australia. His doctoral thesis examined the effects of dietary manipulations on body weight regulation. In 2010, he received a post-doctoral fellowship award and spent three years at the Ingestive Behavior Research Center of Purdue University (USA), researching on various dietary strategies that regulate human appetite and food intake. Dr Tan's previous and current research projects investigate: 1) the acute thermogenic and fat oxidative effects of higher protein and polyunsaturated fat (PUFA) diets, 2) the short- and long-term effects of higher PUFA diets on abdominal fat changes, 3) the nutritional implications of taste, snacking, and food restriction, and 4) the effects of nut consumption (almonds and walnuts) on body weight, body composition, blood glucose regulation, and cardiovascular health.

Richard Waycott

President and CEO, Almond Board of California

The Almond Board of California's (ABC) President and CEO, Richard Waycott, joined the organisation in 2002. Prior to heading up the ABC, Mr. Waycott worked for over 20 years, mostly in Latin America, in the food manufacturing and agribusiness industries, with extensive experience in the consumer products and B-to-B grains and oilseeds market segments. Mr. Waycott's experience compliments the other professionals at the Almond Board by bringing strategic leadership to the global development of the California almond industry. Since his appointment, worldwide almond shipments, and the activities of the ABC, have grown tremendously, with Almond Board programs now touching every aspect of the industry's interests. The Almond Board is a very accomplished organisation, one that is held in high esteem by industry stakeholders around the world.

Dr. Neal Williams

Associate Professor of Pollination and Bee Biology, Department of Entomology and Nematology, University of California

Dr Neal M. Williams is Associate Professor of Pollination and Bee Biology in the Department of Entomology and Nematology at the University of California, Davis and a core faculty member in the UC Davis Agricultural Sustainability Institute. His research on pollination spans the disciplines of conservation biology, behavioral ecology and evolution. One primary research focus is on sustainable pollination strategies for agriculture. This work has been carried out in agro-ecosystems in California's Central Valley, in eastern Pennsylvania and New Jersey, with a continuing goal to provide practical information that can be used by growers and land managers. His research is critical given ongoing pressures facing managed honeybees and declines in important native pollinators such as bumble bees. Results from his work form the basis for USDA-NRCS (Natural resource Conservation Service) planting guidelines to enhance pollinators in agriculture.

Specifically for almonds, Neal is working to develop native plant mixes that provide forage diversity of honey bees and extend the duration of forage for managed and wild native bees. Neal and his colleagues recently showed that wild bees act to increase the pollination effectiveness of honey bees.

Dr Michelle Wirthensohn

Horticulture Australia Research Fellow, University of Adelaide

Dr Michelle Wirthensohn is the Horticulture Australia Research Fellow with the University of Adelaide. Michelle has been involved in horticultural breeding and research since graduating from the University of Adelaide where she gained her Bachelor of Agricultural Science (Hons), Graduate Certificate in Higher Education and a PhD in Horticulture. Michelle has worked on various plant breeding projects involving banksias, eucalypts and olives. She is currently the Program Leader of the Australian Almond Breeding Program which is funded through HAL. She is a member of the Almond Board of Australia's Plant Improvement Committee and lectures in Plant Breeding at the Waite Campus. Other areas of research interest include the biochemistry of almond kernel flavour, genetic mapping of important agronomic traits of almond such as kernel weight, fatty acid profile, and water use efficiency of almonds.

Prof. Jim Adaskaveg

Increases in the intensity of almond cultivation and importance of summer diseases in California

Dr. J. E. Adaskaveg, Department of Plant Pathology and Microbiology, University of California, Riverside, CA 92521, U.S.A.

Simultaneous implementation of horticultural practices such as establishing high-density plantings, minimal pruning, and utilizing more efficient irrigation systems, as well as nitrogen chemigation have increased the intensity of almond cultivation in California. These practices have greatly influenced the occurrence of fungal summer diseases by changing the orchard's microclimate. Hull rot, rust, scab, and Alternaria leaf spot have become important diseases to manage in order to maintain high productivity over the orchard's life. Hull rot can be caused by Monilinia spp., most commonly M. fructicola, and Rhizopus stolonifer. These pathogens infect almond hulls, and the disease can develop into woody tissues with fungal colonization and toxin production. Extensive losses of "fruiting wood" have occurred in recent years at many locations due to this disease. Hull rot can be managed to some extent using deficit irrigation but this practice may result in water-stressed trees and long-term effects on tree productivity. Shortening irrigation durations, providing balanced early-season nitrogen fertilization, and reducing dust in the orchard, all help minimize the occurrence of hull rot. Recently, we also developed effective fungicide treatments with DMIs (FRAC Group or FG 3), QoIs (FG 11), SDHIs (FG 7), and chitin synthase inhibitors (FG 19) as another component of an integrated disease management approach. Different application timings are needed for the two pathogens: late spring for Monilinia spp. and early hull split for R. stolonifer. Rust is more sporadic in its occurrence. Early spring monitoring and fungicide applications timed together for other diseases such as scab and Alternaria leaf spot provide effective management. For scab, dormant treatments before bud-swell with copper-oil or chlorothalonil-oil delay in-season sporulation of overwintering twig infections for more than 4 to 8 weeks after petal fall, respectively, and have minimized the need for in-season fungicide applications. If in-season fungicides are needed, the delay in sporulation has moved scab application timings to late spring and therefore, treatments can be aligned with those for other diseases such as rust and Alternaria leaf spot. To prevent fungicide resistance in pathogen populations, multiple active ingredients with different modes of action (MOA) and with shorter preharvest intervals are registered for each disease. Single MOA FG 3, 7, 9, 11, 17, and 19, as well as pre-mixtures of FG 3/7, 3/11, 3/9, and 7/11 or tank mixtures of 3+19 are used in rotations and have been widely adopted by the almond industry of California for the management of summer diseases of almond. Subsequently, new detections of fungicide resistance in populations of Alternaria spp., and Fusicladium carpophilum that cause summer diseases have not occurred and resistance to QoIs and some SDHIs have not increased in the last few years since the introduction of newer fungicides (e.g., FG 3, 7, and 19).

Dr. Rob Bramley

Senior Principal Research Scientist, CSIRO

Precision Agriculture – Opportunities for enhancing profitability

CSIRO Agriculture Flagship, Waite Campus, PMB 2, Glen Osmond, SA5064

email: rob.bramley@csiro.au

Land is variable. As a consequence, so too is crop production. Although farmers have known this for as long as they have been farming, without tools to measure, monitor and manage within-field variation, agriculture has generally operated under the assumption that the optimal practice in any given field is to use a single uniform management strategy. Thus, for example, an individual almond orchard under conventional management might be fertilized and irrigated at the same rate throughout.

With access to some key enabling technologies, such as the global positioning system (GPS), remote sensing (from satellites, aircraft and now drones), yield monitoring and mapping, electromagnetic and gamma radiometric soil survey at high spatial resolution and Geographic Information Systems (GIS), the growers of many crops including cereals, cotton, winegrapes and more recently, sugarcane are now able to see both the variation in the land underlying their production systems and the impact of this on crop performance, and so can tailor their management in response to it. Variable rate application of fertilizers and soil amendments is becoming increasingly common and in some sectors, most notably amongst wine producers, advantage is taken of the variation through selective harvesting and product streaming. Product tracking, from the farm to supermarket shelf, is an additional opportunity which arises and may be of interest to horticultural producers in particular.

Precision Agriculture (PA) has been described as a cyclical process of Observation (perhaps through yield mapping, remote sensing and soil survey), followed by Evaluation and Interpretation of the observed data, leading to Implementation of Targeted Management. The methods of spatial analysis which underpin the evaluation of observed data are essentially generic to PA in any cropping system and are well understood. So for almond producers to take advantage of this more targeted approach to farming, effort will be required in two areas. The first of these relates to the identification of opportunities for targeting management which would deliver benefits to growers and/or others parts of the almond value chain. In the second, appropriate technologies to support observation of variation in the production system are needed; yield monitors and appropriate remote sensing tools are no doubt of highest priority.

With a focus on profitability, this presentation will use examples from the grains, sugarcane, winegrape and apple industries to offer suggestions as to how the almond industry might benefit from a PA approach to production.

Tim Birmingham

Director, Quality Assurance and Industry Services, Almond Board of California

Food Safety in Focus – The US Experience Abstract:

Almond growers and handlers in California are facing a new era of food safety. Rules are being finalized by US Food and Drug Administration under the Food Safety Modernization Act (FSMA), which will begin to take effect in the summer of 2015. Under the new rules, growers, huller/shellers and handlers will be subject to regulations to address potential risks through growing and processing. With the proactive approach the California Almond Industry has taken towards food safety for more than a decade, the industry is well positioned to adapt to the changes that lie ahead with FSMA. Tim Birmingham will share those key steps and programs the California almond industry has initiated to address microbial food safety challenges over the years, which will help keep almonds positioned as a food safety leader in the low moisture food category. Specific focus will be on understanding the microbial risk, defining safe growing and harvesting practices, developing and validating appropriate lethal steps, and controlling cross contamination.

Peter Clingeleffer

Group Leader, CSIRO Plant Industry

Rootstocks and Nematodes

Peter Clingeleffer, N. Morales, B. Smith
CSIRO Plant Industry, Waite Campus, Wine Innovation West Building, Hartley Grove, Urrbrae, South Australia 5064

A recent glasshouse based study confirms there are varying degrees of root-knot nematode (RKN) tolerance across 18 Prunus rootstocks currently used or with potential for use in Australian almond orchards. Whilst it will be important to confirm resistance/susceptibility of the rootstocks to RKN under field conditions, similar tests by the grapevine industry indicate the results are transferable to field conditions.

The results of the glasshouse based study have significant implications for selection and adoption of Prunus rootstocks by the almond industry, particularly when current orchards are redeveloped or new plantings occur in land previously used for other horticultural pursuits (e.g. vines and vegetables). Inspections of RKN susceptible rootstocks in replant orchards or orchards with a history of irrigated horticulture show RKN infestation, reduced root health and in some instances tree death. Tree death is not commonly seen and in some instances poor root health is not accompanied with reduced yield, but given many of these orchards are only young it is too early to confirm their fate. Experience in Vitis suggests poor root health will lead to variable plant health, yield reductions and reduced vineyard life expectancy.

It is recommended a broader survey of existing almond orchards is undertaken to determine the distribution of root-knot nematode species and virulence of root-knot nematode isolates across the industry. Furthermore, it would be prudent for orchardists to implement soil sampling strategies to identify root-knot nematode species and numbers prior to development of plantings. The results also suggest growers should avoid redevelopment of orchards with the same rootstock that was used in original plantings. It will also be important for the industry to implement strategies to minimise the risk of spread of root-knot nematode species and isolates. This could involve heat treatment of all field nursery grown material, propagation in soil free medium and attention to cleaning machinery and equipment when moving between orchards.

It is also important the almond industry consider root-knot nematode as a biosecurity risk and implement strategies to minimise the risk of spread of species and isolates with varying virulence. The strategies could involve heat treatment of all field nursery grown material, propagation in soil free medium (potted nurseries) and attention to cleaning machinery and equipment when moving between orchards.

RKN resistance should be considered an important trait in the selection and development of rootstocks for the Australian almond industry. It's not the only trait to be considered, but be careful of losing it when changing to alternatives.

Michael Coates

Storage, aeration and dehydration of almonds

Michael Cal Coates1, John Fielke1

1Barbara Hardy Institute, School of Engineering, University of South Australia, Mawson Lakes, South Australia

Australia has significantly increased its almond production since 2007 from 26,882 kernel tonne to 73,361 kernel tonne in 2013. This increased production has increased pressure on the processing capacity making it necessary to rely on post-harvest storage to extend the time from harvest to processing. This increases the fruit's exposure to rainfall and pests, which over time can degrade the quality of the product through colour changes, insect damage, moulds and rancidity. This work is evaluating ways to reduce product degradation through drying fruit that's been rain affected or early 'green' harvested fruit from 'shake and catch' methods. The later having the additional benefit of decreased food safety risks through reduced ground contact.

It is well documented almonds must be stored with a value of water activity below 0.65 (equal to relative humidity around the fruit of 65%) to stop the growth of moulds. This is equivalent to <7% kernel moisture content. This work is investigating methods to dry fruit with kernel moisture in excess of 7% and to then be able to maintain this condition during storage. Developing these possibilities requires an understanding of almond properties related to moisture loss so they can be dried and stored at optimum conditions.

Experiments that determine the rate moisture moves through the fruit (diffusion) were conducted on Carmel almonds at hull split placed in an environment held at 50°C and 25% RH. The fruit was separated into the five components: hull; shell; kernel; in-shell and in-hull. A custom designed dehydrator was used to simultaneously measure the change in moisture content (MC) of the 5 items until they reached equilibrium MC. The time to reach the equilibrium MC of 4% kernel (at 25°C and 50% RH) was in-hull: 85 hours, in-shell: 60 hours, hull: 30 hours, shell: 5 hours, kernel: 40 hours. This test showed loose kernel would reach the critical water activity level of 0.65 in 18 hours. It was observed that high moisture kernels removed from the shell and then dried under the experimental conditions produced a cavity within the kernel. This was thought to be a result of the kernel drying too rapidly. It was noted in another test using air at 60°C resulted in the skin on the kernels flaking off once cracked out of their shells.

Results showed 61% of the moisture is contained within the hull which is equivalent to 488 g of water for every 1000 g of fruit. This indicates the majority of energy and time (i.e. expense) is going to be consumed drying the hull, but if it were removed this would increase drying opportunities. The removal of the hull on-farm and prior to drying and storage is the focus of a parallel project by the University of South Australia.

The work also highlighted the very rapid drying of the shell (5 hours) versus in-shell (60 hours). This indicates the drying of in-shell could be stopped once the shell is dry, allowing water remaining in the kernel to transition into the shell , this would achieve a balanced equilibrium with a water activity of less than 0.65.

Once in storage, effective fumigation and aeration cooling (as done for cereal grains) should be implemented to minimise the almond temperature, insect growth and rancidity. Aeration cooling will be studied during the 2014/15 season.

Dr. Saul Cunningham

Group Leader, Ecology Program,

CSIRO Ecosystem Sciences/ Sustainable Agriculture Flagship

Title: Are we ready for Varroa? Flexible pollination strategies

Dr. Saul Cunningham, CSIRO Land and Water Flagship, Canberra, ACT 2601

Australia has been fortunate, so far, to avoid the global Varroa mite invasion. This good fortune has helped us to maintain a strong beekeeping industry. But we need to be prepared for possible arrival nevertheless. The almond industry has a big stake in this because it has such a strong demand for bee hives. Because pollination is so important to the industry, almond growers have a good knowledge base to work from. In this presentation I use the results of our research on strategies for deploying hives into orchards to examine the options in case growers are forced to make do with fewer hives because of disease impacts on beekeeping. Our experiments indicate that growers can maintain good pollination rates by spreading hives out more and minimising distance between hives and trees. Changing pollination strategies to deal with hive shortages might require more time and labour to implement. The right solution will require a balance between the risk of lost yield from lower pollination, and the cost of the risk reducing strategy.

PROTECO Oils

THE LEADING MANUFACTURER OF QUALITY COLD PRESSED OILS IN AUSTRALIA

To leverage the forecast growth in cold pressed oils and grow your business, make Proteco Oils your partner of choice.

Dr. Chin Gouk

Aspergillus – A Threat to Profit and Reputation

Chin Gouk[1], S. Kreidl[1], B. Emmett[2], N. Tran-Dinh[3], D. Zabaras[3], M. Roohani[3], P. Faulkner[2]

[1]Department of Environment and Primary Industries, Centre for AgriBioScience, 5 Ring Road, Bundoora, Victoria 3083
[2]Department of Environment and Primary Industries, Mildura Centre, Cnr. Koorlong Ave & 11th Street, Irymple, Victoria 3498
[3]CSIRO, Food and Nutrition Flagship, PO Box 52, North Ryde, NSW 1670

Food production and processing are required to comply with international and national food safety standards to safeguard consumer safety, and minimise burden on the wider industry, businesses and governments. Raw nuts such as almonds are considered a ready-to-eat food, and are subjected to stringent microbiological and toxicological criteria. These criteria include limits for a range of foodborne pathogens and their toxins/metabolites. Aflatoxins produced by Aspergillus flavus and A. parasiticus, are amongst the targets for monitoring by regulatory authorities, because they are potent carcinogens even when consumed in small doses.

The almond food safety project (HAL AL11009) has gained a better understanding of the development of Aspergillus spp. in the orchard and during storage. It has identified critical control points for minimising microbial contamination. Findings on the interactions between Aspergillus and hull rot and between hull rot and carob moth have highlighted an integrated approach is required to solving these problems.

This report discusses findings from the last season. In the orchard study, Aspergillus spp. were not detected in green nuts in December 2013 (pre-hull split). However, at harvest (February 2014), the fungi were detected in nuts on the trees, windfall nuts, trash and soil. Rhizopus was also not detected in green nuts in December 2013, even though the inoculum was found on mummies, windfall nuts, soil and trash. At harvest, high Rhizopus inoculum was found in nuts on the trees and windfalls. This indicates that hull split allows both fungi to enter and infect almonds.

Growers and processors either cover the almond stockpiles or leave them uncovered for on-farm storage prior to processing. The influence of both practices on microbial levels and nut quality was investigated. Portable, low cost '1-wire' sensor/logger devices were placed in two stockpiles at different depths to monitor temperature and relative humidity. Hulls/shells and kernels from the uncovered stockpile that was exposed to the rain in April 2014 had 50.6% and 13.1% moisture respectively, exceeding the recommended thresholds. In contrast, the covered nuts were drier, with kernel moisture contents of 4.3%.

Varying levels of microbial growth were detected in covered and uncovered nuts after storage for nine weeks. Aspergillus and Penicillium spp. were present at high levels in early April, the levels then declined in mid June for both covered and uncovered nuts. Rhizopus levels increased during storage in both covered and uncovered nuts, not affected by differences in moisture levels. Bacterial numbers were higher in covered nuts after nine weeks storage, suggesting moisture build up in the surface layers of covered nuts was conducive for bacterial growth. The population dynamics of the microbial species varied under different environmental conditions.

Fungal and bacterial infections of almonds are a key cause of reduced profits, due to yield loss from rotten nuts or quality downgrade of blemished nuts. Environmental conditions and different approaches to orchard and stockpile management can have a significant impact on a complex of microbial species that cause nut rots, deterioration and food safety risks. Different strategies need to be developed to manage these risks.

John Fielke

Associate Head: Teaching and Learning , School of Engineering, University of South Australia

Maryam Shirmahammad

Postdoctoral Research Fellow, University of South Australia

Hulling and Shelling – Impacting the Boundaries

Barbara Hardy Institute, School of Engineering, University of South Australia, Mawson Lakes

The hulling and shelling of almonds by Australian processors is currently undertaken using equipment that simultaneously compresses and shears the almonds to release the kernel. This work is investigating new methods of hulling and shelling. Firstly, the work aims to develop techniques to allow on-farm hulling that retains the nutrient rich hulls on the farm and reduces the volume of almonds that need to be stored, dried, cooled, fumigated and transported. Secondly, the work aims to reduce the amount of damage to the kernel during shelling, thus reducing losses and increasing the value of the final product. This work compares both the current method and an alternative method of impact threshing. For this work, samples of fruit from hull-split through to dried were used.

The current method of compressing/shearing of almonds was observed to be very dependent upon the fruit's orientation and amount of compression applied, and it needed multiple passes to achieve release of all kernels from their shells. A purpose designed machine was constructed for impact threshing of almonds and testing showed that kernel damage was substantially reduced when processed in a wetter condition. This wetter condition can be achieved by processing before drying is completed or by wetting up the fruit before processing. The early harvesting and processing was noted to produce a lighter coloured kernel. The impact threshing of Carmel fruit harvested soon after hull-split showed that 100% of fruit could be hulled in a single pass of the equipment with less than 1% of loose kernel produced. This in-shell fruit would then need to be dehydrated before going into storage. If repeated passes of the fruit is undertaken before dehydration, it can then be shelled to release the kernels with minimal damage to the kernels. Shelling of 60 varieties of almonds (both commercial and experimental) at a common setting of the impact thresher in a wetted condition showed that for soft shell varieties between 78 and 94% of all kernels could be released with no damage (9 to 21 passes), for semi-hard shell varieties between 66 to 95% of all kernels could be released with no damage (12 to 26 passes) and for hard shell varieties between 50 to 72% of all kernels could be released with no damage (17 to 47 passes).

Work is continuing to develop this into a process that could be used at the time of collection of almonds in the orchard to remove the hulls, then mill the hulls to reduce their size and spread them back in the orchard in a single pass. This will have flow-on benefits for improved storing, drying and fumigating almonds and managing serious damage incidences such as insect damage, mould and rancidity. This work has highlighted that by impact threshing to remove the hulls when they are green or wet, there are great benefits for harvest strategies, managing rain affected fruit and reducing food safety risks. The work has also highlighted that by impact threshing almonds in a wetter condition much less damage is sustained to the kernel and this will allow the industry to produce and market a higher presentation quality of almonds.

Dr. Mofakhar Hossain

Senior Research Scientist, Department of Environment and Primary Industries Victoria

Carpophilus beetle, a new pest in almond orchards

Dr. Mofakhar Hossain and David Williams
Department of Environment and Primary Industries, Ferguson Road, Tatura, Victoria 3616
E. Mofakhar.Hossain@depi.vic.gov.au

The Australian almond industry increased significantly during the 2000's with most of this acreage now bearing and near maturity. This "new & emerging" Industry in Australia has generated many surprises and Carpophilus beetle is one of them.

In 2013/14 the industry was first alerted to Carpophilus beetle as a new pest of almonds when several growers and processors discovered its presence and found various degree of kernel damage sometimes worse than that caused by carob moth. What's particularly worrying is the beetle doesn't discriminate between almond varieties.

Carpophilus beetles are very well known to be a serious pest of stone fruit, where crop losses of up to 30% have been reported.

At least 12 species of *Carpophilus* spp. occur in Australia with *C. davidsoni, C. hemipterus,* and *C. mutilatus* causing the greatest economic damage in ripening stone fruit. *C. davidsoni* is native to Australia whereas the other two species are cosmopolitan.

Carpophilus have several generations per year with females laying an average of 1,071 eggs, with eggs hatching in 1-4 days, and larval development taking 4-14 days. They are also strong fliers with flight greater than 4km recorded.

Carpophilus are very resilient pests and can hibernate as mature larvae, pupae and adults. In recent visits to Almond orchards and processing factories we found Carpophilus are happily living and breeding in mummies especially are in the tree lines as well as in the hull dumps.

Like most pests, Carpophilus is affected by environmental conditions with relative humidity less than 40% reducing larvae and egg laying. Consequently, dry conditions in the autumn and winter can reduce spring populations.

Whilst it is not known why Carpophilus has become attracted to almonds, it's thought the volatiles from maturing or rotting fruit are likely to play a role, just as it does in stone fruit.

Other than physical damage and rapid breakdown to stone fruit, Carpophilus also can cause indirect damage by serving as a vector of brown rot inoculum (*Monilinia* spp.), which frequently develops at the sites of beetle entry.

Like the management of most pests, success can be achieved with an integrated approach with orchard hygiene, vigilant monitoring and attract and kill systems available to manage Carpophilus beetle.

Sam Malfroy

Project Officer, Plant Health Australia

Daniel Martin

Apiary Officer, Department of Primary Industries Victoria

The National Bee Pest Surveillance Program

Sam Malfroy, Plant Health Australia
Daniel Martin, Victorian Department of Environment and Primary Industries

The National Bee Pest Surveillance Program is an early warning system to detect new incursions of exotic bee pests. The Program involves a range of surveillance methods conducted at locations considered to be of most likely entry of bee pests throughout Australia. An incursion of any honey bee pest would have serious consequences not only for the honey bee industry, but also many pollination dependent industries, especially the Almond industry.

A large number of exotic pests are monitored for in each state or territory, including the Varroa mite. CSIRO have estimated that the arrival of the exotic Varroa mite will cost the Australian honey bee industry, and pollination dependent industries, around $72 million per annum for over 30 years. For the almond industry, this is projected to cause a major jump in pollination prices, upwards of $150/hive. For this reason, early detection of these pests is critical to providing the best possible opportunity to eradicate an incursion, and to limiting the size and cost of an eradication program.

The Program runs on around $200,000 per year and is currently funded by the honey bee industry, pollinator-reliant industries and the Australian Government Department of Agriculture. In-kind contributions for the implementation of the program are provided through each State and Territory Department of Agriculture and volunteer beekeepers. At a national level, Plant Health Australia coordinates and administers the Program.

One of the highest risks for an incursion of an exotic bee pest is Victoria. For this reason, The Victorian Department of Environment and Primary Industries (DEPI) conducts strategic exotic bee pest surveillance operations within and surrounding Victoria's four main high risk entry international shipping ports (Port Melbourne, Geelong, Hasting and Portland) as well as at Tullamarine Airport. This surveillance employs the use of sentinel (live) beehives which are monitored every eight weeks and swarm catch boxes which are monitored fortnightly.

Victoria, along with other state and territory governments have decided that funding will be focused on pre-border surveillance and emergency preparedness for exotic bee pest incursions, rather than established pest and disease management.

In preparedness for an incursion, DEPI maintains effective emergency response capability through an initial strike force team comprising two Apiary Officers and six apiary trained Biosecurity staff. In addition, DEPI, in partnership with the Victorian honey bee industry, has a beekeeper State Quarantine Response Team (SQRT). This team currently comprises 105 industry beekeepers who have received nationally accredited honey bee emergency response training. In the event of an incursion these SQRT members will be employed by DEPI to assist with surveillance activities. DEPI also has an additional team of 30 committed Biosecurity staff who have received similar training to SQRT members, thereby being able to supervise SQRT members during a campaign.

Considering the heightened risk that exotic bee pests pose to all agricultural industries PHA are looking to secure a long term funding agreement for this Program, as well as greatly increased funding for additional surveillance in Victoria, and around Australia.

David Madge

Senior Entomologist, Department of Environment and Primary Industries Victoria

Carob moth – Eating your profits?

Carob moth (*Ectomyelois ceratoniae*) causes economic damage to numerous tree crops worldwide. It has been known in Australian almonds since the 1960s but became a serious pest only after the unusually wet seasons in 2009/10 and 2010/11. This change in pest status may have resulted from a marked increase in numbers of nut mummies remaining on trees after harvest in those seasons, as carob moth uses mummies as a food resource. Carob moth exhibits similar biology and behaviour to that of its relative the navel orange worm, California's worst almond pest. Its larval stage feeds on almond kernels, making them unsuitable for sale for human consumption.

In 2011 the Department of Environment and Primary Industries began to investigate carob moth as an almond pest through the industry-funded projects 'Food safety in almonds' and 'Managing carob moth in almonds'. The following approaches are being used to develop local knowledge on the pest and assess options for its management:

- A trapping program spanning the major almond producing districts continues to highlight the South Australian Riverland and Victorian Sunraysia districts as hotbeds of carob moth activity. The first generation of moths emerges from around mid-September to early December and lays eggs on mummies. Peak emergence of the second generation of moths coincides with hull split in the new crop – the point at which almonds become susceptible to infestation. From that point onwards, the new crop is at risk of significant damage from the pest.
- We are assessing the role of mummies as a resource for carob moth and a risk factor for damage to new crops. Preliminary data indicates a situation similar to that regarding navel orange worm, i.e. as a 'stand-alone' treatment, the reduction of mummy populations to as few as two per tree may be required to limit the pest's population to such a degree that kernel damage levels are acceptable.
- Field evaluation of pheromone-based mating disruption is continuing into the 2014/15 season. Trials during the previous two seasons achieved good suppression of trap catches (one measure of effectiveness of mating disruption products) but this was not matched by reductions in kernel damage. Extra trial work late last season identified the likely reason for this and a revised trial protocol is being implemented this season to gain a clearer picture of the impact of mating disruption.
- As the industry's 'default standard' for carob moth management, hull-split applications of chlorantraniliprole have also been assessed for protection of almond crops, but to date no clear benefit from this treatment has been found.
- We continue to refine a degree-day model for prediction of carob moth life-cycle events, for potential use in the timing of monitoring and treatment activity.
- During our work with nut assessments and lab culturing we have found carob moth being attacked by several parasitic wasps and a predatory bug. In future these could possibly become part of an integrated management program against the pest.

Dr. Dave Monks

Research Scientist, Department of Environment and Primary Industries Victoria

Orchard productivity: a population of spurs

The main fruit-bearing shoots in almond trees are spurs. Spurs start out growing vegetatively and then, after one or two seasons, bear fruit. Spurs bearing fruit in one season are likely to be non-bearing the next year—and may remain non-bearing for two or more years. Most spurs remain productive for 3 – 5 seasons, but then begin to lose vigour and die resulting in a rate of total spur death from 5 – 25 % per season. The factors that influence spur fruitfulness and longevity unpins seasonal fluctuations and understanding how they contribute to yield helps to define best management practices in an orchard.

Bringing it back to first principals, the yield of an almond orchard is determined by the tree's ability to grow and fill kernels. It can be broken down as simply "Yield = the number of kernels x weight of kernels". The number of kernels can be further broken down to account for the number of kernels per spur, spurs per branch and branches per tree. These components of yield are inherently influenced by genetics and are expressed through interactions with management practices and environment.

In some crops, carbohydrates move freely from areas of high supply to areas of high demand, for example you could remove the fruit from the top half of a tomato plant and have the remaining fruit size up and not lose much yield (Ho, 1996). However, the spurs of an almond tree operate as semi-autonomous units, and carbohydrates tend to only move within the spur (Heerema et al., 2008). This means that for floral bud initiation (establishing bearing potential), flowering, pollination and fertilisation (reproductive potential) and filling kernels (weight potential), the leaf area and sunlight exposure of the individual spur drives the system.

Our new ABA/HAL funded research project will focus on the spur-level responses to different light environments throughout the canopy and water and nutrient management. It follows a 10-year analysis by Tombesi et al. (2011) in California that ultimately debunked the idea that almonds are an alternate-bearing species. Their work found that the year-to-year variation was due to factors influencing spur fruitfulness, rather than the notion that a spur population is itself intrinsically alternate-bearing. Here in Australia, we're using controlled field experiments to take this work even further—investigating the effects of light, nitrogen and water on spur productivity over time. By measuring the number of spurs, the number of flowers, fruit set, nut dry weight, light interception and environmental variables we'll be able to describe the way these components interact over multiple seasons. The data will be used to better understand spur productivity under Australian conditions.

Our national collaborators on this project include CSIRO's Drs Saul Cunningham and Everard Edwards and Plant and Food Australia's Drs Grant Thorp and Andrew Granger. On an international level, Dr Monks and the DEPI team will continue to maintain strong relationships with UC Davis' Drs Lampinen, DeJong, Michailides, Brown and Shackel and their technical and extension team including David Doll, Roger Duncan and Blake Sanden. The project has begun this year.

References:

Heerema, R.J., Weinbaum, S.A., Pernice, F., DeJong, T.M. 2008. Spur survival and return bloom in almond [*Prunus dulcis* (Mill.) D.A. Webb] varied with spur fruit load, specific leaf weight, and leaf area. *Journal of Horticultural Science and Biotechnology* 83, 274-281.

Ho, L.C. 1996. The mechanism of assimilate partitioning and carbohydrate compartmentation in fruit in relation to the quality and yield of tomato. *Journal of Experimental Botany* 47, 1239-1243.

Tombesi, S., Lampinen, B.D., Metcalf, S., DeJong, T.M. 2011. Relationships between spur- and orchard-level fruit bearing in almond (*Prunus dulcis*). *Tree Physiology* 31, 1413-1421.

Tim Pitt

Senior Research Officer, SARDI Water Resources and Irrigated Crops

Almond sensitivity to salt stress at different growth stages

Tim Pitt[1], Rob Stevens[2] and Jim Cox[1]

[1] South Australian Research and Development Institute, GPO Box 397, Adelaide, SA 5001. tim.pitt@sa.gov.au
[2] 11 Inverloch Ave Torrens Park SA 5062 (formerly SARDI)

Most studies into the salt tolerance of almonds have used immature plants grown under greenhouse conditions. These demonstrated the adverse effects of salinity on vegetative growth, but did not provide direct information about salinity's effect on nut production in a commercial orchard. It is unclear whether salinity's effect on nut yield depends on the growth stage during which the trees suffer salt stress.

The Australian Water Recycling Centre of Excellence and the Goyder Institute for Water Research sponsored the present study with the aim of identifying the stage within the annual almond growth cycle which is most sensitive to irrigation with a saline water source. The trial was established in a mature commercial non-pareil almond orchard located on the Northern Adelaide Plains. The orchard is irrigated with 9 ML/ha of saline recycled municipal wastewater, with electrical conductivity (EC) in excess of 1.8 dS/m (>1100 ppm). Consequently, soil salinity remains high throughout the irrigation season and leaf tissue concentrations, of both sodium and chloride, consistently present in the toxic range, >0.4 and >2% respectively.

Beginning in the 2013/14 season, fresh water (EC <0.8 dS/m) was substituted for the saline irrigation water (EC >1.8 dS/m) at each of three phenologically different growth stages: pre-pit hardening, kernel growth and post-harvest. At other times, experimental plots were irrigated with saline recycled water, as was the control throughout the season.

Irrigation with fresh water reduced the salt content of leaves and its effect depended on of the growth stage in which it was applied. Measurements of chloride concentration in end-of-season leaf samples showed that application of fresh water early in the season reduced leaf chloride concentration by 0.35 g/100g, for every 0.1 dS/m reduction in seasonal salt load, whereas application later in the season only reduced it by 0.21 g/100g. In other crops, changes in leaf salt content have been shown to be the precursor to yield effects over the longer term. Yield effects are an ongoing focus of the present study.

Characterising the salt sensitivity of different almond growth stages will inform irrigator decisions around the timing and necessity of leaching irrigations, offering potential water savings during periods of water scarcity. At the whole of industry level, this knowledge would help the ABA and Murray Darling Basin natural resource managers understand that salt releases, arising from managed environmental flows, may impact almond production differently depending on timing.

Dr. Peter Spooner

Senior Lecturer, Vegetation and Restoration Ecology and Postgraduate Coordinator, School of Environmental Sciences, Charles Sturt University

Birds – Almond Damage and Interaction with Ecosystems

Dr Peter G Spooner, Ecologist, Charles Sturt University, Institute for Land, Water & Society, Albury NSW

Studies of bird damage to almond crops have almost always highlighted the negative consequences of interactions with native ecosystems, where in some cases, production losses can be quite substantial. However, interactions with native species are not all necessarily negative and can provide important benefits to growers (e.g. natural pest control, pollination services). The provision of ecosystem services by animals is gaining increasing attention worldwide because of the need to develop more sustainable management practices that ensure long-term food production without disrupting ecological processes.

In a recently completed Australian Research Council project, Charles Sturt University, in collaboration with major partners Select Harvests, the Victorian Department of Environment and Primary Industries, the Mallee CMA and the NSW National Parks and Wildlife Service, conducted research aimed to (1) examine the interactions between food resources and selected groups of birds (e.g. regent parrot) in almond production landscapes, (2) examine the foraging behaviour of birds in agricultural landscapes to determine the potential for species to provide ecosystem services, and (3) to investigate the spatial ecology of regent parrots in relation to almond crops.

We found that, although birds cause some damage to almond crops, consumption of almonds left on trees post-harvest (e.g. removal of 'mummy' nuts) provides important benefits to growers by reducing threats from fungal and insect infestations. While almond crops are used by many parrots for food, almonds are not a preferred food source, and are mainly targeted when other native food resources are scarce (i.e. during drought). Given this, we argue that one of the best ways to manage bird impacts on almond crops (while avoiding threats to bird conservation), is to provide alternative food sources such as a decoy (sacrifice) crops, native plantings of shrubs, or other forage sites that may lure birds away areas experiencing excessive damage.

Alternatively, managers should consider the cost-benefit trade-offs when developing strategies to manage birds. Impacts on crop yield should be monitored more closely, and translated to lost revenue based on the wholesale price of almonds. This should then be traded off against the cost of employing various bird control strategies, and a rigorous, independent evaluation of the success of these strategies be carried out. Given we found crop damage was generally very low, almond growers should consider a more holistic approach to bird management by companies providing compensation to those individual farmers experiencing extensive crop damage by birds (e.g. almond blocks adjacent to native vegetation corridors), to achieve overall benefits in terms of environmentally sensitive farming practice.

A surprisingly large number of threatened bird species use almond orchards which are adjacent to native vegetation – a function which needs to be better recognised by conservation management agencies. This may lead to innovative co-management strategies between public agencies and companies to promote conservation while limiting production losses, to achieve mutually desirable outcomes. In this paper, the implications of these results will be discussed, including discussion of 'bio-branding' almond products to highlight the role of almond producers in conserving native species.

Dr. Sze Yen Tan

Dietitian and Lecturer in Nutrition and Dietetics, University of South Australia

Nuts in nutrition: A weighty matter

Dr. Sze Yen Tan, School of Pharmacy and Medical Sciences, University of South Australia, Adelaide SA, Australia.

The global prevalence of chronic diseases such as obesity, type 2 diabetes (DM), high blood pressure, and cardiovascular diseases (CVD) are increasing rapidly. These conditions not only increase the mortality rate and compromise quality of life, they also add significant burden to the current healthcare system. For these reasons, various strategies have been formulated in the effort to prevent or delay the onset, and to better manage these conditions.

Lifestyle modifications such as increasing physical activity and improving dietary habits are effective in both the prevention and the management of obesity, DM, high blood pressure, and CVD. Dietary strategies may range from a whole-cuisine approach (for example, following a Mediterranean diet), to the incorporation of specific foods such as nuts to achieve an optimal macronutrient composition of a diet.

Epidemiological evidence consistently shows an association between nut ingestion and better health outcomes. However, nuts are a high energy food, which may be viewed as undesirable to people who are attempting to maintain or lose weight. However, such concerns are not warranted, as the incorporation of nuts to a habitual diet has been shown to have minimal effects on body weight in most clinical studies. Although there are very small number of studies that reported weight gain during nut supplementation, the increase in body weight was often smaller than the expected values, calculated based on the additional energy from nuts. From an energy balance perspective, weight maintenance during nut supplementation could be due to either an increase in energy expenditure, and/or a decrease in energy intake.

To date, evidence demonstrating the thermogenic effect (ability to increase energy expenditure) of nuts is limited and inconclusive, but many studies have reported the positive effects of nuts on human energy intake regulation. The appetite-regulating effects of nuts may be attributed to the protein, unsaturated fat, and fibre content of nuts, as well as a result of nut mastication. In addition, fatty acids encapsulated in the cell walls of nuts were not fully extracted by the human body, hence lower energy as fat is available to the body to be absorbed. This was reversed by increased chewing of nuts. In a more recent study, it was documented that the timing of nut ingestion, consumed with a meal or alone as snacks, also had differential effects on human appetite. Almonds, consumed as snacks alone, were shown to supress hunger and desire-to-eat feelings more than when they were consumed with other meals. While increasing eating frequency has been suggested to cause weight gain, the ingestion of nuts between meals may not increase the risk, and could thus be considered a healthy snack option.

Abstracts

Prof. Salah Sukkarieh

Professor of Robotics and Intelligent Systems, School of Aerospace Mechanical & Mechatronic Engineering

Robots in the orchard

Professor Sukkarieh will present an almost 3 year program funded through HAL on the use of robotics and intelligent sensing systems in tree-crop farms. The objective of the project is to determine how novel algorithms in conjunction with the precision of robotics and sensor systems can be used to provide unprecedented information about the tree and crop. Trials were conducted at apple, almond and tropical fruit farms with results demonstrating the capability of tree segmentation and crop yield estimation.

Richard Waycott

President and CEO, Almond Board of California

The global market: A Californian perspective

In 2014 the global almond industry celebrated its most successful year in history. Record shipment volumes matched by record product pricing created a great deal of wealth for almond growers and handlers, brokers and traders. Contrast this rosiest of pictures with the fact that California almond growers have never faced a more daunting outlook due to the unprecedented and persistent drought affecting the central valley, and the state as a whole. Richard Waycott, president and CEO of the Almond Board of California, will share with us his global perspective as to where our industry finds itself at the outset of the 21st century and how Australian and Californian growers and handlers once again need to take on new and far larger challenges to ensure the industry's prosperity and continued growth.

Assoc. Prof. Neal Williams

Associate Professor of Pollination and Bee Biology, Department of Entomology and Nematology, University of California

Strategies for sustainable pollination for almonds

Neal M. Williams, Department of Entomology and Nematology, University of California, Davis

Pollination of almond in California relies heavily on services provided by managed honey bees. The early bloom and large areas in production result in a demand for large, high-quality hives to provide sufficient pollination. These demands coincide with unprecedented mortality of managed colonies across the United States, causing concern about pollination shortfalls that could affect the long-term sustainability of production. We are working from multiple perspectives toward an *Integrated Crop Pollination* goal that can help relieve the burden on managed honey bees and achieve more sustainable strategies for pollination of California almonds. I highlight two areas of ongoing research, (1) benefits achieved from the integration of non-*Apis* bees for almond pollination and (2) development of diverse forage resources to support honey bees, managed non-*Apis* bees and wild bees.

Pollination synergy from diversified pollination: We used a combination of open field and caged trials to quantify the pollination effectiveness of honey bees in the presence of other wild bees versus alone. The presence of wild bees in orchards dramatically increased pollination effectiveness of honey bees, even when wild bee densities were very low. Honey bees transferred 21% more compatible pollen during single visits to almond flowers with wild bees present. These single visits also resulted in a 16% increase in nut set in the presence of wild bees. Mechanistically, the presence of wild bees or managed non-*Apis* bees (the Blue Orchard Bee) caused changes in the flight behavior of foraging honey bees. Honey bees flew more often between rows, and thus varieties, when other bee species were present. These benefits are realized through changes in honey bees. There will also be direct pollination benefits from the non-*Apis* bees in addition to their synergistic effect on honeybees. Recent work from our lab also shows that effective cross pollination significantly impacts the nutritional composition of nuts, highlighting the value of improving pollination quality.

Enhancing forage for managed and native bees: In collaboration with growers, we are developing mixes of California native plants that can provide additional floral resources for bees in orchards preceding and following almond bloom. We quantified the flowering timing of different drought-tolerant wildflower species, and monitored patterns of visitation to these plants by honey bees and wild bees at replicated plots in almond orchards. We began monitoring prior to almond bloom and continued for several months after. During almond bloom we also assessed changes in visitation to adjacent orchards to test for potential competition for pollinators between wild flowers and almonds. Species varied in their bloom time, but with sufficient winter rains or well-timed irrigation, several native species bloom before almond and many bloom immediately following almond. Patterns of visitation to wildflower plantings suggest that bees switch to the almond orchard when it is flowering, but after will return to the plots. These plantings offer great potential to diversity pollen sources for managed bees and increase the nutritional diversity they receive, as well as bolstering populations of wild bee species.

Abstracts

Dr. Michelle Wirthensohn

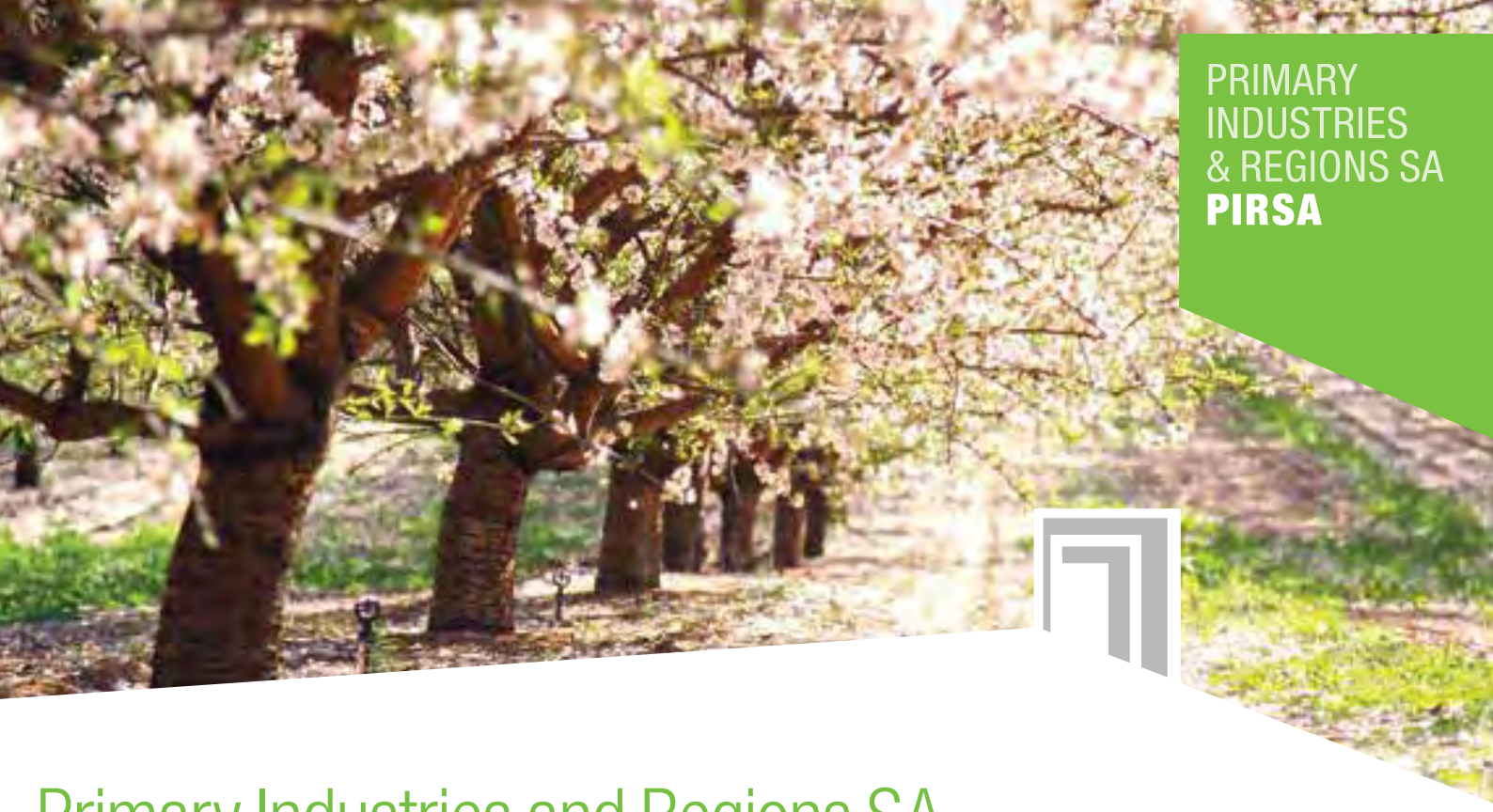
Horticulture Australia Research Fellow, University of Adelaide

Better Trees for Aussie Growers – Australian Almond Breeding Program

University of Adelaide

This breeding program aims to improve the productivity and economic gain for the Australian almond industry by producing new cultivars with higher kernel yield and quality, self-fertility and disease tolerance.

The Australian Almond breeding program has produced several promising selections to date, which are being evaluated in secondary and tertiary trials at various locations in almond growing regions. The tertiary evaluation phase involves semi-commercial trials of approximately 100 trees of each selection grafted to rootstocks and planted on three different commercial orchards in at least two different growing regions. These were planted in 2013. The first five selections derived from the program continue to be evaluated in the field for flowering time, yield, crackout and kernel quality. We now have six years of yield data to draw upon to confirm their superior yield to Nonpareil and kernel quality based on taste and oil analysis. 2014 was the second year of harvest for the second of the secondary trials and some are showing promise with yields greater than Nonpareil. Further selections are currently being evaluated from the primary evaluation site at Dareton.



PRIMARY INDUSTRIES & REGIONS SA
PIRSA

Primary Industries and Regions SA

proudly supporting the production of premium almonds from our clean environment.

Premium Food and Wine from our Clean Environment is one of the South Australian Government's strategic and economic priorities. It seeks to secure the State's position as a producer of premium food and wine from our clean water, clean air and clean soil and capitalise on the increasing global demand for premium products, including almonds.

South Australia's almond industry is a key and growing part of the State's horticulture sector, with $53 million worth of almonds exported to countries including Germany, New Zealand and India in 2012-13.

The almond industry brings significant regional economic benefits to the State, with the Riverland a major focus for the development of the modern Australian almond industry.

Primary Industries and Regions SA (PIRSA) continues to support the State's almond industry in a range of ways.

The South Australian Research and Development Institute (SARDI) delivers directly applicable solutions and advanced technologies for the almond industry, including water resources and irrigation, climate applications, pests and diseases, food safety and innovation and variety evaluation.

The Agriculture, Food and Wine division assists the almond industry to explore potential trade, export and investment opportunities.

Through its grant programs Regions SA has supported recent major developments in the almond industry, and the transformation of the Loxton Research Centre will realise our vision of a vibrant new centre for innovative research and collaboration in the Riverland. This initiative is part of the $265 million South Australian River Murray Sustainability program (SARMS) funded by the Australian Government and delivered by PIRSA.

To find out how PIRSA can help you contact Agriculture Food and Wine Division Director Justin Ross on (08) 8226 8157.

PREMIUM FOOD AND WINE FROM OUR CLEAN ENVIRONMENT

SOUTH AUSTRALIA

Government of South Australia
Primary Industries and Regions SA

Sponsors & Exhibitors

Platinum

Haifa

Gold

Rivulis Irrigation

Silver

Stoller
Unleashing The Power Of Plants

TAYPER

Bronze

GALLARD MACHINERY

NETAFIM
GROW MORE WITH LESS

Dinner

E.E. Muir & Sons

Welcome

JACK RABBIT

Exhibitors

Haifa
E.E. Muir & Sons
YARA
TAYPER
Stoller
Unleashing The Power Of Plants
Rivulis Irrigation
OMC
TORO
ENVIROMIST
SIMPLY BETTER SPRAYERS
ZADCO
for quality gro. pty. ltd.
WM
NETAFIM
GROW MORE WITH LESS
MAIT Industries
NELSON
JACK RABBIT
MEA
FLORY
GALLARD MACHINERY
MELPAT INTERNATIONAL PTY. LTD.
ABN 18 066 067 507
SPRAY GRO
LIQUID FERTILIZERS
Orchard-Rite
USA • Australia
Seasol
SHC
Exact
Harvesting Systems
AustSafe Super

Supporting Sponsors

Government of South Australia
Primary Industries and Regions SA
KILTER RURAL
WM
FLORY
LARAGON PTY. LTD. ALMOND PROCESSORS
SPRAY GRO
LIQUID FERTILIZERS
BAYER
Bayer CropScience
HAL
Horticulture Australia
Waterfind
NATIONAL WATER BROKERS
OMC
Seasol
Elders
MOSSMONT NURSERIES
YARA

Weiss McNair

NUT HARVESTING EQUIPMENT

Weiss McNair has been a leader in the manufacturing of quality nut harvesting equipment since 1966.

Our Goal at Weiss McNair...

Our goal is to be there with you, where it happens, when it's happening, leading the way. We have been there first with most of the harvest innovations of the last 40 years and we intend to be there for generations to come.

100 Loren Avenue
Chico, California 95928

We'd like to take this opportunity to thank all of our loyal customers, vendors and associates for their continued support as we look forward to working with you in the future.

Complete Line of Quality Nut Harvesting Equipment:

- Self-Propelled Harvesters
- P.T.O. Harvesters
- Self-Propelled Air Cab Sweepers
- Self-Propelled Sweepers
- Tractor Mount Sweepers
- P.T.O. Blowers

Fewer Moving Parts • Easy Maintenance • High Resale

100 Loren Avenue, Chico, CA 95928 | (530) 891-6214 | Fax (530) 891-5905 | www.weissmcnair.com

HOSTED BY:
Almond Board of Australia

SUPPORTED BY:
Horticulture Australia Ltd

Delegate List - by Surname

Last	First	Organisation
Adaskaveg	James	University of California
Aggarwal	Aarnav	Kbits Australia Pty Ltd
Aggarwal	Ashwani	Kbits Australia Pty Ltd
Ale	Vili	Select Harvests Ltd
Alevras	Mike	Seasol International
Allen	Geoff	Toro Australia
Amer	Yousef	University of South Australia
Andersen	Brian	Orchard Machinery Corporation
Andrade	Aarti	Blue Diamond Australia Pty Ltd
Andrews	Paul	Wilchem
Angevin-Castro	Youna	Australian Nutgrower
Angove	Victoria	Angove Family Winemakers
Arioli	Tony	Seasol International
Armstrong	Hugh	Bayer Crop Science
Barnard	Peter	Meat & Livestock Australia
Bauer	Andrew	Agrichem
Bell	Cameron	Olam Orchards Australia Pty Ltd
Benham	Luke	Select Harvests Ltd
Bennett	Neale	Cowanna Almond Harvesting
Birmingham	Tim	Almond Board of California
Birrell	Grant	Nut Producers Australia
Botta	Peter	PCB Consulting
Boulton	Ritchie	Landmark
Bradshaw	Dianne	Tayper Enterprises
Brady	Scott	Organic Crop Protectants
Bramley	Rob	CSIRO
Brown	Andrew	MAIT Industries
Brown	Ben	Almond Board of Australia
Brown	Craig	Seasol International
Brown	Des	Agristorage & Logistics Pty Ltd
Bruner	Grant	Lewis M. Carter Manufacturing Co. Inc
Buchanan	Greg	Horticulture Australia Ltd
Burgess	Stuart	Horticulture Australia Ltd
Burns	Michael	Walker Flat Almonds
Callipari	James	Callipari Syndicate

Last	First	Organisation
Campbell	David	Walker Flat Almonds
Camuglia	John	Nu-Edge Solutions Australia Pty Ltd
Cannard	Mary	Select Harvests Ltd
Carey	Nigel	Nut Producers Australia
Cavallaro	David	Stoller Australia
Cavallaro	Domenic	Cavallaro Angle Vale Almond Trust
Cavallaro	Peter	Walker Flat Almonds
Chapple	Mark	AgGuard Pty Ltd
Cheung	Thomas	Sunbeam Foods
Chouhan	Vishal	Kbits Australia Pty Ltd
Clarke	Rob	Omnia Specialities Australia
Coates	Michael	University of South Australia
Condo	Frank	Swan Almonds
Constable	Fiona	Department of Environment and Primary Industries
Cordoma	Joshua	Agrichem
Costa	Michael	Costa Produce Pty Ltd
Costa	Phillip	Costa Produce Pty Ltd
Costa	Tony	Costa Brothers Pty Ltd
Coutts	Paul	Select Harvests Ltd
Cox	Robert	Bright Light AgriBusiness
Cox	Simon	Elders Rural Services Ltd
Crawford	David	CMV Farms
Cresswell	Geoff	Nu-Edge Solutions Australia Pty Ltd
Crewther	Chris	Mildura Development Corporation
Cunningham	Saul	CSIRO
Dack	Paul	Almondco Australia Limited
Darmody	Liz	Flemings Nurseries
Daynes	Cathal	Tradecorp
de Jager	Jan	Omnia Specialities Australia
de Montemas	Simon	CW Pacific Specialties Pty Ltd
Demmer	Larry	Weiss McNair LLC
DeMont	Bob	JackRabbit
Dennis	Trevor	HAIFA Chemicals Australia
Dewit	Ben	A-Gas / SA Rural
Di Giorgio	Nick	Rabobank Berri

Last	First	Organisation
Dinicola	Denis	Dinicola Management Pty Ltd
Dixon	Brad	Olam Orchards Australia Pty Ltd
Doecke	Andrew	Omnia Specialities Australia
Doll	David	University of California
Donkersley	Mike	SACOA Pty Ltd
Dowdy	Lachlan	Mildura Ag Supplies
Draper	Ann	Primary Industries & Regions SA
Ebbage	Joseph	Almond Board of Australia
Edmunds	Aaron	Nufarm Australia Limited
Edwards	Everard	CSIRO
Ellice-Flint	John	
Emery	Richard	Stoller Australia Pty Ltd
Emmerton	Peter	Waterfind Pty Ltd
Estes	Mike	Nelson Manufacturing Co Inc
Fares	Youssef	Agmin Group
Fee	Ben	Primary Industries & Regions SA
Fethers	Simon	Fethers Horticultural Services
Feuerherdt	Craig	Kilter Rural
Fielke	John	University of South Australia
Finch	Jane	Select Harvests Ltd
Fisher	Dean	Jubilee Almonds
Fisher	Shirley	Jubilee Almonds
Flaherty	Stephen	Ruralco Water
Fletcher	Brent	Rabobank Berri
Flett	Sze	Dept of Environment & Primary Industries
Frahn	Rohan	Gallard Machinery
Freeman	Peter	Freeman Farming Pty Ltd
Fremder	Andrew	Almas Almonds Pty Ltd
Gadischke	Josh	Proteco Gold Pty Ltd
Gallard	John	Gallard Machinery
Gallard	Sam	Gallard Machinery
Galluccio	Frank	Sumitomo Chemical
Game	Robert	
Gilan	Shaul	HAIFA Chemicals Australia
Goldsack	Mark	Bayer CropScience
Goodwin	Ian	Dept of Environment & Primary Industries
Gordon	Andy	KC Vines & Rootstocks
Gordon	Paula	KC Vines & Rootstocks
Gouk	Chin	Dept of Environment & Primary Industries
Granger	Andrew	Plant & Food Research
Groenewald	Pierre	Olam Orchards Australia Pty Ltd
Haigh	Troy	Select Harvests Ltd
Haines	Phil	Dept of Environment & Primary Industries
Hall	Nick	Nufarm Australia Limited
Harkins	Shannon	Almond Board of Australia
Harrison	Ben	Nut Producers Australia
Harrison	John	Colliers International
Hayes	Peter	Viti Vini

Last	First	Organisation
Haynes	Richard	Elders Ltd
Hayward	Matt	Select Harvests Ltd
Hazel	Wayne	Swan Hill Chemicals
Hazelton	Charles	Sinon Crop Protection
Henry	Peter	Netafim
Henshall	Phillip	Laragon Pty Ltd
Hicks	Darren	AgVita Analytical
Hill	John	BioAg Pty Ltd
Hobbs	Andrew	CMV Farms
Hoben	Brett	Measurement Engineering Australia
Hockney	Peter	Toro Australia
Hole	Craig	Landmark
Hossain	Mofakhar	Dept of Environment & Primary Industries
Houlahan	Damien	Olam Orchards Australia Pty Ltd
Howard	Sigurd	BASF Crop Protection
Howie	Martin	Nelwood
Hutchins	Deanna	Laragon Pty Ltd
Ietto	Anthony	Ietto Contracting Services
Iwaniw	Michael	Select Harvests
Izzard	Dean	Zadco For Quality Gro Pty Ltd
Jackson	Tim	Almondco Australia Limited
James	Jack	Platinum Ag Services
Janse van Rensburg	Pierre	Olam Orchards Australia Pty Ltd
Jeans	Gary	Swan Hill Chemicals Pty Ltd
Johansson	Asma	Zadco For Quality Gro Pty Ltd
Johns	Anna	BASF
Johnson	Andrew	Primary Industries & Regions SA
Johnson	Mark	Sunraysia Ag Centre
Johnson	Sam	Rabobank
Jones	David	SACOA Pty Ltd
Jongebloed	Simon	RRG
Josekutty	Puthiyaparambil	Clonal Solutions Australia Pty Ltd
Judd	Graeme	EE Muir & Sons Pty Ltd
Kachenko	Anthony	Horticulture Australia Ltd
Katis	Nicholas	Macquarie Agricultural Services
Katis	Steven	Olam Orchards Australia Pty Ltd
Keir	Ben	KMH Agronomy Pty Ltd
Kelly	Kevin	MacQuarie Agricultural Services
Kreidl	Simone	Department of Environment and Primary Industries
Krishen	Ashok	Olam International Pty Ltd
La Bella	Lucia	Elders Ltd
Lacey	Andrew	Lacton Pty Ltd
Lanz	Chris	Tradecorp
Lawes	Chris	Rural Affinity
Layman	Stuart	Flory Industries
Lean	Adam	Netafim
Lee	Tim	PPB Advisory
Lewis	Tim	Rivulis Irrigation

Last	First	Organisation
Liddle	Jeremy	Seasol International
Linsdell	Greg	EE Muir & Sons Pty Ltd
Lloyd	Chris	BARMAC
Lloyd	John	Horticulture Australia Ltd
Lloyd	Matt	Netafim
Lorenz	Troy	Redox Pty Ltd
Lorimer	Philippa	Horticulture Australia Ltd
Lovell	Dustin	Rural Finance
Lowe	Cathy	Select Harvests Ltd
Lowe	Troy	Landmark
Loxley	David	Insect Management Services
Luke	Rod	Kilter Rural
Mackenzie	Steve	Utilacor Pty Ltd
Madge	David	Department of Environment & Primary Industries
Magarey	Peter	Magarey Plant Pathology
Malfroy	Sam	Plant Health Australia
Manning	Walter	Orchard Rite Australia
Manuel	Jesse	Colliers International
Maragozidis	John	Goanna Produce Pty Ltd
Martin	Brent	Nutwood Orchards
Martin	Daniel	Dept of Environment & Primary Industries
Martin	Drew	Omega Orchards
Martin	Paul	Nutwood Orchards
Martin	Tom	Century Orchards
Masasso	Peter	Nu-Edge Solutions Australia Pty Ltd
Mason	Allyson	Jakad Almonds
Mason	David	Jakad Almonds
Mathur	Deepak	Spraygro Liquid Fertilisers
McClintock	Rachael	R&D Viticultural Services
McConnell	Sue	Dept of Environment & Primary Industries
McDonald	Shannon	Gallard Machinery
McGavin	Timothy	Laguna Bay
McKenzie	Scott	Century Orchards
McLaren	Ryan	Platinum Ag Services
McLennan	Andrew	LawrieCo
McMahon	Debbie	Almond Board of Australia
McMichael	Prue	Scholefield Robinson Horticultural Services
Mead	Ian	National Harvesters
Mecwan	Samir	Olam Orchards Australia Pty Ltd
Memery	Paul	Select Harvests Ltd
Meurant	Andrew	LuxorAgri Pty Ltd
Millen	Tim	BASF
Miller	Matt	Nelson Manufacturing Co Inc
Monks	Dave	Department of Environment & Primary Industries
Monson	Trevor	Monson's Honey & Pollination
Moriconi	John	Nu-Edge Solutions Australia Pty Ltd
Morton	Stephen	Almondco Australia Limited
Moss	Ian	Mossmont Nurseries P/L

Last	First	Organisation
Moss	Valerie	Mossmont Nurseries P/L
Mousley	Brian	Tayper Enterprises
Muir	Ian	EE Muir & Sons Pty Ltd
Nankivell	Alan	PGIBSA
Nelson	Josh	Nelson Manufacturing Co Inc
Nish	Mark	SLTEC Fertilizers
Orr	Tim	Lake Cullulleraine Almonds
Orth	Al	Flory Industries
Palmer	Scott	Yara Australia
Pathania	Narender	Rmonpro Developments Pty Ltd
Petersen	Anna	Almond Board of Australia
Peterson	Philip	Yara Australia
Petrig	Joshua	
Petrig	Rudolf	
Pettigrew	Stuart	Ag Dynamics
Pezzaniti	Nick	N & WA Pezzaniti
Pierson	Benjamin	AJS Pierson & Son
Pierson	Jim	AJS Pierson & Son
Pitt	Tim	SARDI
Preusker	Tim	CMV Farms
Prinsloo	Johan	Omnia Specialities Australia
Pronsolino	Dan	Sierra Valley Almonds
Puleio	Michael	Olam Orchards Australia Pty Ltd
Pullen	Michael	Rural Finance
Ramsey	Warren	Incitec Pivot Fertilisers
Raymond	Geoff	Swan Hill Chemicals
Read	Tony	Jubilee Almonds
Reed	Ken	Lindsay Rural
Reichstein	Ian	National Residue Survey
Richman	Troy	Almas Almonds Pty Ltd
Rigden	Justin	Adelaide Research & Innovation Pty Ltd
Ringeisen	Tony	Exact Corp
Roberts	Dion	Rivulis Irrigation
Robinson	Ben	
Robinson	Jason	Select Harvests Ltd
Rochow	Kevin	Waterfind Pty Ltd
Rohrlach	Peter	Nutwood Orchards
Rosenzweig	Brett	Almond Board of Australia
Ross	Chaseley	Australian Nut Industry Council
Ross	Justin	Primary Industries & Regions SA
Ross	Peter	Select Harvests Ltd
Ross	Richard	Marubeni Corporation
Rowett	Michael	MAIT Industries
Rudge	Terry	Rudge Produce Systems Pty Ltd
Ruggiero	Vince	S & V Ruggiero
Ryan	Nick	Select Harvests Ltd
Sanders	Neil	Rmonpro Developments Pty Ltd
Sarkis	Michael	Rural Funds Management

Last	First	Organisation
Scherf	Warwick	Horticulture Australia Ltd
Scholefield	Peter	Scholefield Robinson Horticultural Services
Scott	Bruce	EE Muir & Sons Pty Ltd
Shahzad	Zubair	Olam Orchards Australia Pty Ltd
Sharpe	Andrew	Sharpe Almonds
Sharpe	Brenton	Sharpe Almonds
Sharpe	Bronwyn	Sharpe Almonds
Shaw	Chloe	Jubilee Almonds
Shaw	Duncan	Colliers International
Shearer	Tom	De Sangosse Australia
Shirmohammadi	Maryam	University of South Australia
Sidhu	Brendan	Jubilee Almonds
Simes	Craig	EE Muir & Sons Pty Ltd
Skinner	Andrew	Measurement Engineering Australia
Skinner	Ross	Almond Board of Australia
Slater	Brian	Macquarie Agricultural Services
Smith	Daniel	Olam Orchards Australia Pty Ltd
Smith	Harley	CSIRO
Smith	Nathan	SJB Ag-Nutri Pty Ltd
Smith	Toby	Olam Orchards Australia Pty Ltd
Smith	Trevor	Select Harvests Ltd
Soccio	Marc	Rabobank
Spiers	Maureen	AJ & MH Spiers
Spiers	Tony	AJ & MH Spiers
Spooner	Peter	Charles Sturt University
Stein	Matthew	A-Gas / SA Rural
Stretton	Kevin	Scaled Management Systems
Strout	Graham	TGP Almonds
Sukkarieh	Salah	University of Sydney
Sukkel	Marc	SACOA Pty Ltd
Sutherland	Andrew	Utilacor Pty Ltd
Taffs	John	Olam Orchards Australia Pty Ltd
Takhar	Aman	
Tan	Sze Yen	University of South Australia
Taylor	Ben	Select Harvests Ltd
Taylor	Cathy	Department of Environment & Primary Industries
Taylor	Dean	MAIT Industries
Teitz	Leigh	SJB Ag-Nutri Pty Ltd
Thomas	Ben	Ben Thomas Consulting
Thomas	Dane	SARDI
Thomas	Danny	JackRabbit
Thomas	Steven	SLTEC Fertilizers
Thompson	Paul	Select Harvests Ltd
Thornton	Danny	EE Muir & Sons Pty Ltd
Thorp	Grant	Plant & Food Research Australia
Trainer	Shane	Bayer CropScience
Treeby	Jenny	Dept of Environment & Primary Industries
Treeby	Michael	NSW DPI

Last	First	Organisation
Trengove	David	Esri Australia
Trezise	Kelvin	Simarloo Aust Pty Ltd
Trinick	Natalie	Tayper Enterprises
Tsiros	Jim	Peter Tsiros & Sons
Turner	Hamish	Melpat International Pty Ltd
Turner	Melanie	Melpat International Pty Ltd
van Twest	Bruce	Select Harvests Ltd
Vandenberg	Tim	Olam Orchards Australia Pty Ltd
Vasey	Chris	Micron Group
Wachtel	Anthony	Century Orchards
Wager	Shane	Stoller Australia
Walsh	Alister	Waterfind Pty Ltd
Wang	Wei-Chun	Olam Orchards Australia Pty Ltd
Ward	Michael	Jubilee Almonds
Waring	Chris	MWT Foods Pty Ltd
Waycott	Richard	Almond Board of California
Webber	Mark	Laragon Pty Ltd
Weckert	Nick	DuPont Crop Protection
Wellington	Paul	Elders Rural Services Ltd
Wells	Brad	Horticulture Australia Ltd
Wells	Joe	Orchard Machinery Corporation
Wetherall	Matthew	EE Muir & Sons Pty Ltd
Wheatley	Robert	Olam Orchards Australia Pty Ltd
White	Abby	Swan Hill Chemicals
Wickstein	Russell	Almondco Australia Limited
Willcock	Graham	Orchard Rite Australia
Williams	Ben	Waterfind Pty Ltd
Williams	Neal	University of California, Davis
Williamson	Tina	Gallard Machinery
Winter	Daryl	Rural Funds Management
Wirthensohn	Michelle	University of Adelaide
Wittwer	Scott	National Australia Bank
Woods	Edward	Fairwood Estate Pty Ltd
Woolston	Brenton	Almondco Australia Limited
Wright	Joe	Spraygro Liquid Fertilisers
Wrigley	Eryn	Stahmann Farms
Wynne	Carol	AustSafe Super
Wynne	Michael	AustSafe Super
Zhu	Ying	University of Adelaide

Survey: 2014 AAC Evaluation - Delegates

Conference Feedback and Evaluation

Thank you for your attendance at the 2014 Australian Almond Conference.

The Almond Board of Australia is continually striving to improve the quality and relevance of the annual industry conference program it provides - to do this we need your feedback and comments. Remember, this is YOUR conference and we strive to provide what YOU want! Please take a moment to reflect on this year's event and help us by honestly completing these few questions.

It should take no longer than 5-10 minutes to complete. You can remain anonymous if you wish to do so.

Once again, thank you for your support of the 2014 Australian Almond Conference and we hope to see you again in 2015!

Please provide your name, if you wish to do so:

Please provide your company name, if you wish to do so:

---

1. Conference preparation and administration

Please rate the following (from 1 star = Very poor to 5 stars = Excellent):

Pre-conference organisation & registration *	☆ ☆ ☆ ☆ ☆
Conference venue *(ie visibility, comfort, acoustics)* *	☆ ☆ ☆ ☆ ☆
Audiovisual equipment *(ie could you hear speaker's presentations)* *	☆ ☆ ☆ ☆ ☆
Catering *	☆ ☆ ☆ ☆ ☆
Conference support staff *	☆ ☆ ☆ ☆ ☆

What do you think we could do to improve the pre-conference preparation & administration?

---

2. The Conference, content and presenters

Please rate the following (from 1 star = Very Poor to 5 stars = Excellent)

Balance and mix of topics *	☆ ☆ ☆ ☆ ☆
Relevance of presentations & topics to your needs *	☆ ☆ ☆ ☆ ☆
Conference structure *(ie mix of speakers, discussion, social events)* *	☆ ☆ ☆ ☆ ☆
Quality of key-note speakers & their presentations overall *	☆ ☆ ☆ ☆ ☆
Conference value for money *	☆ ☆ ☆ ☆ ☆

What do you think we could do to improve the conference content & presentations?

3. Did we get the Conference format right?

Please rate the following: (from 1 star = Very Poor to 5 stars = Excellent)

Number of speakers and sessions *	☆ ☆ ☆ ☆ ☆
Length of each session *	☆ ☆ ☆ ☆ ☆
Length of Conference *	☆ ☆ ☆ ☆ ☆

What do you think we could do to improve the Conference format?

4. What are the main reasons you attend the Australian Almond Conference (tick as many as apply).

*

- ☐ Key-note speakers & program
- ☐ Training & professional development
- ☐ Networking
- ☐ Other

5. How did you hear about the Conference (tick as many as apply).

*

- ☐ Email
- ☐ Website
- ☐ Colleague
- ☐ In A Nutshell newsletter
- ☐ Australian Nutgrower
- ☐ Other

6. Please rate the individual components & speakers below giving a score between 1 and 5 (where 1 = Very Poor & 5 = Excellent).

Tuesday October 28th - Conference Welcome Reception	☆ ☆ ☆ ☆ ☆
Day 1 - Wednesday October	☆ ☆ ☆ ☆ ☆

29th - Annual Levy Payer's Meeting	☆ ☆ ☆ ☆ ☆
Brand Australia - A Meaty Topic (Dr. Peter Barnard)	☆ ☆ ☆ ☆ ☆
Go Nuts for Nutrition (Dr. Sze. Yen Tan)	☆ ☆ ☆ ☆ ☆
The Global Market - A Californian Perspective (Richard Waycott)	☆ ☆ ☆ ☆ ☆
Market Development the Australian Way (Joseph Ebbage)	☆ ☆ ☆ ☆ ☆
Agriculture - The Profits in Precision (Dr. Rob Bramley)	☆ ☆ ☆ ☆ ☆
Robots in the Orchard (Prof. Salah Sukkarieh)	☆ ☆ ☆ ☆ ☆
Hulling and Shelling - Impacting the Boundaries (Assoc. Prof. John Fielke & Dr. Maryam Shirmohammadi)	☆ ☆ ☆ ☆ ☆
Better Trees for Aussie Growers (Dr. Michelle Wirthensohn)	☆ ☆ ☆ ☆ ☆
Almond Orchard Productivity R&D Program (Ben Brown)	☆ ☆ ☆ ☆ ☆
Economic Impacts on Australian Horticulture (Marc Soccio)	☆ ☆ ☆ ☆ ☆
Food Safety in Focus - The US Experience (Tim Birmingham)	☆ ☆ ☆ ☆ ☆
Cool Dry Almonds - Storage Solutions (Michael Coates)	☆ ☆ ☆ ☆ ☆
AAC Gala Dinner & Hall of Fame Induction	☆ ☆ ☆ ☆ ☆
Day 2 - Thursday October 30th - Carob Moth Eating Your Profits (David Madge)	☆ ☆ ☆ ☆ ☆
Carpophilus Beetle - A Hungry Pest (Dr. Mofakhar Hossain)	☆ ☆ ☆ ☆ ☆
Biology and Management of Almond Diseases (Prof. Jim Adaskaveg)	☆ ☆ ☆ ☆ ☆
Bird Damage - Interaction with Ecosystems (Dr. Peter Spooner)	☆ ☆ ☆ ☆ ☆
Rootstocks and Nematodes (Peter Clingeleffer)	☆ ☆ ☆ ☆ ☆
Integrated Pollination in California (Assoc. Prof. Neal Williams)	☆ ☆ ☆ ☆ ☆
Almond Pollination -Impact of Varroa Mite (Dr. Saul Cunningham)	☆ ☆ ☆ ☆ ☆
BeeSecure - Surveillance for Varroa and more (Daniel Martin & Sam Malfroy)	☆ ☆ ☆ ☆ ☆
Orchard Productivity - A Population of Spurs (Dr. David Monks)	☆ ☆ ☆ ☆ ☆
Almond Sensitivity to Salt Stress (Tim Pitt)	☆ ☆ ☆ ☆ ☆
Aspergillus - A Threat to Crop Production (Dr. Chin Gouk)	☆ ☆ ☆ ☆ ☆
Phil Watters Award (James Callipari)	☆ ☆ ☆ ☆ ☆

Comments/ suggestions for future presentation topics/ speakers:

7. What was the best part of your conference experience?

8. What was the worst part of your conference experience?

9. In a few words, please give us a quote that we may use for the future promotion of our conferences:

For any questions please contact the Almond Board of Australia on +61 8 8582 2055 or email admin@australianalmonds.com.au

Survey: 2014 AAC Evaluation - Sponsors and Exhibitors

Thank you for choosing to be a sponsor/ exhibitor at the 2014 Australian Almond Conference.

The Almond Board of Australia appreciates the time, effort and money that you or your organisation expend to exhibit at this Conference. Help us to maximise your return on investment by taking a few moments to let us know what worked well for you and what could work better in future. Your straight and honest feedback will truly help us shape the future of this event.

This survey will take just 5-10 minutes to complete. You can remain anonymous if you wish to.

*****Please note this survey is specific to sponsors and exhibitors and not related to the delegate survey which you would have received previously.*****

Once again, thank you again for your support of the 2014 Australian Almond Conference and we hope to see you back again in 2015!

Please provide your name or company name if you wish to:

From a Sponsor/ Exhibitor perspective, please rate the following (from 1 star = Very Poor to 5 stars = Excellent):

Overall organisation of this year's Conference (eg. registration process, ease of staff access regarding exhibitor/ sponsor questions/ requests etc.)	☆ ☆ ☆ ☆ ☆
Location of the Conference (Stamford Grand Hotel, Glenelg, South Australia)	☆ ☆ ☆ ☆ ☆
Overall value of this Conference to your organisation in terms of the time and the money spent.	☆ ☆ ☆ ☆ ☆
Quality of show "traffic" (attendees) (e.g. are the people you spoke with the ones that you wanted to meet?)	☆ ☆ ☆ ☆ ☆
Number of show attendees (e.g. did you speak with a good number of people?)	☆ ☆ ☆ ☆ ☆
Quality of information that you received as a sponsor/ exhibitor (e.g. initial sponsorship prospectus, sponsor & exhibitor manual, email responses etc.)	☆ ☆ ☆ ☆ ☆
Quality (e.g helpfulness, cost etc.) of the exhibition sub-contractors: electrical, lighting & furniture - (Adelaide ExpoHire)	☆ ☆ ☆ ☆ ☆
Overall environment of the conference & trade show (e.g. air temperature, quality of	☆ ☆ ☆ ☆ ☆

food/rest area, show entrance etc.)	
Overall design of the show (e.g. layout of booths, catering areas, rest areas etc.)	☆ ☆ ☆ ☆ ☆
Trade show move-in and move-out (e.g was it easy and accessible?)	☆ ☆ ☆ ☆ ☆

Further comments:

Do you feel that the fees for sponsorships and display spaces are reasonable in comparison to other comparable horticultural trade shows?

- ○ Yes
- ○ No

Comments:

For future shows, would you prefer that the fees and arrangements for furniture be bundled in the exhibit fee, resulting in an fee increase of approximately $500?

- ○ Yes
- ○ No

Comments:

Do you feel there was adequate promotion of exhibitors and sponsors?

- ○ Yes
- ○ No

If no, how could it be improved?

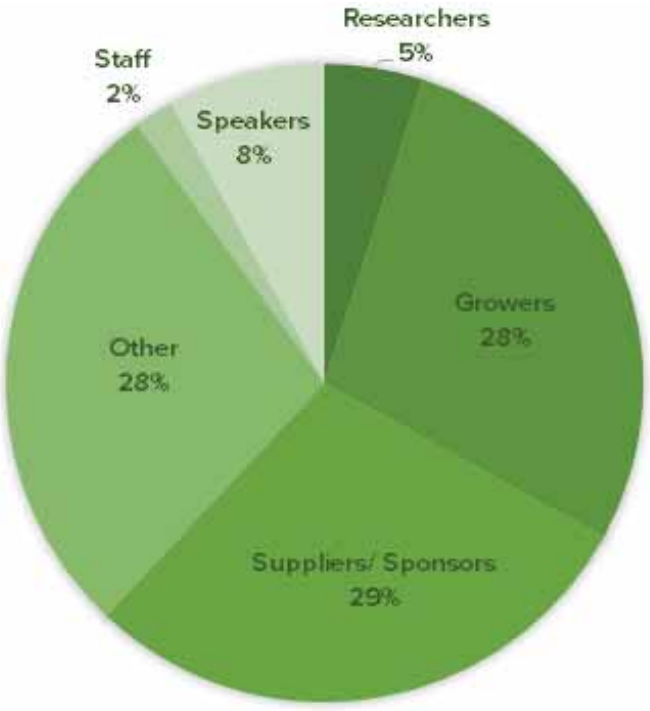
Are you considering exhibiting/ sponsoring next year's Conference?

- Yes
- No

If no, why not?

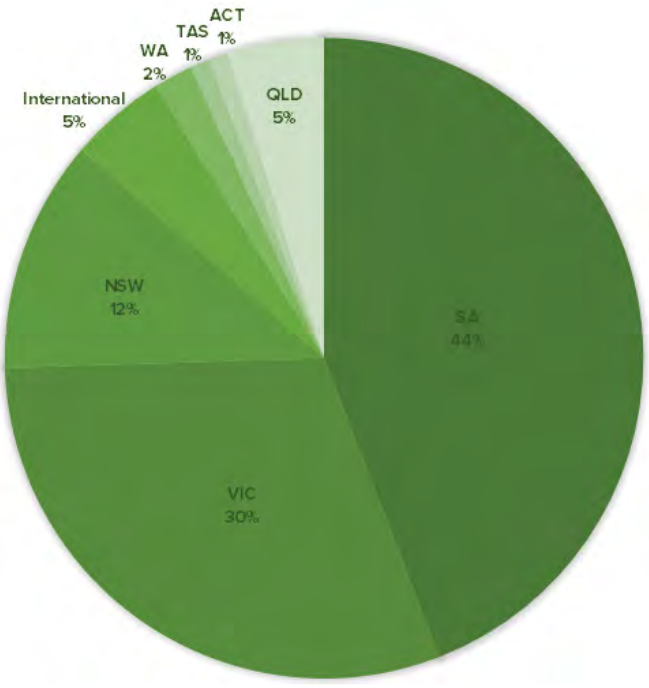
For any questions please contact the Almond Board of Australia on +61 8 8582 2055 or email admin@australianalmonds.com.au

Delegates by Type



Researchers	20	5%
Grower	104	28%
Suppliers/Sponsors	107	29%
Other	104	28%
Staff	7	2%
Speaker	31	8%
	373	100%

Delegates by Origin

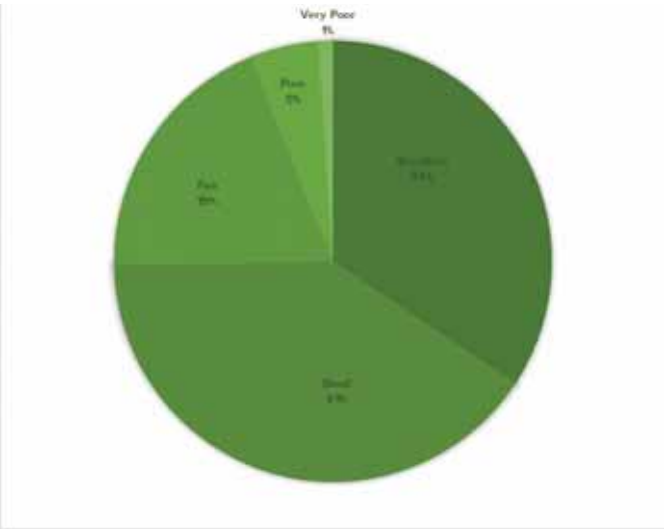


SA	166	45%
VIC	116	31%
NSW	43	12%
QLD	17	5%
WA	7	2%
TAS	2	1%
ACT	3	1%
International	19	5%
	373	100%

Evaluation

Conference feedback was gained through a number of means including an interactive survey emailed to all participants at the conclusion of the conference (see appendix), telephone feedback and verbal comments. A summary of the ratings by delegates is provided below:

Overall Conference Rating



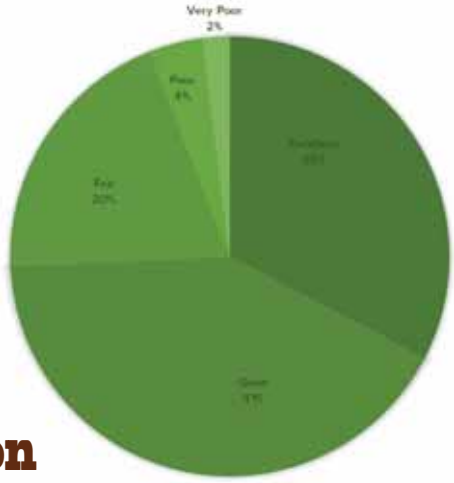
Excellent
34%
Good
40%
Fair
19%
Poor or Very Poor
6%

Delegates were emailed an interactive form to complete rating various aspects of this years conference. 74% of respondents rated this years conference in the range of 'Excellent to Good' overall.

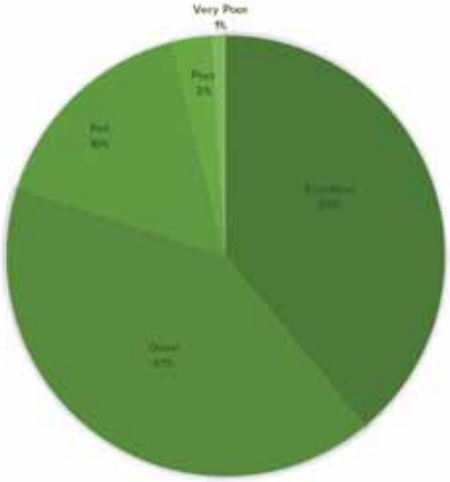
Topics & Sessions

79% of delegates responded that the topics and sessions during the 2014 conference were 'Excellent' or 'Good', with 20% stating that the sessions were 'Fair'.

Excellent
33%
Good
42%
Fair
20%
Poor or Very Poor
6%



Management, Venue & Organisation



Excellent
39%
Good
41%
Fair
16%
Poor or Very Poor
4%

Conference management, venue and organisation feedback indicated that 96% of delegates agreed that these aspects of the conference were 'Excellent', 'Fair' or 'Good'.

In A Nutshell

ALMOND BOARD OF AUSTRALIA

Summer Edition
December 2014

AUSTRALIAN ALMONDS

www.australianalmonds.com.au

OMC

Serving the Australian nut industry for more than 35 years

SHOCK WAVE MAGNUM SERIES IV

SERIES IV ***SPRINT***

When down the row efficiency and speed is important the Shock Wave Magnum Series IV Sprint will deliver.

SERIES IV ***MONO BOOM***

The Shock Wave Magnum Series IV Mono Boom has the power and reach to shake even the biggest trees.

ORCHARD MACHINERY CORPORATION
2700 Colusa Highway Yuba City, CA 95993
Tel: (530) 673-2822 Fax: (530) 673-0296
www.shakermaker.com

Almond Board of Australia Inc.
ABN 31 709 079 099
9 William Street, PO Box 2246
Berri South Australia 5343

P + 61 8 8582 2055
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

Find us on...

AustralianAlmonds
AmazingAlmonds
@AusAlmonds
AussieAlmonds
amazingalmonds

Board Members

Circulation: With a circulation of more than 650 and readership of over 2000 the 'In A Nutshell' newsletter is available to the general public and interested parties via the Almond Board of Australia website www.australianalmonds.com.au, and high quality printed copies distributed to: Almond Board of Australia members, industry contacts within Australia and overseas, nut producing, distributing and marketing companies.

In a Nutshell
The Almond Board of Australia is the peak industry body representing the interest of almond growers, processors and marketers in Australia in matters of national importance including regulation, legislation, marketing research and development. In a Nutshell is published quarterly by the ABA to bring news to all industry contacts and members.

Advertising/Editorial
The Almond Board of Australia (ABA) acknowledges contributions made by private enterprise through placement of advertisements in this publication. Any advertising and/or editorial supplied to this publication does not necessarily reflect the views of the ABA and unless otherwise specified, no products and/or services are endorsed by this organisation.

Publisher
Almond Board of Australia
9 William Street, PO Box 2246
BERRI SA 5343
t +61 8 8582 2055
e admin@australianalmonds.com.au
w www.australianalmonds.com.au

Some of these projects were facilitated by HIA in partnership with the Almond Board of Australia. They were funded by the R&D levy and/or voluntary contributions from industry. The Australian Government provides matched funding for all HIA's R&D activities.

Horticulture Innovation Australia

Contents

ALMOND BOARD OF AUSTRALIA

ABA Membership

Why Become a Member?

As a member you have a direct say about the future of the industry and direct access to our organisation.

The ABA has undertaken industry-wide consultation to develop an Industry Strategic Plan which establishes funding priorities for the industry's R&D and marketing programs.

We aim to support our rapidly increasing industry by encouraging effective communication and co-operation between industry members.

The ABA aims to keep members informed through a range of activities including:

- Presentation of the Annual Almond Industry Conference.
- Distribution of the ABA's quarterly newsletter "In a Nutshell"
- Regular field days and regional meetings
- Technical articles and ABA news in the "Australian Nutgrower" Journal
- Collection and distribution of industry statistics
- Access to regularly updated information via the ABA website

To join the ABA please visit our website and download a membership form, or contact our office on 08 8582 2055 or email admin@australianalmonds.com.au

EXECUTIVE update

The 2014 Australian Almond Conference was a highly successful event which enjoyed great support from delegates, sponsors, exhibitors and of course, the presenters and panel members. It's these people that lie at the heart of this showcase event for the ABA and the industry. Thanks goes to all involved, particularly to the ABA staff who worked as a team to organise and deliver the Conference to such a high standard. Year after year the Conference continues to get better.

In a few short years the Conference has outgrown the regional venues and already we are looking for a larger Conference venue than the Stamford Grand Hotel in Adelaide.

The presentations from Conference will be distributed to delegates shortly but the abstracts are available to all on the ABA website.

A highlight of the Conference was the induction of Mr. Don Rough and Mr. Tom Martin into the Australian Almond Industry Hall of Fame.

The attendance at the ABA's Annual General Meeting was not as impressive as the Conference with fewer than expected members present. The reports by the Chair and CEO to the AGM noted that the ABA's role as the industry's peak body is to strive to improve the financial position of industry members and stakeholders and help the industry grow. The tools to achieve this are the industry unity and being able to speak with one voice, to invest and direct investment into R&D and marketing, to share knowledge, and to interact with the broader community, including Government.

The Board takes a strategic approach to many challenges whether it be improving yields, determining efficient input levels, addressing emerging pest issues, improving processing results, reducing food safety risks, analysing market potential, or increasing consumer demand.

All these issues were addressed during 2013/14. As the industry has rapidly grown so too have the expectations of the ABA. The ABA is undertaking more and more with the same level of staff but with increased funds to invest in R&D and Market Development due to the growth in production.

More and more people are becoming involved in the Australian almond industry, whether it be new growers, investors, trading partners, politicians and government staff, researchers, suppliers, media and consumers and we welcome their participation in what has been an exciting recent period for the industry and what appears to be a bright future ahead.

Even with the rapid growth to become a $600 million industry and Australia's most valuable horticultural export earner, the almond industry remains inclusive which is a testament to the structures and people that are in place to service the industry.

Brendan Sidhu, Tim Orr, Grant Birrell and Laurence Van Driel were re-elected to the Board unopposed to join Neale Bennett, Domenic and Peter Cavallaro, Denis Dinicola, Damien Houlahan and Brenton Woolston to form the ABA Board for 2014/15. Amongst these Directors, most of Australia's almond production, processing and marketing is represented.

The contribution of the Board Directors is significant in terms of the skills, experience and the time they provide. At the AGM it was noted that the Board met formally four times during the year but the contribution of the Directors did not stop there. Tim Orr chaired the Plant Improvement Committee, Peter Cavallaro chaired the Production Committee, Brenton Woolston the Processing Committee, Brendan Sidhu the Market Development and Almond Centre Committees and Grant Birrell the Audit Committee. Other Directors participated as members on these Committees that met three to four times during the year. The ABA Remuneration Committee and the Conference Committee met as required.

The contribution of the 33 industry members on the supply chain committees was acknowledged. These members contribute time, knowledge and in some instances, turn over parts of their orchards and facilities as cooperators in the industry R&D program. These industry members help identify gaps in required knowledge and technologies to take the industry forward. They provide assistance and support to researchers and monitor their project's progress.

Chris Joyce's representation of the nut industry working with government and other industries on market access matters was recognised.

The Almond Industry Advisory Committee was acknowledged. The Committee has directed the R&D investment of industry levies and Commonwealth funds wisely, but under the new structure for HAL's replacement body will cease to exist. Ben Robinson and Greg Buchanan who provided great guidance in their role as Chair of the IAC were thanked for their service to the industry.

The report to the AGM listed the activities undertaken in the market development program by the ABA in conjunction with the industry marketers that have assisted us to achieve an export tonnage increase of 82% to 59,000 tonnes with a value of $473 million for 2013/14. The domestic program achieved a 3% increase, consolidating the 20% increase in 2012/13.

The other ABA initiatives progressed during 2013/14 were:

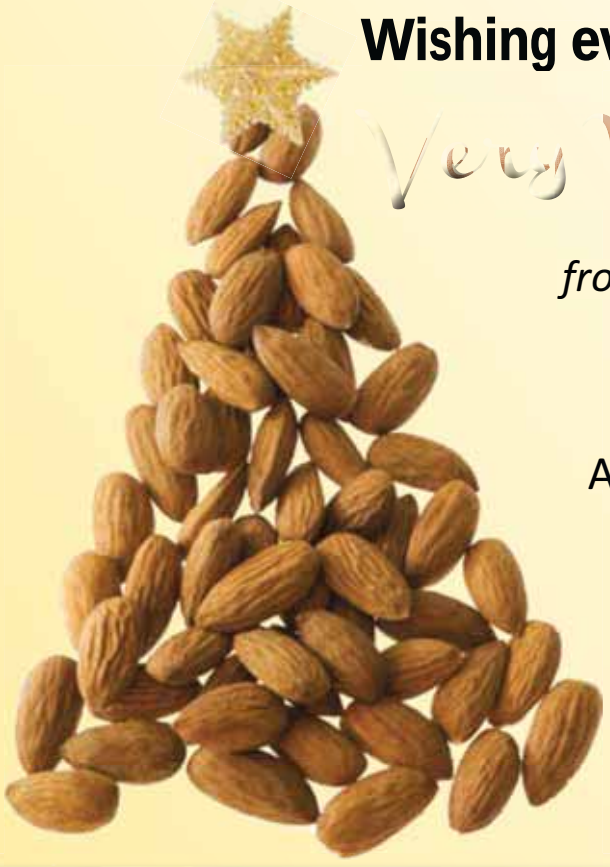
- The Almond Centre of Excellence
- Biosecurity risks to bees and pollination efficiency
- Evaluation of new varieties / rootstocks and access via commercialisation agreements
- Tissue culturing of hybrid rootstocks capability
- Major new research program to lift productivity
- Review of poor 2014 crop to identify causes
- Regional discussion group program to add to extension activities
- Post harvest insect and mechanical damage to product
- Chemical availability and restrictions on use
- Water supply and other input costs
- Market development and access
- Food safety issues.

The 2014/15 year ahead holds new challenges. Not the least of these being the new relationship with Horticulture Innovation Australia Limited (HIA Ltd) and how the project endorsement process will work. It is hoped that the gaps in knowledge and technologies to assist with the implementation of the ABA's industry strategic plan will continue to be forthcoming under the new arrangements.

On behalf of the Board and ABA Staff, we would like to wish you all a happy and safe festive season and look forward to working with you in 2015.

Neale Bennett
Chairman

Ross Skinner
CEO



Wishing everyone a

Very Nutty Christmas

from the ABA Board members and staff

Please note:
The Almond Board of
Australia office will be closed from:
Monday 22nd December
and re-opens on
Monday 5th January 2015

Where to now for horticulture R&D?

Ross Skinner, CEO

Following a review of Horticulture Australia Limited (HAL), a new body has been established to undertake the management of Commonwealth research funding and growers' statutory levy funds. The new body, Horticulture Innovation Australia Limited (HIA), has commenced operation with a new Constitution and a new Board of Directors. The staff of HAL are now employed by HIA and the assets and liabilities of HAL have been transferred to the new body. A new Statutory Funding Agreement was signed between the Government and HIA on November 23rd that directs how the funds can be invested.

What led to the review of HAL? Given that the major points being pushed in the publicity of the new body are greater transparency and the ownership of the new body directly by grower levy payers, the conclusion is that the previous ownership arrangement with industry representative bodies was not transparent.

Speaking from the almond industry perspective, how much more transparent can it have been? On the ABA Board sit six grower directors representing each of the four producing regions, marketing directors from Olam and Select Harvest, the two largest levy payer businesses that grow, process and market nearly two thirds of the crop, and two marketing directors who represent the interests of grower shareholders, one the Managing Director of Almondco, a grower co-operative and the other the CEO of Nut Producers Australia. The ABA Board of Directors represents 97% of Australian almond production and hence statutory R&D levy payers. Under HAL, the ABA Board had responsibility to initiate changes to the R&D levy but maintained the levy as its close monitoring of the research program showed a strong return of investment.

The return on investment to levy payers and the taxpayer of research is entirely dependent on the uptake of the projects' outputs of new knowledge or technology. For the almond industry, strong uptake has been assured as the research projects endorsed by the industry and funded by HAL provided the missing knowledge and technologies to implement the industry's strategic plan.

The ABA's ownership of and accountability to growers for the plan's implementation means that prioritised research outputs are well defined, the projects carefully monitored, industry assistance is provided to researchers and the work is undertaken in a logical and cost effective sequence. The ABA also addressed any impediments to the uptake of knowledge or new technologies as part of the strategies, so extension is not just the researchers providing their research findings to growers.

The capacity of the ABA to undertake wide consultation amongst levy paying growers, processors, marketers, the domestic and international nut trade, researchers, government, suppliers of production inputs such as nurseries, equipment manufacturers, chemical companies etc. is viewed as important to getting good project outputs delivered and outcomes achieved. Funding of this role ceased at the end of October 2014.

This collaborative approach of industry, researchers and the funding body working together is now in jeopardy and we await closely how the new HIA processes for R&D identification, prioritisation, approval, specification, monitoring, and industry assistance develop in the near future. The ultimate measure of HIA's success will be the usefulness of project outputs to the implementation of the industry's strategic plan that is developed by the industry growers and hence levy payers and other key industry participants.

Many of the industry's objectives mirror those of the Government in terms of export market development, input efficiency (particularly water), biosecurity, adaption to severe weather events and management of other risk areas, health benefits for the community, and growth in jobs and investment in regional areas.

By any measure of these the industry has been successful. In the area of export market development, the almond industry was the first horticultural product to have annual export sales of $300 million. This was achieved in 2013 and in 2015 our export sales should exceed $500 million. The industry's Market Development Plan, an important element of the Strategic Plan, is approved by marketers responsible for selling 97% of the industry's production on which the R&D levy is raised.

The successful implementation of the Marketing Plan owes its success to a co-operative approach, both within the industry and also working with Government who are in the process of delivering free trade agreements in key markets that will facilitate further growth in export sales.

The ABA has taken an open minded approach towards HIA though we do hold concerns regarding the uncertainty that surrounds the processes that have worked well for our industry in the past. We want the close linkage between the industry strategic plan and the R&D investment program to continue. The ABA, as the owner of the industry plan and responsible for actioning it on behalf of industry growers, processors and marketers should be involved in the R&D funding decisions.

In concluding, it is interesting that accountability is cited as the reason for the change from HAL to HIA and the change of company ownership from the Industry Representative Bodies to individual grower members. It is difficult to imagine that you as individual growers will want to spend the time, effort and money that the ABA has in the past acting on your behalf to ensure the right research is being conducted, in the right sequence, with an eye to the impediments to uptake and understanding where it fits as part of an overall strategy to ensure the return on that investment is maximised.

It is to be hoped the new model has not thrown the baby out with the bath water but it is the ABA's intention to work to ensure the new model works to deliver the best possible outcomes from the 97% of the levy paid by the almond producers we represent.

Horticulture Innovation Australia

Farewell Ben!

The Almond Board of Australia congratulates Ben Brown on his recent appointment at Select Harvests Ltd as Project and Technical Manager.

Ben worked for the Almond Board of Australia for nearly eight years during which time he undertook a varied role that included the extension of research to growers. He did this through a variety of means including in person, through publications, field days and forums. He also managed research projects covering nutrition, irrigation, and assessment of rootstocks and new varieties.

Ben managed many of the production risk areas such as biosecurity, pollination, pest and disease threats, and chemical registration and permits.

A major achievement of Ben's in recent years was bringing researchers closer to industry which has been a huge benefit to all involved. As a result, projects are well prepared and their implementation is done so in a co-operative manner to get the required outputs necessary to take the Australian almond industry forward.

His knowledge of almond production has been key in the development of the research program aimed at delivering a production system tailored to Australian conditions. Ben has always been motivated to assist our industry members to improve their operations.

Ben is held in high regard by the Directors and staff of the ABA who wish him well with his new position in the industry.

2013/14 Annual Report

The 2013/14 Almond Board of Australia Annual Report is available to view online at:

www. australianalmonds.com.au/industry/aba

If you would like to receive a hard copy of this document and have not received one, please contact the Almond Board of Australia office on 08 8582 2055.

Marketing Matters

Joseph Ebbage Market Development Program Manager

Above: Stand at Asia Fruit Logistica.

Above: Damien Houlahan speaking with delegates at Food Week Korea.

During the last quarter, the Australian almond industry participated in four export market development trade exhibitions and missions: Asia Fruit Logistica in September, Sial Paris in October, Food Week Korea and a Jakarta research visit in November.

Asia Fruit Logistica

The Australian almond exhibition at Asia Fruit Logistica was our first promotion at a fruit and vegetable expo. It was held in Hong Kong and ran from September 3 to 5. We exhibited with the "Australian Fresh" pavilion organised by HAL's "Australia Fresh" program.

The 'fresh produce' categories for supermarkets in Asia represents a major growth opportunity for nuts in general and almonds in particular.

There was an industry seminar held the day before the exhibition opened. One of the key themes repeated on numerous occasions was the role of health and nutrition in driving consumption of fresh produce.

Nuts however, are not included in the 'fresh produce' categories in most Asian supermarkets. They are merchandised almost exclusively within the 'salty snack' category. Developing a new range of nut products featuring almonds specifically for fresh produce would allow the retailers to leverage the health and nutrition benefits of the nut segment.

This was the key message communicated at our Australian almond exhibition and found some resonance with a number of fresh produce distributors and supermarket retailers.

We hope to exhibit again in 2015 and aim to include a specific presentation on the growth opportunity of almonds in next year's seminar program.

Sial Paris

Each year, Australian Almonds runs an exhibition at a major food fair in Europe, alternating between Anuga in Cologne and Sial in Paris. Both these exhibitions take place in October. This year the Sial exhibition ran from October 19 to 23.

Above: Booth at Sial Paris.

The Australian almond delegation to Sial Paris 2014 comprised of Damien Houlahan from Olam Orchards Australia Pty Ltd, Laurence Van Driel from Select Harvests Ltd and Tim Jackson from Almondco Australia.

Europe remains a very important region for Australian almonds. In the last marketing year, it accounted for 42% of all Australian almond exports.

The focus of the Australian almond exhibition was the promotion of the 2015 new season crop. Concerns about the drought in California and price uncertainty dominated discussions.

Food Week Korea

'Food Week Korea' was the first trade exhibition for Australian almonds in the Korean market. Held in Seoul, 'Food Week Korea' ran from November 12 to 15. The anticipated 'Entry into Force' of the Korean-Australian Free Trade Agreement, in which the 8% tariff on Australian almonds is removed entirely, means that we will be in a strong competitive situation with California.

The key element of our trade promotion was an Australian Almond Seminar held on the afternoon of the first day of the Trade Show. We contracted Austrade to organise this event which was very successful. Forty-five people attended our seminar, representing the key players in the Korean nut industry.

Left: Joseph Ebbage second from right, visited Jakarta to meet with the Board of Indonesian Dietetics Association.

The seminar included an opening address by the Australian Trade Commissioner, Wendy Haydon, an overview by Joseph Ebbage and business profiles by Damien Houlahan from Olam Orchards Australia Pty Ltd and Tim Jackson from Almondco Australia.

This seminar was a key driver of follow-up meetings during the remainder of the expo.

Market development in Indonesia

On the way back from Seoul, we stopped off in Jakarta to meet with the Board of the Indonesian Dietetics Association (IDA), the Victorian Government's Commission for Indonesia, the Australian Government's Agriculture Counsellor from the Department of Agriculture and the team from Austrade.

A meeting with the Board members of the Indonesian Dietetics Association was held with the purpose of initiating a conversation about the opportunity to collaborate in a similar fashion to our relationships with the Dietitians Association of Australia and Sports Dietitians Australia.

The meeting was hosted by Mr Brett Stevens, the Victorian Commissioner for Indonesia.

We learnt that while the IDA members did not have a deep knowledge of the nutritional profile of almonds, they were prepared to discuss the opportunity to work together. They committed to responding to us by mid-December.

The IDA does not currently have any corporate sponsors and relies on member and government assistance for their work.

The Victorian Commissioner is very committed to assisting the Australian almond industry break into the Indonesian nut market. He has a small team who will provide assistance, particularly around next April's exhibition at Food and Hotel Indonesia.

On November 18 we met with Dean Merrilees, the Minister Counsellor for the Australian Department of Agriculture. His role is to assist with issues of product access, particularly as it relates to changes in Indonesian government rules and interpretations.

We also met with the food team from the Australian Trade Commission on November 19 at the Australian Embassy in Jakarta. Those present were Dr Matthew Durban, the Trade Commissioner, Sonya Monica and Debora Gracia, Business Development Managers.

The key points from this meeting were:

- There is support of our patient approach to market entry based on research
- Agreement with our approach to the Indonesian Dietitics Association to help build our nutritional story
- Opportunities to run a seminar at Food and Hotel Indonesia in April 2015 were discussed
- The potential for Australian almonds to participate in a Food Tasting Festival to be held in one of Indonesia's largest shopping malls - the Grand Indonesian Mall - after Food & Hotel Indonesia in April 2015 was discussed
- It was mentioned that over the past 6 months, they have received numerous requests for information about Australian almonds. They will forward these to the ABA for distribution to the Australian almond marketers
- An on-going dialogue will continue to assist with planning activities around Food and Hotel Indonesia.

Domestic Marketing Program

From a domestic marketing perspective, one of the highlights of the last quarter's work was the Almond Blossom Photography Competition (opposite page). The photography competition offered five $500 prizes and we received more the 350 photographic entries.

In August, our focus was on advertising the natural beauty of our blossom season. The imagery powerfully communicates Australian almonds as 'naturally healthy'. It also helps connect our consumers with our growers and orchards. These themes were communicated via our website and Facebook pages.

Complementing our 'blossom promotion' was some advertising on www.bestrecipes.com.au that featured 'blossom-inspired' cup cakes. Made from almond meal, they are also gluten-free. The cup cake recipes were on our Facebook site beside our almond blossom imagery and on our amazing almonds website.

Health Professional Conferences

Our 'Educating Health Professionals' program - AL12001 - continues until the end of August 2015. Australian almonds have been exhibited at two major health conferences in August and November:

Australian Diabetes Educators Conference

This is a key conference for a number of health and medical professions involved in the prevention and management of diabetes.

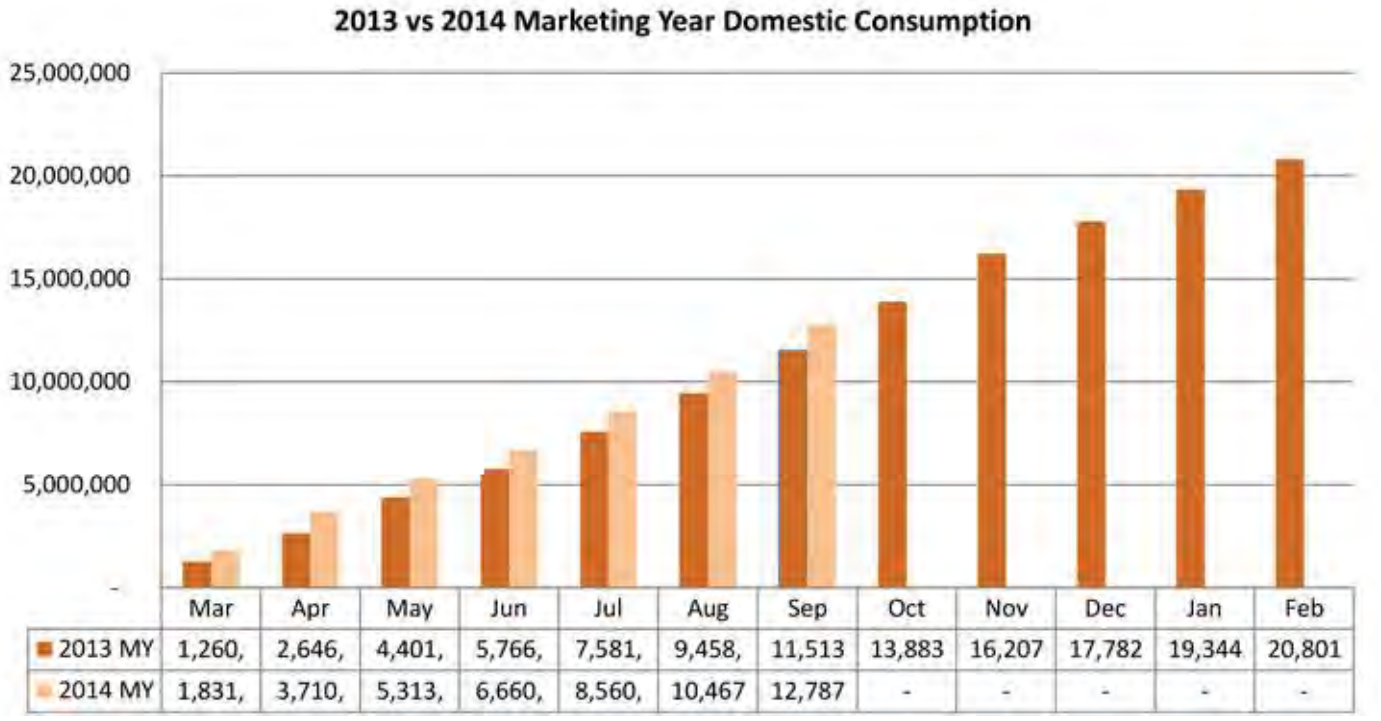
We distributed more the 2000 almond tins and fact sheets over the week with over 700 attendees requesting a follow-up pack of tins and brochures.

GPCE Melbourne

More than 1,500 GPs and GP nurses attended GPCE Melbourne, which was held at the Melbourne Exhibition and Convention Centre.

The heart-shaped snack tins remained extremely popular with the delegates with more than 400 requesting follow-up packs of brochures and tins.

The main messages communicated at these conferences related to the role of almonds in maintaining a healthy heart by lowering LDL cholesterol as well as in helping prevent Type 2 diabetes.



	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
2013 MY	1,260,	2,646,	4,401,	5,766,	7,581,	9,458,	11,513	13,883	16,207	17,782	19,344	20,801
2014 MY	1,831,	3,710,	5,313,	6,660,	8,560,	10,467	12,787	-	-	-	-	-

Domestic Sales Year to Date: The latest 2014/15 marketing year statistics show domestic sales have risen 11% for the first seven months of the marketing year. Domestic sales of Australian product are 11,834 tonnes, up 10% for the year to date. Imports are up 19% for the year to date to 953 tonnes bringing total domestic consumption to 16,208 tonnes.

2014 Almond Blossom Photography Competition

Winning Entries

Photo by Vikki Martin, Murtho, South Australia. This photo was taken of Vikki's exchange student from Spain.

Photo by Mark Anderson, Rosemeadow, NSW. The viewer's choice - this great photo was snapped in Mark's suburban backyard. Mark has recently taken a shine to gardening and snapped this lone blossom on his iPhone.

Photo by Jennifer Abend, Lindsay Point, South Australia. This beautiful photo was taken about 10 - 15 metres from Jennifer's back door.

Photo by Grace Nuske, Paringa, South Australia. This fantastic photo was taken by 11 year old Grace. She chose this image of her little brother because she felt that it was a really great shot of the blossoms.

Photo by Paul White, Riverland, South Australia. This gorgeous photo was taken in the orchards around the Riverland on Justin and Kirby Faint's wedding day.

Hydro-PC & Hydro-PCND Drip Lines.

Manufactured by Rivulis Irrigation (formerly John Deere Water), and used in Australia for over 16 years, Hydro-PC & Hydro-PCND are names synonymous with performance and reliability.

Of course we could name a number of features that make them so popular; two outlets per dripper, a large labyrinth to help prevent clogging, but the most important feature is the many Australian almond growers who successfully grow crops year after year with Hydro-PC & Hydro-PCND.

D5000 Flow Regulating Drip Line with flat emitter also available.

Rivulis
Irrigation

Ph: 1800 558 009 | Rivulis.com

Studies again prove the positive effects of nut consumption

Need more reasons to consume more nuts? The health benefits of nut consumption have again been highlighted, this time at the INC Symposium entitled "Nuts in Health and Disease" held at the 3rd World Congress. Nutrition experts presented new findings on the positive effects of nut consumption, particularly in relation to diabetes, cardiovascular diseases, cognitive degeneration and mortality rates.

Cardiovascular-disease induced mortality was reduced by

29%

in people who ate nuts four or five times a week.

Nut consumption has a positive effect on cardiovascular health due to nuts' unique nutritional composition. They contain high levels of monounsaturated fatty acids, fibre, minerals and vitamins which may explain why they can protect the cardiovascular system and have a positive effect against diseases with high mortality rates. Cardiovascular diseases are the main mortality cause in the whole world, with 17 million deaths each year.

Furthermore, nuts enable the blood to flow better and improve the endothelial function of the blood vessels. They also have an anti-inflammatory effect. These benefits are attributed to the multiple components that these products have, such as vitamin E, folic acid, magnesium, arginine, plant sterols and phytochemical compounds. They also have a low content of saturated fatty acids, among others.

The incidence of Type-2 diabetes can be reduced by

52%

with a regular consumption of nuts*.

Nut consumption has a protective effect on insulin-resistance and Type-2 diabetes. By following a Mediterranean diet, including 30grams of nuts a day, the incidence of diabetes reduced by 52% among the people aged between 55 and 80 (non-diabetic when the study began) who followed this type of diet for at least four years. The daily consumption of nuts improves the glycemic control and the lipid levels in blood in patients.

** According to the PREDIMED study: http://www.nejm.org/doi/full/10.1056/NEJMoa1200303*

An increase in nut consumption is directly related to the decrease of the total mortality and of the mortality caused by a specific cause, excluding other indicators.

Nut consumption also has a positive effect on metabolic syndrome control, which is the combination of at least three interlinked cardiovascular risk factors (central obesity, high blood pressure, high triglyceride concentration, low levels of good cholesterol and hyperglycaemia or diabetes, among others). The metabolic syndrome increases the risk of suffering from Type-2 disbetes and cardiovascular diseases.

GRAFTED ALMOND TREES

Ready for you July 2016

We communicate - regular progress reports

Lead times reducing - limited root stocks - order soon!

2016 Winter Delivery

~ GF677 Peach Almond Hybrid ~
~ Brights Hybrid ~ Nemaguard ~

Autumn Budded 2015, ready June/July 2016

2015 Winter Delivery

SOLD OUT

Nemaguard

Spring Budded 2014, ready June/July 2015

As good as it gets!

Biological Method - Best Practice

- *Essential soil microbes added*
- *Certified organic compost and certified organic composted cow manure used*
- *Compost teas foliar and soil applied*
- *Hybrids tissue cultured*

INTRODUCTORY OFFER:

Order now for free site inspection and agronomist visit

KC HORTICULTURAL NURSERY

Contact

Andy Gordon, Manager
03 5024 8812 0407 309 961
andy@kcvines.com.au www.kcvines.com.au

"The future belongs to those who plant for it"

Almond Board of California releases new honey bee best management practices

The Almond Board of California has invested $1.6 million (US) since 1995 on research related to honey bee health on subjects such as Varroa mite and other honey bee pest and disease issues, nutrition, the impact of pesticides and for technical assistance to beekeepers through tech transfer teams.

Results from this research have been assembled into a series of new best management practices (BMP) guides, made available as part of a broad effort to disseminate information on best practices for honey bees during almond bloom throughout the chain of communication for those involved in almond pollination. The practices are intended to ensure almonds are, and continue to be, a good and safe place for honey bees.

The three pieces, including *"Honey Bee Best Management Practices for California Almonds," "Honey Bee Best Management Practices Quick Guide for Almonds"* and *"Applicator/ Driver Honey Bee Best Management Practices Quick Guide for Almonds"* (in English and Spanish), can be accessed online at Almonds.com/BeeBMPs.

The BMPs emphasise communication among all involved in almond pollination, including pollination stakeholders as well as the local county agricultural commissioner. All almond pollination stakeholders, including beekeepers, bee brokers, farm owners/lessees, farm managers, PCAs and applicators, have a role in hive health during the pollination season and beyond. While comprehensive, the BMPs emphasise pesticide application practices and considerations during bloom. Some of the recommended practices are:

- There should be agreement between beekeeper and grower on a pesticide plan that outlines which pest control materials may be used

- Insecticide applications should be avoided at bloom until more is known about their impact on young, developing bees in the hive. Currently, most bee warning labels only address adult acute toxicity, and recent information and controlled studies indicate that some insecticides may be harmful, particularly to bee brood
- Tank-mixing insecticides with fungicides should be avoided.
- If fungicide application is needed during bloom, be sure to apply in the late afternoon or evening, when bees and pollen are not present. This avoids contaminating pollen with spray materials.

The document *"Honey Bee Best Management Practices for California Almonds"* also includes information on:

- Preparing for arrival of bees;
- Assessing hive strength and quality;
- Providing clean water for bees to drink;
- Using integrated pest management (IPM) strategies to minimise agricultural sprays;
- Honey bees and self-compatible almond varieties;
- Honey bee removal timing so they can avoid contact with pesticides from later treatments in other crops; and
- Addressing suspected pesticide-related honey bee losses.

The Almond Board is connecting with numerous pollination stakeholders about Bee BMPs at conferences and meetings leading up to the 2015 pollination season. These groups include growers, beekeepers and pest control advisers.

This article has been reprinted with permission from the Almond Board of California. The article can also be viewed at http://www.almonds.com/newsletters/outlook/almond-board-releases-new-honey-bee-best-management-practices

Please note: Australian bee management practices do differ in some areas to Californian practices. For the latest information, please visit www.beeaware.org.au.

california almonds
AlmondBoard.com

16th Australian Al

Stamford Grand Hotel, Glenelg, South A

Rev

Serving as a centre for communication, the Australian Almond Conference offers presentations on almond production related topics that directly impact grower decisions and activities in the orchard and marketplace. With technical experts from across the globe, it's no surprise that every year, Australian almond growers and allied industry members gather for the only conference in Australia dedicated entirely to the almond industry.

For the second year in a row, growers and industry converged on the Stamford Grand Hotel in Glenelg SA, from October 28th – 30th to attend the 2014 Australian Almond Conference (AAC) and Trade Exhibition. This year's Conference was the biggest yet with almost 340 registered delegates, once again confirming it as a landmark event for the Australian almond industry. The growers benefited from the ongoing networking opportunities with their peers, presenters and suppliers. It is wonderful to see our industry so well supported, with many attendees remarking on the positive atmosphere. This highlights the importance of a national event to encourage networking and unity between growers, researchers, supply chain and service providers across Australia.

The Conference is one of the best opportunities for processors and growers to sharpen their knowledge to foster the long-term sustainability of the industry. The highlight of the information-transfer calendar, the program included both international and domestic keynote speakers presenting the latest advances in production and pest and disease management, along with almond marketing strategies in Australia and internationally.

The conference is an ideal setting for face-to-face communication of research and development (R&D) project results to national levy payers and those who service the industry.

The first day's program included the Annual Levy Payers' Meeting, presentations on almond nutrition, the global market, marketing and branding of Australian almonds, advancements in orchard robotics and hulling and shelling. Panel sessions also took place with lively discussions on the future direction of both almond marketing and modern almond orchards.

ALMOND BOARD OF AUSTRALIA · HAL Horticulture Australia · Haifa

lmond Conference

Australia

iew

October 28-30, 2014

The second day's proceedings included a look at pests including carob moth, carpophilus beetle and bird damage. Almond pollination was also on the agenda as well as the biology and management of almond diseases including Aspergillus. 2013 Phil Watters Award winner, James Callipari, finished off the Conference with a review of his study tour of the almond industry in Spain.

Keynote speakers at the 2014 event included Richard Waycott (Almond Board of California), Tim Birmingham (Almond Board of California), Prof. Jim Adaskaveg (University of California) and Assoc. Prof. Neal Williams (University of California). Our Californian visitors were extremely well received with plenty of interest surrounding the issues currently effecting the Californian industry.

The conference trade exhibition featured trade displays showcasing the latest innovation and R&D from agricultural suppliers, machinery companies, transport and logistics companies and chemical suppliers.

Acclaimed as the biggest night of the conference, this year's annual Conference Gala Dinner, sponsored again by EE Muir & Sons, paid tribute to the eighth and ninth inductees into the Australian Almond Industry Hall of Fame, Mr. Tom Martin and the late Mr Donald (Don) Rough.

The ABA would like to thank sponsors and presenters for making this year's event an incredible success that the Australian almond industry can be proud of, with special thanks to Horticulture Australia Limited (HAL) for its co-funding.

Copies of photos and presentations are available from the ABA website www.australianalmonds.com.au.

Sponsorship, exhibition and conference enquiries for 2015 should be directed to:

Almond Board of Australia
P 08 8582 2055
E: admin@australianalmonds.com.au

Thank you to our Sponsors & Exhibitors

Platinum

Haifa

Gold

Rivulis Irrigation

Silver

Stoller
Unleashing The Power Of Plants

TAYPER

Bronze

GALLARD MACHINERY

NETAFIM
GROW MORE WITH LESS

Dinner

E.E. Muir & Sons

Welcome

JACK RABBIT

Exhibitors

Haifa
E.E. Muir & Sons
YARA
omnia
TAYPER
Stoller
Unleashing The Power Of Plants
Rivulis Irrigation
OMC
TORO
ENVIROMIST
SIMPLY BETTER SPRAYERS
ZADCO
for quality gro. pty. ltd.
WM
NETAFIM
GROW MORE WITH LESS
MAIT Industries
NELSON
MEA
FLORY
JACK RABBIT
MELPAT INTERNATIONAL PTY. LTD.
ABN 18 066 067 507
SPRAY GRO
LIQUID FERTILIZERS
Orchard-Rite
USA • Australia
Seasol
SHC
Exact
Harvesting Systems
AustSafe Super

Supporting Sponsors

HAL
Horticulture Australia
WM
KILTER RURAL
FLORY
SPRAY GRO
LIQUID FERTILIZERS
BAYER
Bayer CropScience
LARAGON
ALMOND PROCESSORS
Government of South Australia
Primary Industries and Regions SA
Waterfind
NATIONAL WATER BROKERS
OMC
Seasol
Elders
MOSSMONT NURSERIES
YARA

Pamper Today. Reap Tomorrow.

AUST. ALMOND 2012-2014 Platinum SPONSOR CONFERENCE

Haifa Multi-K

Potassium nitrate products for healthy crops

Optimise your crops with Multi-K potassium nitrate

Treat your crops with Multi-K cutting-edge products to improve tomorrow's harvests. Multi-K potassium nitrate fertilisers help you to enhance quality, boost yields and reduce labour costs. Haifa's potassium nitrate is 100% used by plants, with no residual remaining in soils. Our world renowned, fully water soluble fertilisers include:

- **Crystalline Multi-K** plain or enriched for Nutrigation
- **Haifa-Bonus npK** for foliar application
- **Multi-K Prills** for soil application

FOR FURTHER INFORMATION, CONTACT YOUR HAIFA TEAM

Trevor Dennis, Managing Director
E: trevor.dennis@haifa-group.com **M: 0400 119 852**

Shaul Gilan, Southern Agronomist
E: shaul.gilan@haifa-group.com **M: 0419 675 503**

Peter Anderson, Qld Sales Agronomist
E: peter.anderson@haifa-group.com **M: 0459 488 850**

Jason Teng, Customer Service/Logistics
E: jason.teng@haifa-group.com **M: 0488 036 528**

Haifa

Pioneering the Future

Australian Alm

Hall o

The Almond Board of Australia recognises that occasionally we should stop to consider the contribution people make to our industry. This industry has developed and come a long way over the last fifty years, and many people have contributed to these changes. Importantly, many of course continue to do so. Industry needs these people, needs their vision, their courage, their support. Without them it will neither develop as quickly nor as well.

Providing direction, pushing the boundaries, taking calculated risks and trying new techniques, technology and even new varieties

2014 Inductee

Tom Martin

Born in 1947, Tom Martin is a third generation almond grower and eldest son of the late Ross and Rosa Martin.

Tom was born and raised on a mixed farm in Willunga, South Australia, farming almonds and sheep. Tom attended school in Willunga before attending Prince Alfred College in Adelaide for Year 12. Tom had a passion for engineering but realised he was not suited to academia and opted for a career in farming.

In 1965, Tom joined his parents and grandparents farming 100 acres of almonds in addition to the other mixed enterprises. His passion for practical engineering and tinkering was encouraged by his father and remains an ongoing source of satisfaction.

Tom married Jan in 1971 and they have three children: Stuart, Andrew (Drew) and Shelley.

In 1978, his parents sold the Willunga property to enable Tom and Jan to move to Lindsay Point, where they purchased 100 acres and joined his brother Paul who had established plantings in 1973.

Tom's inventive nature has characterised his involvement in almonds from increasing the throughput of the Drewery cracker at the Willunga farm, to developing a mono boom shaker that did 60km/hr in reverse, to the hydraulic foot control of a sweeper head that was later replicated by Flory and included on every sweeper model since, to developing a self-propelled sprayer, and more recently a prototype in-line analyser for objectively and efficiently assessing the quality of processed almonds.

Tom has been actively involved in the oversight and management of hulling and shelling facilities with Laragon where he has been a Director since 1978 and Managing Director since 1986. Tom was also a Director of the Co-operative Almond Producers Ltd. from 1977 until 1990, and Almondco Australia Ltd. from 1995-1996, and has been a Director of Nut Producers Australia since 2002.

Tom's experience with Lindsay Point Almonds Pty Ltd., a private unlisted company of growers and investors, provided a model of an enterprise based almond orchard. This was pivotal to future expansion of the orchard area in the Riverland.

In 1987, Tom and Paul together with Tony Read, reviewed the lessons learnt from the Lindsay Point development and commenced plans for a major orchard project that developed into Jubilee Almonds, established at Waikerie in 1988. Paul went on to become Managing Director with the support of Tom.

Following the success of Jubilee Almonds, Tom led the development of Century Orchards at Loxton where he became Managing Director and more recently a Horticultural Director. Planting at Century Orchards began in 1999 and by 2001, the production area was 500ha of almonds and 100ha of wine grapes.

In 1999, after a successful partnership, Tom and Paul separated their business relationship to facilitate family succession and he purchased a 1200ha property at Murtho. This led to the development of Omega Orchards with almond plantings expanding to 135ha, and is now owned by son Drew.

Tom has a strong commitment to bettering the industry for all its participants and has served on many industry bodies. Tom served on the Australian Almond Improvement Society (AAIS) which aimed to support the continual improvement and expansion of the industry, largely through the use of improved plant material. Tom remembers this as an exciting period of advancement for the industry. Tom has also served on the Australian Almond Growers Association (AAGA), the representative body established in 1995 to deal with the broadening issues facing the industry. Once the Almond Board of Australia took over from the Association, Tom has remained an active participant in assisting the industry move forward and is a member of the ABA's Almond Processing Committee.

Tom has also represented the interests of irrigators. He realised the need for a strong and united voice and has been involved with South Australian Murray Irrigators and more recently as the ABA representative on the National Irrigators Council. This has assisted the development of projects and policies to ensure the efficiency and viability of Australian irrigated agriculture.

Tom is approaching his 50th harvest and has greatly contributed to the Australian almond industry.

nond Industry

f Fame

are instrumental in helping to develop infrastructure. Whether processing or marketing, this allows the industry to both expand and to remain competitive. These people keep the industry focussed and cohesive, and assist through providing advice to others or serving on committees. All of our pioneers, in their own way, have helped make the industry what it is today.

In 2014, Mr Tom Martin and the late Mr Donald (Don) Rough were chosen to be publicly recognised for the significant contributions they have made to transforming a fledgling industry into the modern, vital and proactive force that it has become and has helped lay the foundation for today's industry.

2014 Inductee

Donald Rough

Donald (Don) Rough was a Farm Advisor for 33 years with the University of California who was widely respected and recognised as the father of modern almond growing in Australia having helped establish growing practices that set the industry on its way.

Don was born in Stockton, California and raised in Brentwood, California. In 1943 he graduated from Liberty Union High School in Brentwood and immediately entered the military - serving as a U.S. Army Sergeant and Medic in the Pacific during WWII - primarily in the Philippines and Okinawa. Interestingly, it was during this time Don began his connections to Australia as he visited Brisbane on route to Papua New Guinea where he would also have met many serving Australians.

Upon returning home Don married his high school sweetheart, Ernestine Allmen, on Mar. 3, 1946 and was the father of Mark, Tim and Claudia. He attended Stockton J. C. then transferred to Cal Poly Pomona, and graduated in 1952 with his B.S. Degree in Agriculture from Cal Poly, San Luis Obispo. He was first assigned as a Farm Advisor in Fresno, then transferring 1 year later to San Joaquin County where he worked until his retirement in 1988.

Don was first visited in California by Eric Lacey in 1961. One of his major recommendations was the use of full irrigation. It seems a life time away now but remarkably the Australian industry relied on rainfall and supplementary bore water at this time. This trip provided Eric Lacey with the confidence and know-how to successfully develop an irrigated almond orchard along the Murray River at Nildottie, South Australia.

In August 1975 Don was invited by the Almond Co-operative Ltd to visit the Australian almond industry and came for a 3 month sabbatical. He was met with great enthusiasm. He held numerous seminars and farm walks in South Australia and Victoria. Don made a second visit to Australia in 1978 and a third in 1986 following further sponsorship by the Almond Co-operative Ltd. Reports of his trips were made available to industry and the on-going communication with Don in subsequent years proved invaluable to the Australian industry.

A report published from Don's visit in 1975 included recommendations that are still promoted today such as: developing closer relationships with the bee industry including the development of contracts to protect both parties; develop local information for almond nutritional needs and maximum yield; utilise high health nursery trees and develop a nursery tree grading system; and strengthen the industry by getting involved and fostering better cultural and marketing practices.

Don was extremely generous with his time and hosted in excess of 80 visiting Australian almond growers over the 1970s and 1980s and they always stayed at his house where he had an "Australian Room" complete with a visitors book, photos, flags and memorabilia from his relationships and experiences "down under".

Don was an affable man with wonderful people skills and a genuine interest in families and the broader aspects of life. He made a point of knowing every grower's name, their wife's name and their children's name.

Don was never able to say a bad thing about anyone or their orchard and on one occasion he was hosting an Australian grower and took him on one of his orchard visits, only to see one particular orchard that was in severe decline. The only comment Don could make to the grower was "...you've got a fine gate".

Don was fond of many sayings and one that sticks in many Australian growers' minds was "there is no replacement for the shadow of the owner in the orchard."

It was 20 years of exchange between Don and Australian almond growers that has led to a great two way flow of information between California and Australia.

Don was highly regarded and respected by his peers and all of the many farmers he worked with over the years. He was characterised by sincerity, loyalty and generosity.

In The Orchard

Brett Rosenzweig - Industry Development Officer

The next few months leading up to harvest will again be a critical time for irrigation management. The Bureau of Meteorology predicts a drier and hotter than normal period from November to January. The official summary at 30th October 2014 is:

- A drier than normal November to January is more likely over the northern and eastern mainland.
- For the month of November, a drier than normal month is more likely over the northern half of Australia, with the chances of a wetter or drier November roughly equal over most of the south.
- The November to January temperature outlooks indicate a warmer than normal season for both daytime and night-time temperatures across most of Australia.
- Climate influences include warmer than normal temperatures in the tropical Pacific Ocean, near normal tropical Indian Ocean temperatures, and normal to cooler than normal sea surface temperatures off Australia's northern coasts.

The next update is scheduled for the 27th November and can be found on the Bureau's website at: http://www.bom.gov.au/climate/outlooks/#/overview/summary.

Everyone knows moisture stress can have an impact on final yield. Moisture stress from fruit set until pit hardening will limit the overall fruit size and moisture stress from pit hardening until harvest will impact the overall kernel size and weight (Figure 1).

In simple terms if moisture stress occurs before pit hardening, fruit growth is reduced. Therefore no matter how much irrigation and fertigation occurs after pit hardening, the end result will always be the same - small kernels. If moisture stress occurs after pit hardening the result can be pinched, shrivelled, misshapen or small kernels. If moisture stress at any stage during the fruit/kernel growth can impact negatively on kernel size and weight at harvest, is there any stage during the season which can have the most impact and therefore should be given the most attention in regards to irrigation scheduling? The short answer is NO - once you lose the opportunity for fruit/kernel growth you can't get it back.

Figure 2 (opposite page) highlights the kernel dry weight accumulation during the 2011-12 growing season at the RDI Trial located at Lake Powell, Victoria.

the kernel loses moisture after hull split, the variation in kernel weight becomes evident. There is also the possibility that the final kernel weight accumulation can occur in the period from early hull split to harvest. Both of these theories haven't been analysed as part of the project and further confirmation is needed.

Based on the simple principle that moisture stress has a direct impact on

Figure 1: Parts of an almond.

The amount of combined irrigation and effective rainfall applied ranged from 1336mm for the wet treatment (1296mm irrigation and 40mm effective rainfall) to 703mm for the RDI55 treatment (663mm irrigation and 40mm effective rainfall). Kernel dry weight accumulation is the same for each of the treatments until early hull split in January. From then until harvest (final weight measurement) the weight accumulation slows dramatically for those treatments with increasing levels of deficit (stress). The results of kernel dry weight accumulation for the 5 years of the RDI trial are shown in Figure 3 (opposite page). The decreased weight accumulation in the 55% treatments occurred regardless of whether the deficit occurred as a sustained deficit all season (SDI55) or a targeted deficit between fruit set and post-harvest (RDI55). The graphs suggest there is a lack of dry matter accumulation or oil content during the season and when final yield, it's critical to keep on top of irrigation scheduling this summer. With the possible increase of extreme heat events in the future a review of irrigation system capacity and/or scheduling requirement is warranted. A recent calculation by Ben Brown estimated for the 2013-14 season highlighted how many days an irrigation system could not match tree demand based on varying application rates. Assuming a total application of 14ML/Ha for the season, an irrigation system with an application rate of 0.91mm/hr (10.87 mm/day) had 21 days that didn't meet water demand. On the other hand, an irrigation system with an application rate of 1.17 mm/hr (14.04mm/day) would have four days that didn't meet water demand. A well designed irrigation system with adequate capacity is critical to deal with the variable nature of heatwaves.

How robust are your strategies for limiting moisture stress and potential impact on yield?

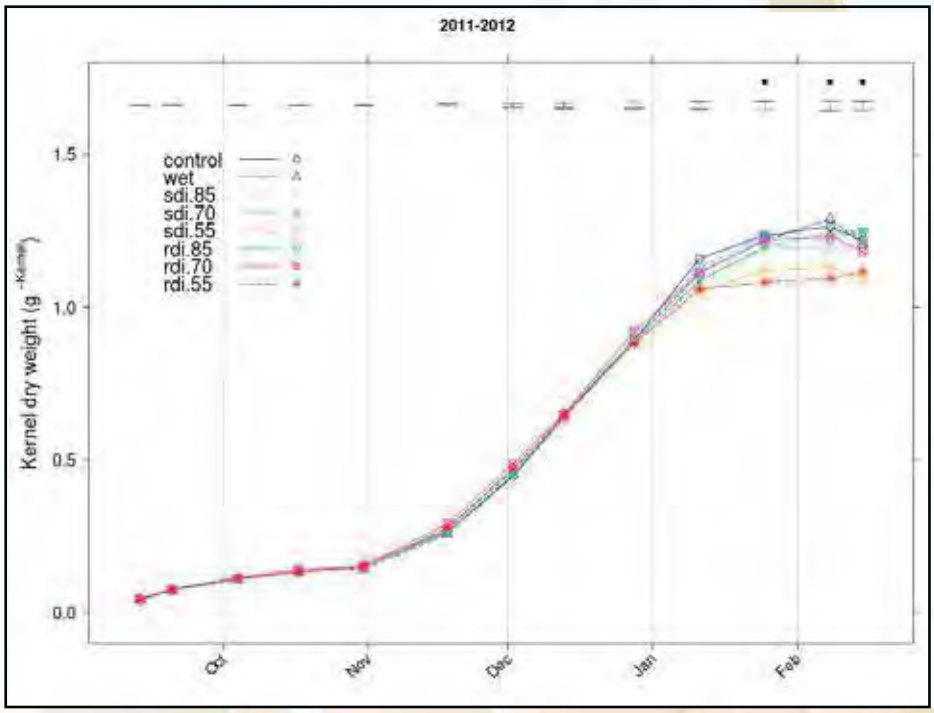


Figure 2: Kernel dry weight accumulation during 2011-12

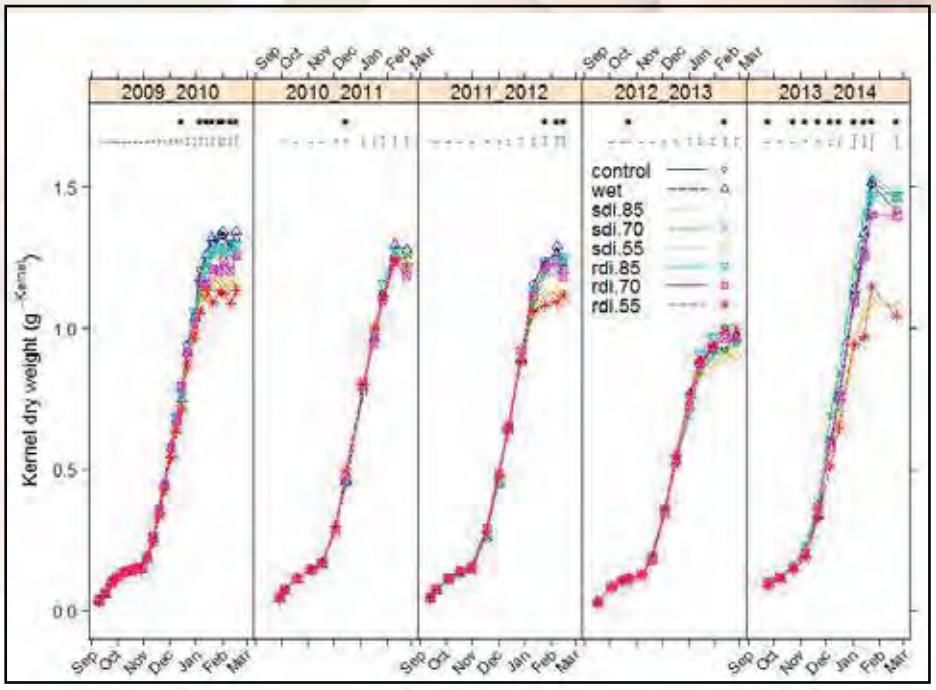


Figure 3: Kernel dry weight accumulation over 5 years (2009-2014)

Stoller®
Unleashing The Power Of Plants

WHAT'S NEW IN NUTS?

At Stoller Australia we know nuts. Stoller's global network captures the latest nut research from around the world and we've been testing our programs in Australian almonds for almost 20 years.

Talk to our team today to find out about the latest developments in the local and global almond industry.

FEATURED PRODUCT

STOLLER'S SUGAR MOVER

Formulated to improve bud and nut development and maintain growth balance – moving sugars where they're needed most.

Stoller's Sugar Mover -
Good nut to leaf ratio +
even crop = increased profits.

Stoller Australia, Silver Sponsor of the Australian Almond Conference 2014.

NELSON HARDIE®

ORCHARD SPRAYERS

- Excellent Spray Coverage
- Very Low Maintenance
- Stainless Tank, Hood, Doors, Front & Side Panels
- Galvanized Frame, Fan Housing & Guards
- PTO-Drive Models & Engine-Drive (140HP to 325HP)

TREE SQUIRREL®

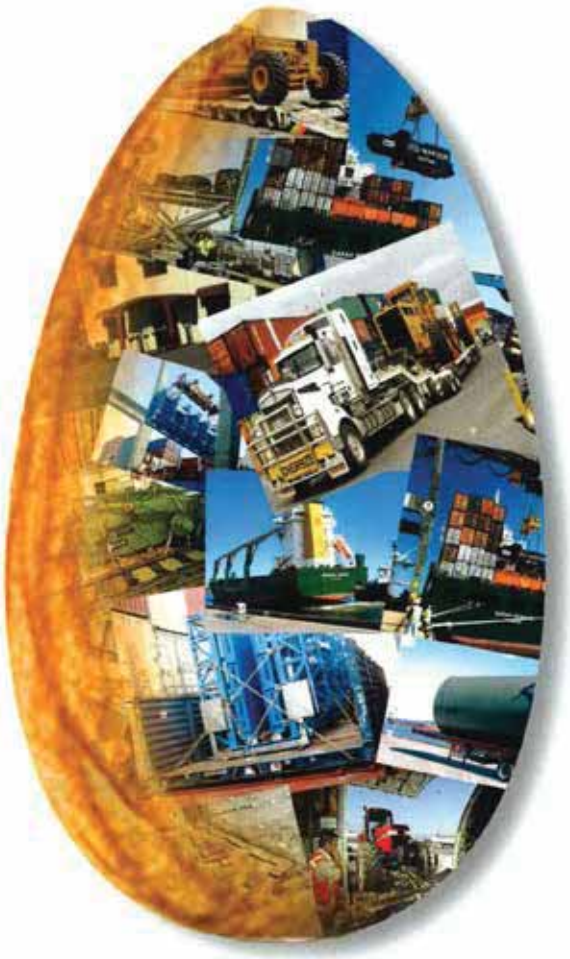
PRUNING TOWERS

- 20 ft. & 25 ft.
- 25HP Kubota diesel engine
- 2 speed drive
- Smooth action
- Powdercoat finish

NELSON

NELSON MFG. CO., INC.
Yuba City, CA, USA
Tel (530) 673-0919
www.NelsonHardie.com

BUY DIRECT AND SAVE!



TAYPER
Your global supply chain partners

YOUR SUPPLY CHAIN PARTNERS

SET
Your Complete Logistics Partners

Evans Street (PO Box 377), Port Adelaide SA 5015 Telephone: +61 8 8300 3100 Fax: +61 8 8300 3116

PROTECT YOUR NUTS

AND YOUR AVOCADOS AND CUSTARD APPLES AGAINST A RANGE OF BORERS AND CATERPILLAR PESTS

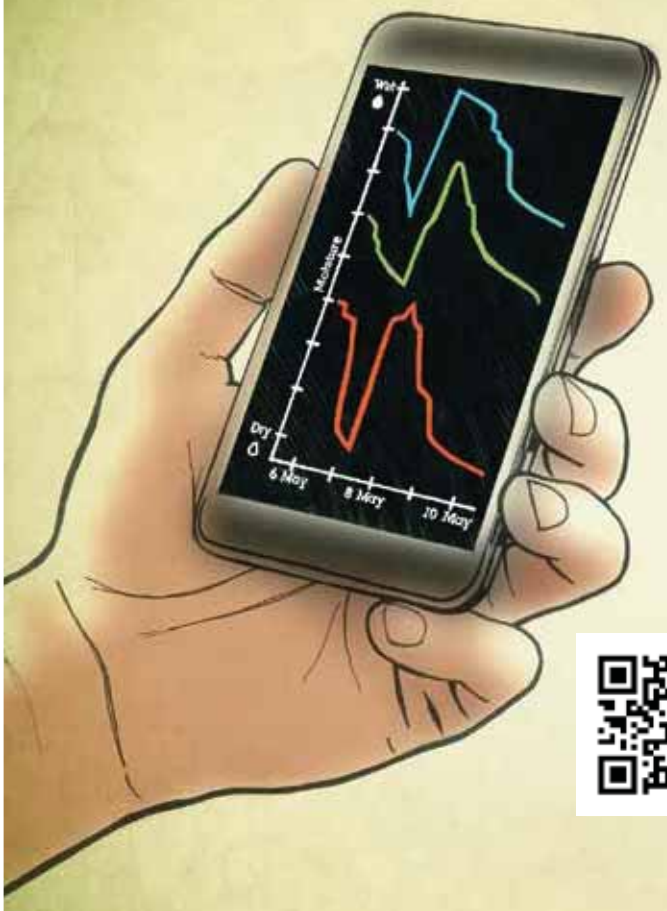
Prodigy™
INSECTICIDE

APVMA Permit Number PER 13553
For the control of carob moth in almonds

For more information call 1800 700 096
www.dowagrosciences.com.au

DOW® **Dow AgroSciences**

Solutions for the Growing World



STRAIGHT FROM THE SOIL TO YOU

Plexus wireless networks put accurate, up to date soil moisture and temperature data in the palm of your hand.

Plexus lets you create monitoring networks for properties of any size.

Readings are viewed on the Green Brain website using your smart device or internet-connected computer.

With data available 24/7, Plexus helps you replace guess work with certainty.

To find out more about how we can help you grow smarter call us on 08 8332 9044 or visit mea.com.au.

MEA

Primary Industries and Regions SA

proudly supporting the production of premium almonds from our clean environment.

Premium Food and Wine from our Clean Environment is one of the South Australian Government's strategic and economic priorities. It seeks to secure the State's position as a producer of premium food and wine from our clean water, clean air and clean soil and capitalise on the increasing global demand for premium products, including almonds.

South Australia's almond industry is a key and growing part of the State's horticulture sector, with $98 million worth of almonds exported to countries including Germany, New Zealand and India in 2013-14.

The almond industry brings significant regional economic benefits to the State, with the Riverland a major focus for the development of the modern Australian almond industry.

Primary Industries and Regions SA (PIRSA) continues to support the State's almond industry in a range of ways.

The South Australian Research and Development Institute (SARDI) delivers directly applicable solutions and advanced technologies for the almond industry, including water resources and irrigation, climate applications, pests and diseases, food safety and innovation and variety evaluation.

The Agriculture, Food and Wine division assists the almond industry to explore potential trade, export and investment opportunities.

Through its grant programs Regions SA has supported recent major developments in the almond industry, and the transformation of the Loxton Research Centre will realise our vision of a vibrant new centre for innovative research and collaboration in the Riverland. This initiative is part of the $265 million South Australian River Murray Sustainability program (SARMS) funded by the Australian Government and delivered by PIRSA.

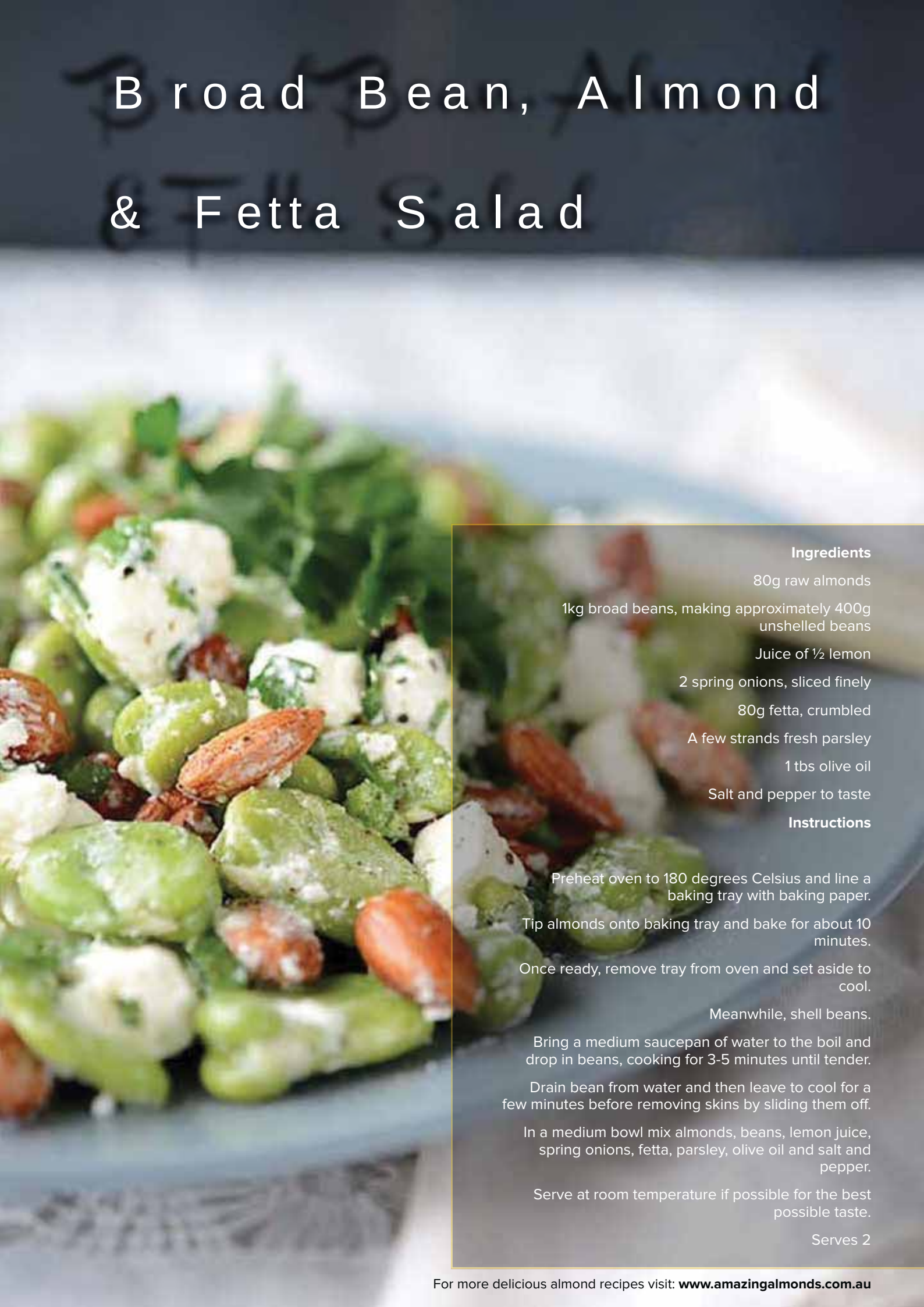
To find out how PIRSA can help you contact Agriculture Food and Wine Division Director Justin Ross on (08) 8226 8157.

PREMIUM FOOD AND WINE FROM OUR CLEAN ENVIRONMENT

SOUTH AUSTRALIA

Government of South Australia
Primary Industries and Regions SA

Broad Bean, Almond & Fetta Salad



Ingredients

80g raw almonds

1kg broad beans, making approximately 400g unshelled beans

Juice of ½ lemon

2 spring onions, sliced finely

80g fetta, crumbled

A few strands fresh parsley

1 tbs olive oil

Salt and pepper to taste

Instructions

Preheat oven to 180 degrees Celsius and line a baking tray with baking paper.

Tip almonds onto baking tray and bake for about 10 minutes.

Once ready, remove tray from oven and set aside to cool.

Meanwhile, shell beans.

Bring a medium saucepan of water to the boil and drop in beans, cooking for 3-5 minutes until tender.

Drain bean from water and then leave to cool for a few minutes before removing skins by sliding them off.

In a medium bowl mix almonds, beans, lemon juice, spring onions, fetta, parsley, olive oil and salt and pepper.

Serve at room temperature if possible for the best possible taste.

Serves 2

Weekly Times (Vic), Melbourne
05 Nov 2014, by Alex Sampson

General News, page 53 - 160.00 cm²
Rural - circulation 58,582 (--W---)

ID 335960632 BRIEF ALMONDAUST INDEX 1.1

Aussie almonds take on the world

By ALEX SAMPSON

AUSTRALIA is now the world's second-largest almond producer, and more than 70 per cent of national production comes from Victoria.

In 2013-14, Victorian almond exports were valued at $366 million and accounted for 41 per cent of the value of the state's horticulture exports.

That was an increase of 167 per cent in value and 93 per cent in volume from 2012-13.

This season's exports are tipped to top last year's at $473 million.

About 350 delegates travelled to Adelaide last week for the 16th Australian Almond Conference.

The conference included presentations by 30 researchers and experts focusing on the entire supply chain from both a domestic and international perspective.

Almonds are now Australia's largest horticultural export industry, having overtaken Spain to become the world's second largest producer behind the US.

Almond Board of Australia industry liaison manager Ben Brown discussed the almond orchard productivity research and development program.

CSIRO senior principal research scientist Rob Bramley presented on precision agriculture and the opportunities for enhancing profitability.

University of South Australia Barbara Hardy Institute School of Engineering researcher Michael Coates discussed storage, aeration and dehydration of almonds.

Another hot topic was efficient pollination and protecting the local bee population from the varroa mite, which has devastated bee populations overseas but has not yet entered Australia.

The global market for almonds is worth an estimated $5.1 billion, according to the latest report from Select Harvests.

The US still dominates the market, with 83 per cent of global supply grown in California.

However, the Californian drought has severely affected production.

Australia and Spain each represent a month of the world's almond supply.

Olam is Australia's biggest almond player, having a 42 per cent market share with 11,949ha planted in Victoria. Next comes Select Harvests, with 19 per cent of the Australian market and 5389ha planted in Victoria, NSW and South Australia.

An estimated 81 per cent of Select Harvests orchards will mature in the next year.

World almond supply and demand have shown 8 per cent compound annual growth over the past decade.

Current demand growth is trending above the average rate, with 59 per cent of all almonds consumed in the US and Europe.

Good Fruit & Vegetables, National
01 Dec 2014, by Ashley Walmsley

General News, page 20 - 355.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368455454

Almond growers on market mission

By ASHLEY WALMSLEY

S the second largest global producer of almonds, Australia is poised to pounce on further trade opportunities.

This was one of the messages delivered at the 16th Australian Almond Conference in Glenelg, South Australia, in October, when some 350 delegates attended.

This year's conference speakers focused on the entire supply chain from both a domestic and an international perspective.

South Australian Minister for Agriculture Leon Bignell welcomed visitors and gave some insights into his positive perspectives on Australian almonds.

"In June I was in India and met with a lot of the importers of almonds and they were very happy with what they were getting from Australia," he said.

"They said the different seasons in California and Australia allowed them to get good fresh almonds pretty much all year round."

His comments on the industry's export success were echoed by the Almond Board of Australia's market development manager Joseph Ebbage in his address.

He said 75 per cent of the Australian crop was exported, making it a player on the world scene.

An estimated figure of $5.1 billion had been put on the global market for almonds, according to Select Harvests.

About 83 per cent of global supply comes from the US, most of which is grown in California.

India, Europe, Japan, Hong Kong, New Zealand and the Middle East are all key destinations for Aussie almonds.

"Suffice to say, we've just seen some unbelievable, significant growth," Mr Ebbage said.

"In terms of our domestic sales we've been averaging about 10pc increase on our sales per annum.

"Twenty-seven per cent of all our exports go to India. Our single largest region is Europe at 42pc of our exports, followed by the Middle East and Africa.

"But I would point out to you that there are seriously large opportunities in Asia for us. Only 3pc of our exports go to north east Asia and 3pc go to south east Asia."

Dr Sze Yen Tan from the University of South Australia spoke on nutrition research and Richard Waycott of the Almond Board of California gave an update from a Californian perspective.

Topics such as the use of robotics within orchards, productivity research and development, tree development, food safety, nut storage, plus pest and disease issues were also covered.

The Australian almond crop is forecasted to be a record 78,600 tonnes in 2014. The gala dinner, which honoured some of the key industry contributors, was held at the Morphettville Racecourse.

LEFT: Almond Board of Australia market development manager Joseph Ebbage

Good Fruit & Vegetables, National
01 Dec 2014, by Ashley Walmsley

General News, page 20 - 355.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368455454

Australia has become the second largest global exporter of almonds.

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

Your GF&V souvenir gallery

Australian Almond Industry Hall of Fame inductee Tom Martin

Musical comedy act Tripod keeps the crowd entertained at the conference dinner

Australian Nut Industry Council executive officer Chaseley Ross

Abby White, Swan Hill Chemical, with Melanie Turner, Melpat International

Dr Sze yen Tan, University of SA nutrition and dietetics lecturer

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

Master of ceremonies Peter Hayes keeps things moving along

HAIFA Australia CEO Trevor Dennis during the conference presentation on nutrition.

Dr Peter Barnard, general manager trade and economic services for Meat and Livestock Australia

South Australian Agriculture Minister Leon Bignell welcomes guests to his state

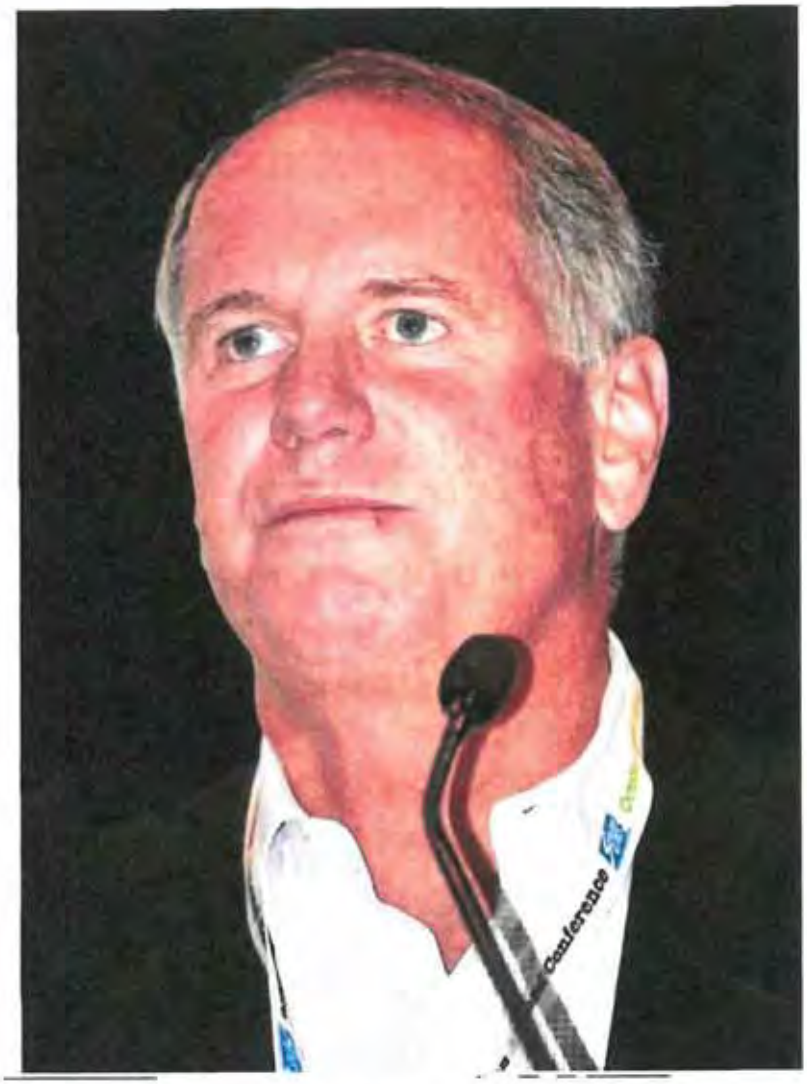
Almond Board of Australia chairman Neale Bennett tunes into the speaker sessions

Richard and Chaseley Ross, enjoy the night

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011



Almond Board of California president and CEO Richard Waycott details his home country industry

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

Jane Finch, Mildura with Troy Haigh, Renmark.

Cathy Lowe and Paul Thompson.

Dion Roberts, Echuca with Jagtar Singh, Rivulis Irrigation Product Specialist.

Ross Skinner pictured with Tom Martin.

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

John and Anastasia Maragozidid

Sonia and James Callipari

Seasol territory managers Mike Alevras and Jeremy Liddle with Dr Tony Arioli, director research and development

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

Chloe Shaw with Michael Ward, Jubilee Almonds

Representing Orchard-Rite are Graham Willcockand Waller Manning

Dr Andrew Skinner, director, MEA Engineering

Shane Woger, Stoller

Chris Vasey, Enviromist, prepares some information for visitors

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

Gary Jeans, Swan Hill Chemicals, with Shaul Gilan and Trevor Dennis, Haifa Chemicals Australia

Frank Galluccio, Sumitomo Chemicals and Zubair Shahzad, Olam Orchards Aust

Tony Ringelsen, Exact Harvesting Systems

Good Fruit & Vegetables, National
01 Dec 2014, by None

General News, page 21 - 2,115.00 cm²
Rural - circulation 7,229 (Monthly)

ID 368470011

LEFT: Scott McKenzie and Anthony Wachtel, Century Orchards

LEFT: Skinn and James Dalgish

Tom Martin celebrates his induction into the Australian Almond Industry Hall of Fame

Australian Nutgrower, National
01 Dec 2014

General News, page 52 - 630.00 cm²
Rural - circulation 1,200 (Quarterly)

ID 356594376 BRIEF ALMONDAUST INDEX 1.5

Almond Board of Australia

ALMOND BOARD OF AUSTRALIA

The Australian Almond Conference, held in Adelaide at the end of October attracted 373 delegates to the two day forum. The valued co-operation of the Californian industry was again a feature with presentations from Richard Waycott and Tim Birmingham of the Almond Board of California and Bruce Adaskaveg and Neal Williams of the University of California who also presented at field days in the Adelaide and Riverland regions.

A feature of the Conference Dinner is the induction of new members into the Australian Almond Industry Hall Of Fame. This year's inductees were Tom Martin and US researcher and extension officer, Don Rough. 2014 has been a successful one for the almond industry. Farm gate returns have increased and the industry's sales are now well over $700 million dollars annually. Almonds are a major contributor to the communities we farm in. Vitality has returned to the Murray Valley horticultural regions despite the downturn in the wine grape industry.

The recent news on trade agreements with Korea, Japan, China and hopefully India in the not too distant future is welcomed by the almond industry. FTA's with these countries will stimulate demand as they are all large importers of almonds. Currently, South East Asia and North East Asia each account for only 3% of Australia's almond exports so there is great potential to improve sales into these regions.

With another planting boom underway in the almond industry with a likely 30% increase in orchard area, or nearly 10,000 hectares, in the next few years the development of further markets is a key priority of the Almond Board of Australia. 2014 was the busiest year yet in terms of attending overseas trade exhibitions with stands at Moscow's ProdExpo, Dubai's Gulfoods, Tokyo's Foodex, Hong Kong's Asia Fruit Logistica, Paris' SIAL, and Seoul's Food Week Korea.

In the first seven months of the 2014/15 marketing year since March, exports have increased 7,272 tonnes (21%) to 41,492 tonnes and the value of exports has increased by $99 million (39%) to $350 million.

During the year, the industry has taken steps to address risks to production and quality through the

Australian Nutgrower, National
01 Dec 2014

General News, page 52 - 630.00 cm²
Rural - circulation 1,200 (Quarterly)

ID 356594376 BRIEF ALMONDAUST INDEX 1.5

research program as well as undertaking consumer research both on the domestic and selected overseas markets.

The support of the Victorian Department of Environment and Primary Industries to the almond research program during 2014 is acknowledged and the ABA looks forward to the work ahead in establishing the Almond Centre of Excellence. It is an exciting prospect that will have the increased research capacity and experimental orchard aiming towards increasing the efficiency of existing orchards and developing new production systems that lift yields and address areas of risk in growing almonds in Australian conditions.

On behalf of the ABA Board, I would like to wish nut industry participants a prosperous new year and a rewarding harvest in 2015.

Ross Skinner, CEO

Stock Journal(SA), Adelaide
11 Dec 2014, by Ashley Walmsley

Supplements, page 14 - 837.00 cm²
Rural - circulation 12,467 (---T---)

ID 351301460 BRIEF ALMONDAUST INDEX 1.2

Aussie almonds a world favourite

By ASHLEY WALMSLEY

AS THE second largest global producer of almonds, Australia is poised to pounce on further trade opportunities.

This was one of the messages delivered at the 16th Australian Almond Conference at Glenelg in October where some 350 delegates attended.

This year's speakers focused on the entire supply chain, from a domestic and international perspective.

Agriculture Minister Leon Bignell had positive news on Australian almonds.

"In June I was in India and met with a lot of the importers of almonds and they were very happy with what they were getting from Australia," he said.

"They said the different seasons in California and Australia allowed them to get good fresh almonds pretty much all year round."

His comments on the industry's export success were echoed by the Almond Board of Australia's market development manager Joseph Ebbage in his address.

He said 75 per cent of the Australian crop was exported, making it a player on the world scene.

Select Harvests says an estimated $5.1 billion has been put on the global market for almonds.

About 83pc of global supply comes from the US, most of which is grown in California.

India, Europe, Japan, Hong Kong, New Zealand and the Middle East are all key destinations for Australian almonds.

"Suffice to say, we've just seen some unbelievable, significant growth," Mr Ebbage said.

"In terms of our domestic sales, we've been averaging about 10pc increase on our sales per annum.

"Twenty seven per cent of all our exports go to India. Our single largest region is Europe at 42pc of our exports, followed by the Middle East and Africa.

"But I would point out to you that there are seriously large opportunities in Asia for us.

Only 3pc of our exports go to North East Asia and 3pc go to South East Asia."

Other speakers included Dr Sze Yen Tan from the University of South Australia who spoke on nutrition research and Richard Waycott of the Almond Board of California who gave an update from a Californian perspective.

Topics such as the use of robotics within orchards, productivity research and development, tree development, food safety, nut storage, plus pest and disease issues were also covered.

The Australian almond crop is forecast to be a record 78,600 tonnes in 2014.

The gala dinner, which honoured some of the key industry contributors, was held at the Morphettville Racecourse.

Stock Journal(SA), Adelaide
11 Dec 2014, by Ashley Walmsley

Supplements, page 14 - 837.00 cm²
Rural - circulation 12,467 (---T---)

Abby White, Swan Hill Chemical, with Melanie Turner, Melpat International.

Mark Webber with Deanna Hutchins, Laragon.

Tony Ringeisen, Exact Harvesting Systems.

Scott McKenzie with Anthony Wachtel, Century Orchards.

Stock Journal(SA), Adelaide
11 Dec 2014, by Ashley Walmsley

Supplements, page 14 - 837.00 cm²
Rural - circulation 12,467 (---T---)

ID 351301460 BRIEF ALMONDAUST INDEX 1.2

Chloe Shaw with Michael Ward, Jubilee Almonds.

Dean Izzard with Zadco general manager Asma Johansson.

Stock Journal(SA), Adelaide
11 Dec 2014, by Ashley Walmsley

Supplements, page 14 - 837.00 cm²
Rural - circulation 12,467 (---T---)

Richard and Chaseley Ross, executive officer of the Australian Nut Industry Council.

Micron Enviro (Enviromist) sales and operations director Chris Vasey.

Melanie Turner, Melpat International.

Above: Representing Orchard-Rite are area maintenance manager Graham Willcock, and Walter Manning.

Stock Journal(SA), Adelaide
11 Dec 2014, by Ashley Walmsley

Supplements, page 14 - 837.00 cm²
Rural - circulation 12,467 (---T---)

ID 351301460 BRIEF ALMONDAUST INDEX 1.2

Left: Representing Netafim are Adam Lean, Peter Henry and Matt Lyod.

17th Australian Almond Conference

Pullman Hotel Melbourne, Albert Park, Victoria

November 8th - 10th, 2016

Accommodation

Pullman Hotel, Albert Park ★ ★ ★ ★ ★

65 Queens Road, Albert Park, Melbourne, Victoria 3004

The Pullman Melbourne Albert Park is Melbourne's newest fully refurbished upscale hotel. It is centrally located on Queens Road, minutes from Melbourne's central business district and St Kilda Road. The hotel is close to South Yarra's Chapel Street retail precinct and The Royal Botanic Gardens. The contemporary guestrooms will provide a sense of space and comfort, with many rooms overlooking stunning Albert Park Lake or the sunsets over Port Phillip Bay.

Just a 20 minute drive from the airport and a 15 minute drive from Melbourne's bustling CBD.

Rates & Bookings

The Almond Board of Australia has secured a discounted rate for our guests during the Almond Conference.

To receive this negotiated rate, please advise Reservations that you are attending the **Almond Board of Australia Conference** at the time of booking. A valid credit card number will be required to confirm your reservation.

To secure your room please contact the Pullman Hotel, Albert Park Reservations team on: Ph: +61 3 9529 4300, E: H8788@accor.com

Mercure Melbourne, Albert Park ★ ★ ★ ★

65 Queens Road, Albert Park, Melbourne, Victoria 3004

Warm, inviting and tastefully appointed, each of the guest rooms and suites at Mercure Melbourne Albert Park offers the perfect place to relax. With a wide variety of room configurations available, this beautiful Melbourne hotel is the ideal base for any type of traveller - with Premium, Privilege and Family options on offer. Each room features a large work desk, a flat screen LCD with cable channels, Wi-Fi and cable internet access, in-room safe, and a modern ensuite with Mercure branded bath products.

Rates & Bookings

The Almond Board of Australia has secured a discounted rate for our guests during the Almond Conference.

To receive this negotiated rate, please advise Reservations that you are attending the **Almond Board of Australia Conference** at the time of booking. A valid credit card number will be required to confirm your reservation.

To secure your room please contact the Mercure Melbourne, Albert Park Reservations team on: Ph: +61 3 9529 4300 E: H8811@accor.com

Information

Conference Venue

Pullman Melbourne Albert Park is perfectly placed for discovering Melbourne's rich restaurant, shopping & cultural scene. The hotel overlooks picturesque Albert Park, but for one week of the year, the view is transformed into one of the world's most exciting Formula 1 racing circuits & guests can enjoy all the action from their windows.

The Pullman Melbourne Albert Park is Melbourne's newest fully refurbished upscale hotel. It is centrally located on Queens Road, minutes from Melbourne's central business district and St Kilda Road. The hotel is close to South Yarra's Chapel Street retail precinct and The Royal Botanic Gardens. The contemporary guestrooms will provide a sense of space and comfort, with many rooms overlooking stunning Albert Park Lake or the sunsets over Port Phillip Bay.

Just a 20 minute drive from the airport and a 15 minute drive from Melbourne's bustling CBD.

Terms & Conditions

Refunds & Cancellations

All cancellations must be notified in writing to the Almond Board of Australia (details below). Cancellations after June 30th and before September 1st, 2016 will incur a $100 cancellation fee. Cancellations after this date cannot be accepted, however transfer of registration to another delegate will be accepted. All refunds will be paid at the conclusion of the Conference.

Hotel Cancellation Policy

Delegates wishing to make any changes to a reservation at any accommodation provider must notify the hotel directly. Please contact your hotel for more information.

Personal Details

In registering for this Conference, relevant details will be incorporated into a participant list for the benefit of all delegates (name, email and organisation only), details may be made available to parties directly related to the Conference including venue and accommodation providers (for the purposes of room bookings only) and to inform you of future Almond Board of Australia activities.

Disclaimer

The Almond Board of Australia, will not accept liability for any injury of any nature sustained by participants or for loss or damage to property as a result of the Conference or exhibition and related events.

This initiative has been facilitated by HIA Ltd in partnership with the Almond Board of Australia and has been funded by voluntary contributions from industry.

Almond Board of Australia Inc.
ABN 31 709 079 099
1801 Bookpurnong Road, PO Box 1507
Loxton South Australia 5333

P + 61 8 8584 7053
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

australian almonds
ALMOND BOARD OF AUSTRALIA

Horticulture Innovation Australia

17th Australian Almond Conference

Pullman Hotel, Melbourne
Albert Park, Victoria

Tuesday, November 8th - Thursday, November 10th 2016

DELEGATE REGISTRATION

australian almonds
ALMOND BOARD OF AUSTRALIA

HOSTED BY:
The Almond Board of Australia

Horticulture Innovation Australia

SUPPORTED BY:
Horticulture Innovation Australia

Delegate Registration

For further details regarding the Conference please contact the ABA Office on +61 8 8584 7053 or admin@australianalmonds.com.au

Please complete **one form per delegate** and return completed forms to:
Almond Board of Australia, PO Box 1507, LOXTON SA 5333, or email admin@australianalmonds.com.au

Delegate Name:

Company/Organisation:

Position/Job Title:

Postal Address:

City State: Postcode:

BH Phone: Mobile:

Email:

FULL Registration Includes

- Welcome Cocktail Function Ticket
- Entry to all Conference Sessions
- Access to Trade Exhibitions
- Morning & Afternoon Teas
- Daily Buffet Luncheons
- Gala Dinner Ticket
- Delegate Satchel, Compendium & Name Badge
- Official Conference Luggage Tag
- Conference Proceedings USB

17th Australian Almond Conference

Early Bird Registration closes **Friday, 30 September 2016**

Full Delegate Registration (Includes ALL events)	Early Bird	Full Price	Select
Full Registration (ABA Member)	$ 380	$ 480	
Full Registration (Non Member)	$ 450	$ 550	

Day ONLY Registration (Does NOT include events)	Early Bird	Full Price	Wed Nov 9	Thur Nov 10
Day Registration (Please tick day/s)	$200	$250		

Event Attendance for Full Delegates	I WILL attend	I WILL NOT attend
Welcome Cocktail Function		
Conference Dinner		

Event Only Registration (Included only in full registration)	Price	Select
Welcome Cocktail Function only	$ 80	
Conference Dinner only	$ 150	

To qualify for ABA Member rates each delegate must be a current financial member of the Almond Board of Australia.

If you have any special dietary requirements please indicate here:

Tuesday, November 8th

- Industry Exhibition Setup
- Welcome Cocktail Function

Wednesday, November 9th

- Registration
- Trade Exhibition
- ABA Annual General Meeting
- Official Conference Opening
- Keynote Addresses
- Pre Dinner Exhibition Drinks
- Conference Gala Dinner

Thursday, November 10th

- Trade Exhibition
- Keynote Addresses

Payment Details

☐ Cheque enclosed for $_____
(cheques made payable to Almond Board of Australia in AUD)

☐ Electronic Funds Transfer
Acc Name: Almond Board of Australia
Acc# 040339140 BSB# 105-052 **REF: Your Surname**

Credit Card: ☐ VISA ☐ Mastercard ☐ American Express
A processing fee of 2% for VISA & Mastercard and 3% for AMEX and international credit card payments will apply

Card Numbers:

_____ - _____ - _____ - _____

Expiry Date: ____/____ CCV: _____
(Credit Card Verification Number)
Last 3 digits on reverse

Card Name: _____

Signature: _____

Total Payment Due: $_____ AUD

☐ *I have read & agree to the terms and conditions of registration as set out on this form.*

A Tax Invoice will be sent following processing of your registration. Please retain a copy of this registration form for your records. All prices quoted INCLUDE GST.

For accommodation information please refer overleaf

17th Australian Almond Conference

Pullman Hotel Melbourne, Albert Park, Victoria

November 8th - 10th, 2016

Official Program

HOSTED BY:
Almond Board of Australia

SUPPORTED BY:
Horticulture Australia Ltd

PROGRAM SPONSOR:
Weiss McNair

Pamper Today. Reap Tomorrow.

AUST. ALMOND 2016 Signature SPONSOR CONFERENCE

Haifa Multi-K

Potassium nitrate products for healthy crops

Optimise your crops with Multi-K potassium nitrate

Treat your crops with Multi-K cutting-edge products to improve tomorrow's harvests. Multi-K potassium nitrate fertilisers help you to enhance quality, boost yields and reduce labour costs. Haifa's potassium nitrate is 100% used by plants, with no residual remaining in soils. Our world renowned, fully water soluble fertilisers include:

- **Crystalline Multi-K** plain or enriched for Nutrigation
- **Haifa-Bonus npK** for foliar application
- **Multi-K Prills** for soil application

FOR FURTHER INFORMATION, CONTACT YOUR HAIFA TEAM

Trevor Dennis, Managing Director
E: trevor.dennis@haifa-group.com **M: 0400 119 852**

Jon Corona, Agronomist
E: jon.corona@haifa-group.com **M: 0408 568 605**

Peter Anderson, Qld Sales Agronomist
E: peter.anderson@haifa-group.com **M: 0459 488 850**

Jason Teng, Customer Service/Logistics
E: jason.teng@haifa-group.com **M: 0488 036 528**

50 Years of Growth

Haifa

Contents

This project has been funded by Horticulture Innovation Australia Limited with co-investment from the Almond Board of Australia and funds from the Australian Government.

Information

Accommodation

The Almond Board of Australia are not responsible for any accommodation bookings for the 2016 Australian Almond Conference. All bookings/ changes/cancellations must be made directly with the your accommodation provider in accordance with their accommodation terms and conditions.

Delegates wishing to make any changes to a reservation at any accommodation provider must notify the hotel directly. Please contact your hotel for more information.

Name Badges/Dinner Tickets

Delegate name badges must be worn at all times during the Conference and associated events.

Badges must be scanned at the Registration Desk prior to entry to the event, and at the entry to the Gala Dinner.

Conference name badges have been posted directly to delegates registering prior to October 21st. Late registration name badges can be collected from the registration desk during opening hours.

Disclaimer

The Almond Board of Australia, will not accept liability for damage of any nature sustained by participants or guests for loss or damage to property as a result of the conference or exhibition and related events.

Internet

The Conference venue has facilities for wireless or cable internet services. Delegates who require internet services will need to arrange this at their own expense with their service provider or with the venue.

Insurance

Participants carry their own risk for personal injury or loss of property (including baggage) during the conference. The organisers are in no way responsible for any claims concerning insurance.

Liability

Whilst every precaution will be taken, neither the Almond Board of Australia nor the Conference Venue will accept responsibility for any loss or damage which may occur to persons or property at the Conference (from any cause whatsoever).

Parking

The Pullman & Mercure Melbourne, Albert Park offers a range of secure and affordable parking options 24 hours 7 days a week. Valet Parking, and self parking is available.

Personal Details

In registering for this Conference, relevant details will be incorporated into a participant list (name and organisation only), details may be made available to parties directly related to the conference including venue and accommodation providers (for the purposes of room bookings only) and to inform you of future Almond Board of Australia activities.

Refunds & Cancellations

All cancellations must be notified in writing to the Almond Board of Australia (details below). Cancellations of paid delegates after June 30th and before September 30th, 2016 will incur a $100 cancellation fee. Cancellations after this date cannot be accepted, however transfer of registration to another delegate will be accepted. All refunds will be paid at the conclusion of the conference.

Registration

Please see the Conference registration desk at the venue if there are any questions in regard to your registration.

Almond Board of Australia Inc.
ABN 31 709 079 099
1801 Bookpurnong Road, PO Box 1507
Loxton South Australia 5333

P + 61 8 8584 7053
E admin@australianalmonds.com.au
W www.australianalmonds.com.au

australian almonds
ALMOND BOARD OF AUSTRALIA

Welcome

The ABA takes great pleasure in welcoming you to the 2016 Australian Almond Conference.

Registrations for the Conference have again been very strong and we continue to build on the success of past events. The emergence of Australian almonds as a major horticultural industry and the country's most valuable horticultural export product has drawn extraordinary interest in our industry, which is both encouraged and appreciated.

The industry is in a period of significant growth with strong global prices, increasing production, renewed orchard planting and demand growth both domestically and in overseas markets. The Conference program for 2016 covers all these areas that are of vital importance to our industry's ongoing development.

The Australian Almond Conference provides knowledge both from speakers and industry peers - sharing what works or doesn't in orchards, business and the market. The Conference aims to provide inspiration and information, and demonstrate the benefits of a collaborative approach in gaining continuous improvement required for our industry to remain strong.

This Conference will hear from researchers about their work to address risks to production and product quality. Our relationship with the Californian industry continues to develop, and we are appreciative of Gabriele Ludwig of the Almond Board of California making the trip to present at the Conference. In addition, our strongest ever lineup of international speakers will complement presentations by Australian experts in their fields of endeavour.

The Conference will again provide the opportunity for socialising and networking with the Welcome Reception and the Annual Almond Conference Gala Dinner, at which we will honour our tenth inductee into the Australian Almond Industry Hall of Fame.

Sponsorship is critical to the success of this event, and we gratefully acknowledge the support of our Conference sponsors once again this year. Our largest ever trade exhibition features over 30 exhibitors showcasing products and information and allowing you to browse and interact with exhibitors throughout the two days of Conference.

The ABA appreciates your attendance at this year's Conference, our 17th event as it is the interaction of all participants that is the hallmark of the forum's success.

On behalf of the Almond Board of Australia Directors and staff of the ABA, I hope you will enjoy the 2016 Australian Almond Conference and benefit from attending.

Neale Bennett (Chairman) and Ross Skinner (CEO)

NUTS?
WE UNDERSTAND.

Stoller Australia has been working with the almond industry for more than 15 years.

We're committed to investing in on-farm research and development – our programs are perfected in real-life systems and specifically designed for almond growers.

Visit our team at the Stoller Australia exhibit (Stand 32) and test their nut knowledge.

Stoller Australia, Platinum Sponsor of the Australian Almond Conference 2016 and nut enthusiasts.

CONTACT STOLLER ON FREECALL 1800 337 845 OR EMAIL INFO@STOLLER.COM.AU

RAYMOND CROWE
·THE UNUSUALIST·

Raymond Crowe is called The Unusualist for a good reason - there is no other entertainer like him.

Originally from Adelaide, Australia; Raymond has charmed audiences all over the world. His amazing signature hand shadow piece performed to the Louis Armstrong classic What a Wonderful World, was a global YouTube sensation that has now been seen by an estimated 20,000,000 people.

In high demand overseas; some of Raymond's amazing performances include the UK's Royal Variety Performance in front of the Queen, Caesars Palace in Las Vegas for NBC's The World's Greatest Magic and The Late Show with David Letterman.

In his own back yard , Raymond is a highly respected artiste who was a Grand Finalist on Australia's Got Talent with other notable appearances including Spicks and Specks, The Footy Show and The Melbourne Comedy Extravaganza.

In addition to regularly performing his own popular shows, Raymond is also highly sought-after entertainer for corporate events, functions and prestigious overseas shows such as The Illusionists 2.0 - The Planets Largest touring magic show.

FOR THOSE NOT IN THE KNOW, AN UNUSUALIST IS A MASTER OF INTRICATE HAND SHADOW PUPPETS, VENTRILOQUISM, PHYSICAL COMEDY, WORLD CLASS ILLUSION AND BRILLIANT AUDIENCE PARTICIPATION

Australian Almond Conference Gala Dinner Proudly Sponsored by

E.E. Muir & Sons
"INNOVATORS IN AGRIBUSINESS"

Conference Dinner

Program

Australian Almond Conference 2016

Tuesday, November 8th

6.30pm	Australian Almond Conference Welcome Reception: Grand Lobby, Pullman Hotel	**Sponsored by:** Seasol THE SEAWEED SOLUTION

Wednesday, November 9th

8.00am	AGM Sign In, Conference Registration & Trade Exhibition Open	
8.30am	Almond Board of Australia AGM	**Neale Bennett** - Chairman & **Ross Skinner** - Chief Executive Officer **Almond Board of Australia**
9.30am	Conference Registration, Morning Tea & Trade Exhibition	*Grand Lobby & Grand Rooms 1 - 4*
10.30am	A Word from our Signature Sponsor	**Trevor Dennis** - Chief Executive Officer, **HAIFA Australia**
10.40am	Official Conference Opening	
10.50am	Trade Market Access from a US Perspective	**VIDEO Presentation: Almond Board of California**
11.00am	California Almonds: Demand Persists	**Vernon Crowder -** Senior Vice President & Senior Analyst, Food & Agribusiness Research and Advisory, **Rabobank USA**
11.45am	Trade Marketing of Australian Almonds	**Joseph Ebbage** - Marketing Program Manager, **Almond Board of Australia**
12.05pm	Lunch & Trade Exhibition	*Grand Rooms 1 - 4*
1.05pm	Correlation of individual tree nut yield, evapotranspiration, tree stem water potential, total soil salinity and chloride in a high production almond orchard	**Blake Sanden** - Irrigation and Agronomy Farm Advisor, **University of California, Cooperative Extension**
1.35pm	VRDI: The New Generation in Drip Irrigation	**Dr Itamar Nadav -** Project Manager & Chief Agronomist, Research & Development department, **Netafim**
2.05pm	Fluid Assets: - The Water World	**Gavin McMahon -** Chief Executive Officer, **Central Irrigation Trust** & Chairman, **National Irrigators Council**
2.25pm	The Emergence of Water Trading Patterns: What it Means for Almond Growers	**Alister Walsh -** Chief Executive Officer, **Waterfind**
2.45pm	Afternoon Tea & Trade Exhibition	*Grand Rooms 1 - 4*
3.15pm	Sustainability – The California Almond Journey, so far	**Dr Gabriele Ludwig** - Director, Sustainability & Environmental Affairs, **Almond Board of California**
3.45pm	Optimising Weed Control in Almond Orchards	**Dr Peter Boutsalis** - Manager, **Plant Science Consulting**
4.05pm	Plant Growth Regulation and Pest Protection Strategies in California Almond Production	**Lance Beem** - President, **Beem Consulting/Beem AgroSciences Corp USA**
4.35pm	Day Close	

Session Sponsor HAIFA Australia

Session Sponsor Netafim Australia

Session Sponsor Stoller Australia

Australian Almond Conference Dinner

6.30pm	Pre-Dinner Canapes - **Mercure Lounge/Pullman Lobby**
7.00pm	Sponsor Presentation, 2016 Almond Industry Hall of Fame Induction & Entertainment by Raymond Crowe, Unusualist

E.E. Muir & Sons

Master of Ceremonies

Peter Hayes

Peter Hayes has extensive experience across education and training, R&D investment and management, viticultural operations, irrigation sector and government and industry affairs in a 40 year career in the wine industry. Working across the public and private sector, career appointments include Lecturer/Senior Lecturer/Vice Principal, Dookie Agricultural College; State Viticulturist, Victoria; Executive Director, Grape and Wine Research and Development Corporation; Acting CEO, Cooperative Research Centre for Viticulture; Director of Viticulture, Rosemount Estates; and National Viticulturist and Industry Affairs Manager, Southcorp Wines. Industry positions held include Council Member, Australian Wine Research Institute; President, Australian Society of Viticulture and Oenology; President of the International Organisation of Vine and Wine; Chair, CRC for Irrigation Futures, and Independent Chair of McLaren Vale Grape Wine & Tourism Association amongst others. He is currently Deputy Chancellor at Charles Sturt University and a board member of Irrigation Australia Ltd. Peter operates as an independent Wine Industry Strategist and Advisor with activity in Australia, India and the UK. He is also Business Editor of the International Journal of Wine Economics and Policy. Qualifications held are B.Sc. (University of Melbourne), Dip.Ed. (Monash University), B.App.Sci.-Wine Science (Riverina College/CSU); MS-Horticulture (UCD). Peter was also awared an AM in the Australia Day Honours list in 2016.

Thursday, November 10th

8.30am	Conference Registration & Trade Exhibition	*Grand Lobby & Grand Rooms 1 - 4*
9.00am	Australian - Mediterranean Diet Research	**Professor Catherine Itsiopolous** - Head of School of Allied Health, **La Trobe University**
9.20am	Relationships between nut consumption and vascular and cognitive function	**Assoc. Prof Alison Coates -** Lecturer & Researcher, School of Allied Health Sciences, **University of South Australia**
9.40am	Nuts for Life	**Lisa Yates -** Program Manager & Dietitian, **Nuts for Life**
10.00am	The Role of Almonds in Sports Recovery	**Simone Austin -** Accredited Sports Dietitian & Accredited Practising Dietitian
10.20am	Almond Strategic Investment Plan 2017-22: Some Early Insights	**Michael Clarke -** Principal, **AgEconPlus**
10.40am	Morning Tea & Trade Exhibition	*Grand Rooms 1 - 4*
11.10am	A Word from our Platinum Sponsor	**Richard Emery -** General Manager, **Stoller Australia**
11.20am	Plant Health Australia: Who we are & What we do	**Dr Susanna Driessen -** General Manager, Emergency Preparedness and Response, **Plant Health Australia**
11.40am	The Biology Behind Preparing Honey Bee Colonies for Almond Pollination	**Dr Gordon Wardell -** Director of Pollination Operations, **Wonderful Orchards USA**
12.10pm	On Property Best Practice: Timing & Management of Hives	**Ian Zadow -** Principal, **Zadow Apiaries** & Former Chairperson, **Australian Honey Bee Industry Council**
12.30pm	Lunch & Trade Exhibition	*Grand Rooms 1 - 4*
1.30pm	A Word from Our Sponsor	**Shane Trainer -** Development Manager - Horticulture, **Bayer CropScience**
1.40pm	Intelligent Information Systems for Horticulture & Tree Crops	**Dr James Underwood -** Senior Research Fellow, **Australian Centre for Field Robotics, University of Sydney**
2.00pm	Transforming Almond Orchards: Tree Architecture & Advanced Production Systems	**Dr Grant Thorp** - Senior Scientist, **Plant & Food Research Australia**
2.20pm	Getting useful information for almond producers from Precision Agriculture Sensing Technologies	**Dr Rob Bramley -** Senior Principal Research Scientist - Precision Agriculture & Site Leader, Waite Campus, **CSIRO Agriculture & Food**
2.40pm	Evolution of Management Practices of Select Harvests & GPS Planting	**Ben Brown -** Technical Manager**, Select Harvests**
3.00pm	Conference Close	

Session Sponsor
Stoller Australia

Session Sponsor
Plant & Food Research Australia

The Conference Program may be subject to change at any time prior to the event.

2016 Australian Almond Conference

- Hedging
- Mulching
- Shredding
- Spraying
- Ground Preparation
- Roadside Vegetation Maintenance

AGENTS FOR

QUALITY BUILT AIR-O-FAN SINCE 1945

GALLARD

www.gallardservices.com.au

Telephone: (08) 8582 1671 **Facsimile:** (08) 8582 1075

Speaker Biographies

Speakers

Simone Austin

Accredited Sports Dietitian & Accredited Practising Dietitian

Simone is an accredited sports dietitian with over 20 years experience. Simone has spoken at many corporate events and conferences on health including Sports Medicine's Australia, Sports Dietitians Australia, the Exercise Sports Science Australia conference, and the AFL Grand Final Medical Symposium.

Having seen the Hawthorn AFL Football Club through three consecutive Grand Final wins, her success as a Dietitian speaks for itself.

She has previously worked with many other elite men's sporting teams, the Australian Men's Cricket Team through their very successful period of the early 2000s, Melbourne City A League, Western Bulldogs AFL, Melbourne Storm Rugby League club & the Melbourne Rebels Rugby Union club. She consults privately to the general public and other elite & sub elite athletes.

She is the president of Sports Dietitians Australia and a media spokesperson for the Dietitians Association of Australia having presented on radio, television and written numerous newspaper, magazine and online articles.

Simone works at Swisse Wellness part time having assisted with development of the sports nutrition range and has an interest in the regulations around nutrition products. Providing practical nutrition advice that turns the science of nutrition into achievable and enjoyable dietary intakes is the goal to Simone's dietetic practice.

Lance Beem

President, **Beem Consulting/**
Beem AgroSciences Corp USA

Lance's company Beem Agro Sciences conducts contract research, consulting and demonstrations focused on development of new pesticides, fertilisers, natural products and generally regarded as safe compounds. His business is designed to integrate conventional/ and non-conventional plant regulation, nutrition and pest management practices. He has extensive expertise in herbicides, insecticides, fungicides, plant hormones, plant extracts, antioxidants, glycoside chemistry. He consults with large and small farmers, companies and individuals seeking registrations. Prior to beginning his own business, Lance was engaged by Stoller Enterprises for numerous years as a Market Development Manager in major and minor crops.

Neale Bennett

Chairman & Sunraysia Grower Representative,
Almond Board of Australia

Neale has been involved with almonds since converting his family farm from vines in 1992. Neale also operates a contract almond harvesting business, Cowanna Harvesting. His appointment as Deputy Chairman and Sunraysia Region Grower Representative on the ABA Board follows positions as Secretary, Treasurer and Chairman of the Sunraysia region of the Australian Almond Growers' Association (AAGA). Neale's committee positions include the Audit, Remuneration and Conference Committees He is also a member of the Almond Industry Advisory Committee (IAC).

Dr. Peter Boutsalis

Manager, **Plant Science Consulting**

Peter Boutsalis grew up in Renmark, SA. His parents owned a vineyard/orchard property between 1970-1984. Peter has been involved in Herbicide Resistance for over 25 years. He graduated from The University of Adelaide in 1996 with a PhD investigating the first cases of broadleaf weed resistance to Group B herbicides in Australia. He was employed as a herbicide-weed biologist in Europe by an international company for almost a decade. Since 2005 he has been employed as a researcher with the University of Adelaide investigating the management of herbicide resistant weeds and investigating new mode of action herbicides. He also manages Plant Science Consulting, an Adelaide based company specialising in commercial Herbicide Resistance Testing and customized pot trials for the chemical industry.

Dr. Rob Bramley

Senior Principal Research Scientist, **CSIRO**

Dr. Rob Bramley is a Senior Principal Research Scientist in CSIRO's Agriculture Flagship and is the Site Leader for CSIRO Waite Campus in Adelaide. He has worked as a soil chemist, on land-use sustainability issues, and since 1996, has had a primary research focus on Precision Agriculture and the management of variability in agricultural production systems. He has just completed a significant multi-agency Precision Agriculture project in the Australian sugar industry and, since 1999, has been a pioneer in the development of Precision Viticulture for winegrape production systems, now leading a newly funded project on within-vineyard yield-grape quality interactions. He is the author of over 290 research articles including 46 in refereed international journals and has spoken on Precision Agriculture at numerous international conferences around the world.

Ben Brown

Technical Manager, **Select Harvests**

Ben Brown joined Select Harvests as Technical Manager in November 2014. Ben's role at Select Harvests is to lead the development, monitoring and evaluation of the horticultural program, and assist in its implementation. In addition, Ben is also an integral member of the Project Team that's responsible for the development of greenfield orchards and expansion of the company's horticultural assets.

Before joining Select Harvests, Ben was the Industry Development Manager at the Almond Board of Australia for nearly eight years, and an irrigation and soil agronomist at Yandilla Park for a similar duration. In addition to this, Ben's had experience in the applied production of almonds, stonefruit, citrus and carrots.

Ben is an Applied Science graduate with Honours in Soil Science and has nearly 20 years' experience across perennial irrigated horticulture with expertise in: orchard development; production horticulture; the development of detailed RD&E strategies; and extension and technology transfer of best practice.

Michael Clarke

Principal, **AgEconPlus**

Michael Clarke is an agricultural economist (University of Sydney 1987) and strategic analyst (Diploma of Business Strategy 2002) with more than twenty-five years' experience preparing industry investment plans. Michael commenced his professional career with the NSW Government in 1987 working as an agricultural economist providing industry analysis and policy advice. He spent two years in London with Cargill Technical Services before joining agricultural consultants Hassall & Associates in 1990. Michael went on to lead Hassall's Australian Consulting Division before leaving to form his own consultancy, AgEconPlus, in 2004.

Michael has prepared industry investment plans for a range of agricultural industries including Rice, Livestock, Pork, Poultry, Floriculture, New Zealand kiwifruit, honey bees and pollination. His experience in Australian horticulture has included review of Horticulture Australia Limited's performance against its first statutory funding agreement, economic evaluation of citrus export arrangements to the US and completion of all cost benefit analyses associated with the HAL R&D program between 2008 and 2014. Michael has developed investment plans for apple and pear, avocado, banana, citrus, nursery, summerfruit, turf and vegetables. He is currently preparing Strategic Investment Plans for Chestnut, Macadamia and Almonds.

OmniBio

Feed Your Invisible Workers

- Improve biological diversity
- Stimulate root systems
- Feed beneficial microbes, including fungi
- Act as a natural chelating agent
- Improve nutrient availability
- Improve yield and quality
- Promote soil health

Mega-Kel-P™

Mega-Kel-P allows you to manipulate crop growth to your advantage by scientifically managing plant physiology, improving yields and quality with better nutrition and fruit set. Apply Mega-Kel-P as a foliar spray to new foliage for vital root growth

Khumate™

Increase fertilizer efficiency with K-Humate, the world's most concentrated humate product. 100% Australian made. Recognised as the international industry standard.

03 5133 9118
www.omnia.com.au

omnia NUTRIOLOGY*
*the science of growing

Assoc. Professor Alison Coates

Lecturer & Researcher, School of Allied Health Sciences,
University of South Australia

Associate Prof Coates is a lecturer and researcher in the School of Health Sciences at the University of South Australia. As a nutritional scientist, she is interested in how bioactive compounds from food can reduce risk factors for obesity, cardiometabolic diseases and impaired cognitive function. Alison has been involved in over 20 clinical trials using nutritional supplements and foods sponsored by industry partnerships and through government grants. She is currently working with the Almond Board of California investigating the potential for almonds to improve cognition. She is a registered nutritionist and has written over 80 peer-reviewed journal articles and book chapters. Her contribution to the area of cardiometabolic health and nutrition has been recognized by a South Australian Tall Poppy Award and invited presentations.

Vernon Crowder

Senior Vice President & Senior Analyst, Food &
Agribusiness Research & Advisory, **Rabobank USA**

Vernon Crowder is a Senior Vice President and Senior Analyst for Rabobank's Food & Agribusiness Research and Advisory (FAR) group. He manages the team, which analyzes and conducts market research on California agribusiness as well as the North American fresh fruit and produce sectors.

Before joining Rabobank in 2010, Crowder served as senior vice president and agricultural economist for Bank of America for 11 years, analyzing the agricultural industry, agribusinesses, commodity prices and food processors. Most recently, he served as senior client manager for Bank of America in Fresno for seven years.

A banker for 40 years, Crowder began his career at the former Security Pacific National Bank where he progressed to vice president and agribusiness specialist. Crowder earned a Bachelor of Arts degree and an MBA at the University of California, Riverside. He is a graduate of the California Agricultural Leadership Program and attended the Pacific Coast Banking School at the University of Washington.

Rabobank's FAR team provides information and analysis covering all of the major sectors throughout the food chain. The Americas-based FAR team is part of Rabobank's global FAR group, which is comprised of approximately 90 analysts around the world.

Trevor Dennis

Chief Executive Officer, **HAIFA Australia**

Trevor has been involved in the fertiliser industry for over 20 years, originally completing his Agricultural Degree with Melbourne Uni (Dookie) in the early 90s. He has moved on to be passionate about Agriculture in Australia. In the past 20 years Trevor has worked in every state of Australia in many capacities, from fertiliser, irrigation and GPS guidance to now heading up HAIFA Australia, the premium supplier of water soluble nutrients, in particular Potassium Nitrate to Australian farmers. It is with the support of the almond industry that HAIFA and its team have been the major sponsor of the Almond conference for the past four years.

Speakers

Dr. Susanna Driessen

General Manager, Emergency Preparedness & Response,
Plant Health Australia

Dr Susanna Driessen joined Plant Health Australia in May 2012 as General Manager, Emergency Response and Preparedness. This is a new position in PHA, taking on the EPPRD responsibilities previously held by Rod Turner, who retains the role of General Manager, Risk Management.

Susanna spent several years working in the floriculture, grains, cotton and plant biosecurity areas of state government departments of primary industries. She has a background in science and plant pathology, completing studies in biotechnology and an industry funded PhD in plant pathology from Murdoch University.

Susanna has a broad knowledge and experience in policy development, legislation and market access as it relates to plant health, working most recently in Plant Biosecurity, NSW Department of Primary Industries, as the Strategy Leader Plant Biosecurity Operations. In this role she was responsible for the operation of the NSW Interstate Certification Assurance scheme, as well as maintaining and developing new domestic market opportunities for NSW plants and plant products through representation on the national Subcommittee on Domestic Quarantine and Market Access.

Joseph Ebbage

Market Development Manager, **Almond Board of Australia**

Joseph Ebbage is engaged on a contract basis to manage the Almond Marketing Program. Based in Melbourne, Joseph has been working with the ABA since 2003. He is the principal of "Consumer Insights", a market research and consultancy agency specialising in the Fast Moving Consumer Industry and has developed innovative solutions for companies including Select Harvests, the Nuts for Life Program and Horticulture Australia Limited.

Professor Catherine Itsiopoulos

Head of School of Allied Health, **La Trobe University**

Catherine is a recognised leader in Dietetics and has international standing as a leader in Mediterranean diet research. She is an Accredited Practising Dietitian, the deputy chair of the Australian Dietetics Council, and is the founding head of the department of Dietetics and Human Nutrition at La Trobe University. Her current role is Head of School of Allied Health at La Trobe University. Catherine's specific research area of interest is Mediterranean diet studies focussing both on migration impact on diet and lifestyle and chronic disease risk and dietary clinical intervention trials using the traditional Cretan Mediterranean diet (and elements of) as intervention models in the prevention and management of metabolic syndrome, Non-Alcoholic Fatty Liver Disease, type 2 diabetes, cardiovascular disease, and more recently mental health. Catherine has authored over 50 peer-reviewed publications with 720 citations, has co-edited a Nutrition textbook, and has published 2 Mediterranean Diet Cookbooks (The Mediterranean Diet 2013, The Mediterranean Diet Cookbook 2015).

Dr. Gabriele Ludwig

Director, Sustainability & Environmental Affairs,
Almond Board of California

Gabriele Ludwig has been working for the Almond Board of California for some 11 years. The Almond Board of California is a federal marketing order that focuses on research and generic marketing of almonds and is funded by a grower assessment. At the Almond Board, Gabriele gets to combine her passion for agriculture and the environment with research and policy. As Director for Sustainability and Environmental Affairs, she was instrumental in the development of the California Almond Sustainability Program, and continues to encourage a diverse range of research on almonds and environmental issues.

She is currently a participant of the California Roundtable for Ag and the Environment, Board chair for the non-profit Coalition for Urban/Rural Environmental Stewardship, and serves on several government agencies' advisory committees. Prior to joining the Almond Board, she worked for the consulting firm Schramm, Williams & Associates in Washington, DC. She received her PhD. in plant physiology from the University of California, Davis and her B.A. in Biology from Wellesley College.

Gavin McMahon

Chief Executive Officer, **Central Irrigation Trust**
& Chairman, **National Irrigators Council**

Mr Gavin McMahon is heavily involved in water issues within the SA Riverland District and across the Murray–Darling Basin. He is the Chief Executive Officer of Central Irrigation Trust and a Director of Central Irrigation Pty Ltd, where he is responsible for the delivery of irrigation water to thousands of families, domestic customers and industries. He is also a Director of the National Irrigators Council and currently serves as the Chairperson. Gavin was recently a member of a Water Act Review Panel which reviewed the Water Act 2007. Mr McMahon previously spent 23 years with BSES Ltd, a research and development company servicing primary producers and processors in the sugar industry where he held several positions within the company commencing as an agricultural advisor and completing his time with BSES as the Manager of Customer Service.

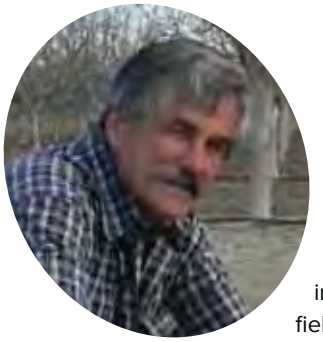
Gavin holds a BSc from Griffith University where he majored in Environmental Studies as well as a BBus from the University of Southern Queensland.

Speakers

Dr. Itamar Nadav

Project Manager & Chief Agronomist, Research & Development Department, **Netafim**

Itamar gained his Ph.D. studying at the Soil & Water Sciences Department, Faculty of Agriculture in Rehovot, Hebrew University of Jerusalem. He published several papers on soil water distribution under water repellent conditions. For the last nine years, he has been project manager and chief agronomist at the R&D department of NETAFIM. Itamar's main responsibilities include soil sensors implementation, testing and development and precision agriculture implementation. His work includes experimentations in advanced drip irrigation technology involving remote sensing and precision agriculture as well as advanced modelling for irrigation scheduling.



Blake Sanden

Irrigation and Agronomy Farm Advisor, **University of California Cooperative Extension**

Blake Sanden is the Irrigation and Agronomy Farm Advisor with the University of California Cooperative Extension, stationed in Kern County at the southern end of the San Joaquin Valley. He conducts county-based, applied research and extension programs focusing on irrigation system management, salinity/fertility management for all crops, and agronomic field crop production of alfalfa, dry beans and oil crops.

Blake has a BS in International Agricultural Development & Agronomy and MS in Irrigation and Drainage from UC Davis and 35 years of experience in production ag, international ag development and extension. Significant projects include: development of salt tolerance thresholds for pistachios in the San Joaquin Valley, soil moisture monitoring and irrigation efficiency assessment on 12,000 acres in Kern County, deficit irrigation in early citrus navels and almond water use/fertilizer management for optimal yield.

Ross Skinner

Chief Executive Officer, **Almond Board of Australia**

Ross was appointed to this position in 2011. He has previously been the Assistant General Manager of the Australian Dried Fruits Association, General Manager of the Dried Fruits Research and Development Council, and General Manager of the Australian Dried Fruits Board, a statutory body. Ross has 34 years' experience managing R&D programs for many Murray Valley horticultural industries and driving uptake of knowledge and technologies by producers. He is a member of HIA's Almond Strategic Investment Committee and HIA's Nut Industry Trade Advisory Panel.

Dr. Grant Thorp

Senior Scientist, **Plant & Food Research Australia**

Dr Grant Thorp is a Senior Scientist with Plant & Food Research Australia, based in Melbourne. He completed his PhD studies at The University of Adelaide researching avocado tree architecture. He has worked with the apple, avocado, kiwifruit and persimmon industries in New Zealand and overseas examining the role of plant architecture, canopy management and rootstocks in determining tree productivity and fruit quality.

Grant currently leads programmes in Australia researching the development of “small tree” high density growing systems for almonds and macadamia.

Dr. James Underwood

Senior Research Fellow, **Australian Centre for Field Robotics (ACFR), University of Sydney**

Dr. James Patrick Underwood is a senior research fellow at the Australian Centre for Field Robotics (ACFR) at The University of Sydney. James is an expert in the area of perception systems for field robotics – the study of how outdoor robots working in complex, unstructured environments can make sense of their world using science and technology in multi-modal sensing, data fusion and mapping. James has applied his research to a number of industry applications including mining, defence and agriculture, with a focus on research and development of robotics and sensing technology for the horticulture industry

Alister Walsh

Chief Executive Officer, **Waterfind**

Alister’s knowledge and experience in irrigation communities, along with his strong business skills enable him to strategically drive the Waterfind business, whilst maintaining a hands on role in the business’ day-to-day operations.

Growing up near Wentworth NSW on his family’s cropping and grazing property, experience with water trading and irrigation started early. Alister has an extensive career in agriculture, business development and account management. He holds a Bachelor of Economics in International Agribusiness.

Dr. Gordon Wardell

Director of Pollination Operations,
Wonderful Orchards USA

Gordon earned his Ph.D. in Entomology with emphasis in Apiculture at Michigan State University in 1982. Following his degree he worked for 12 years in International Apicultural Development in regions from Nepal to Fiji, with most of his time spent in Indonesia, Malaysia and Thailand helping improve beekeeping potential.

In 1988 he joined the faculty of the University of Maryland as the extension apiculturist. After moving to Arizona in 1996 he established and managed a research and development company dedicated to implementing innovative solutions to entomological and apicultural problems including the development of the honey bee nutritional supplement, MegaBee®.

In 2009 Gordon accepted a position as Director of Bee Biology with Paramount Farming Company California's largest almond grower. His duties include overseeing honey bee health and nutrition, coordinating pollination efforts for the company's almond orchards and investigating the solitary bee, Osmia lignaria, as possible pollinator of almonds.

In addition, Dr. Wardell is currently the chairman of Project Apis m, a non-profit organization dedicated to improving honey bee health and funding innovative research. He is a science advisor to the Almond Board of California and a lecturer at California Polytechnic University.

Lisa Yates

Program Manager & Dietitan, **Nuts for Life**

Lisa is an Advanced Accredited Practising Dietitian with 20 years experience in nutrition communications, strategy development and implementation and event management, over 15 years experience in marketing and public relations and still has her finger on the pulse by working part-time in clinical practice.

Since 2005 Lisa has been the Program Manager and Dietitian to Nuts for Life – a health promotion program from the Australian Tree Nut Industry with Almond Board of Australia as one of its founding financial contributors.

Lisa is a columnist for Medical Observer and 6minutes GP publications and holds a Bachelor of Science with a double major in Biochemistry and Pharmacology as well as a Masters Degree in Nutrition and Dietetics both from the University of Sydney.

Ian Zadow

Principal, **Zadow Apiaries** & Former Chairperson, **Australian Honey Bee Industry Council**

Ian Zadow is a commercial beekeeper based at Tintinara in the Upper South East of South Australia and has been involved with almond pollination for 20 years in the SA Riverland region.

Ian is heavily involved in industry leadership within the Apiary Industry. He has been an executive member of the South Australian Apiarists' Association for 14 years including 3 years as president. He has been an executive member of the Australian Honey Bee Industry Council for 8 years and has just stepped out of 3 years as Chairman.

SPRAY GRO
LIQUID FERTILIZERS

Macro & Micronutrient Nutrient Specialists

- STARTER NPK FORMULATIONS
- FIRMRITE™ CALCIUM'S
- SMARTRACE™ Chelated Trace Elements
- GRIPPER™ edta Chelated Trace Elements
- SMART RELEASE NITROGEN™ NPK'S
- SPRAYPHOS™ 400, 620
- CUSTOM BULK FORMULATIONS
- GROWTH PROMOTANT/BIOSTIMULANTS

www.spraygro.com.au
Phone: 08 8447 7266

For technical advice please contact
Joe Wright - Riverland, North West & Central Victoria 0418 890 907
Eamonn Rath - South East South Australia & South West Victoria 0417 884 717
Sam McEachern - Tasmania, East Victoria & Riverina 0488 585 339

AMAZING SPRAY COVERAGE
BETTER YIELDS & QUALITY

NELSON

The NELSON HARDIE® **SUPER 80** engine drive sprayer, with twin 40 inch diameter fans, provide exceptional coverage for a wide variety of trees such as almonds, walnuts, pecans and crops with heavy foliage such as macadamias & citrus.

- Dual 40 inch Diameter HD Fans
- 173 & 225 HP JD Diesel Engine
- Stainless Steel Hood, Doors and Panels
- 2000 - 4000 Liter Stainless Steel Tank
- HD Galvanized Frame

NelsonHardie.com

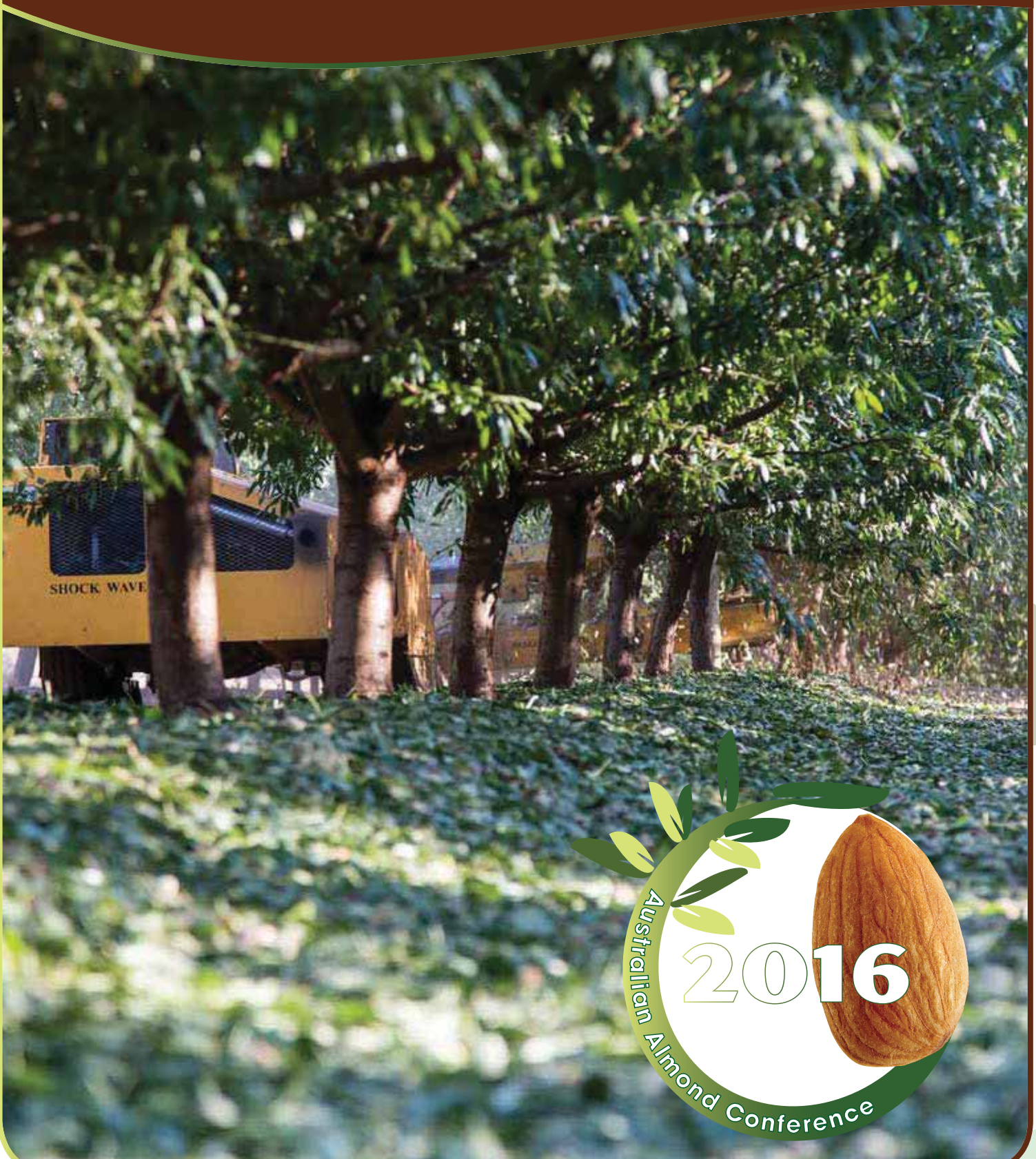
SOLD AND SERVICED BY:

SUNRISE AG
Mildura & Swan Hill, VIC
TEL: 03-5023-0284

PASTRO CUSTOM AG
Griffith, NSW
TEL: 02-6964-3888

Nelson Mfg. Co. Inc. • Yuba City, CA • 530-673-0919 • info@NelsonHardie.com

Presentation Abstracts



Simone Austin

The Role of Almonds in Sports Recovery

Simone Austin BSc, MND, APD, Accredited Sports Dietitian Hawthorn Football Club, President Sports Dietitians Australia Melbourne, Victoria, Australia

There is a lot of focus on nutrition for recovery post exercise. Which nutritional supplement to use, how much protein, how much carbohydrate and when. The answer to this has modified over time. The big focus was on carbohydrate, even if that meant plenty of sugar. Everything had to be low fat. This has now moved to include protein, which has possibly overtaken carbohydrate in some people's view, particularly in sports nutrition product marketing. Protein from a variety of sources is incorporated and now accepted if found in foods that also contain 'Good fats', such as in nuts. The rise of the vegan and vegetarian market have made almonds even more appealing for their provision of protein as a recovery food.

Protein is on trend and it's importance in recovery is the topic of many researcher's studies. The general consensus is that 20-30grams of protein post exercise is beneficial to muscle growth and maintenance, much more can probably not be utilised. However recovery nutrition is not just for the elite. We all need to maintain muscle mass, particularly as we age. Research is showing the quantity of protein needed changes with age and it seems as we age we do not utilise our protein as effectively, we may need more for the same effect. So are our current Recommended Dietary Intakes (RDI) for protein still valid? Should the RDI for protein be increased for the older person from 0.8g/kg body weight to 1.2g/kg body weight? More emphasis on protein distribution throughout the day to maintain muscle mass for general health and wellbeing at any age is needed. Almonds can play a part in this.

Almonds are a valuable source of protein, good fats and nutrients that are welcomed into the diet as part of general nutritional intake and recovery programmes.

Lance Beem

Plant Growth Regulation and Pest Protection Strategies in California Almond Production

Lance Beem M.S. IPM, Beem AgroSciences Corporation, Granite Bay, California USA 2016

Plant Growth Regulation and Pest Protection Strategies in California Almond Production: Commercial use of "Plant Growth Regulators" have been used extensively in Table Grapes & Stone Fruit crops, such as cherries and peaches, since the 1970s. Generally, these compounds were gibberellins or ethylene regulators. Though almonds, an important "Stone Fruit" crop in both California and Australia, has often been bypassed as a target market for Plant Growth Regulator registrations by major chemical companies. Many of the older compounds were only used to increase size or color of fruit. As new almond production issues arise such as poor bee pollination, increased marginal land plantings with salts and water stress issues, root to shoot changes with new drip irrigation systems and new self-pollinating varieties, there has been a number of new opportunities in the area of Plant Growth Regulation strategies to counter some of the aforementioned problems facing the Almond Industry. Plant Growth Regulation agents such as traditional synthetic auxins, cytokinins, gibberellins, abscisic acids and ethylene regulating compounds or mimics of plant hormones have played a minor role in commercial use on almonds. However, with the current advent of several new technologies, our understanding of plant growth regulation has yielded some highly effective alternatives to the traditional five plant growth regulating compounds. New analogs of Brassinosteroids, Salicylic Acids and Oligosaccharides are currently being investigated in almond orchards, as well as a whole class of oxidants, antioxidants, anti-ethylenes, anti-gibberellins, lactones, carboxylic acids and Strobilurins. These have all been shown to have various levels of impact on plant hormones and plant growth regulation on almonds. Plant hormones are typically regulated by oxidation and conjugation as a check and balance of plant growth. Several of the later chemistry groups being investigated in almond orchards are involved with transport or non-transport of plant hormones, breakdown or preservation of plant hormones, delay of senesce of flowers, improvement of pollination to fertilization, enhancement of root development and bud to shoot ratios with classic dose curve effects. Proper application timings and rates of plant hormone regulators can maximize an almond tree's ability to offset abiotic stresses, as well as, biotic stresses such as plant parasitic nematode, fungi and insect pests. Applications of these newer plant growth regulating compounds to the roots via low volume irrigation has turned out to be often better than applied to the foliage and shoots. Plant Growth Regulation strategies are now being employed by major agricultual chemical companies to reduce the potential of resistance in fungicides, such as Strobilurin fungicides. The presentation will describe some of the current research in areas of Plant Growth Regulation and Pest Protection Strategies in almonds in California, today.

Dr. Peter Boutsalis

Optimising weed control in almond orchards

Dr Peter Boutsalis, , Plant Science Consulting Pty. Ltd, Prospect SA 5082
and The University of Adelaide, Waite Institute SA, Glen Osmond SA 5064
www.plantscienceconsulting.com.au 0400 664 460

Weed control in almond orchards is a challenging proposition and herbicide resistance can complicate weed control. 'Herbicide resistance' is defined as the ability of a weed population to survive a herbicide that previously was effective. Repeated use of any herbicide will select for herbicide resistance. Increases in herbicide resistance in horticulture is likely to impact the cost of production. In almond orchards, herbicide resistance could be a major issue in the next few years if not monitored. Testing can determine if herbicide resistance has occurred (see www.plantscienceconsulting.com.au).

Herbicides that are commonly used in almond orchards include glyphosate and paraquat. Hundreds of cases of glyphosate resistance have been reported in multiple species Australia wide in agriculture. Most glyphosate resistance has been detected in annual ryegrass, fleabane, windmill grass, feathertop rhodes grass, all of which are important weeds of almond orchards. Resistant weeds have also been detected along roadsides, non-cropped areas such as fencelines, around agricultural buildings, within cropping paddocks, orchards and vineyards. Paraquat resistance is not as common but has been detected in annual ryegrass and fleabane from orchards, vineyards and seed crops.

The repeated use of any herbicide can potentially select for resistance. Herbicides are strong selection agents, that is, they kill susceptible plants leaving resistant ones to set seed. Resistant plants occur naturally in weed populations. At the molecular level, natural mutations occur that can confer resistance to any herbicide. Whilst the frequency of these is rare, using the same mode of action herbicide continuously can rapidly enrich for these resistance genes.

The best strategy to minimise the risk of herbicide resistance is to rotate herbicides and also introduce other forms of weed control, eg mechanical. Its very important to act now, even if your current herbicide(s) are working and reduce the onset of resistance. Consider introducing residual herbicides that prevent weed seeds from germinating. This has the effect of reducing weed numbers so that the chance of selecting for resistance genes with post-emergent herbicides is greatly reduced. Pre-emergence herbicides such as simazine, norflurazon, oryzalin, pendimethalin, napropamide are from different chemical classes and are registered in almonds. Post emergent Group A herbicides such as haloxyfop, fluazifop are very effective in controlling grass species. Group G herbicides such as oxyfluorfen, carfentrazone, and saflufenacil will control broadleaf weeds. Saflufenacil is the latest Group G herbicide that is very effective on many of the key broadleaf weed species occurring in almonds such as fleabane, sowthistle etc. In addition to incorporating a diverse range of herbicides, it's imperative to use herbicides correctly.

Coverage is very important because reducing the dose can increase the rate of resistance development. Nozzle choice and correct sprayer setup is therefore necessary. Water volume and quality can greatly affect the performance of herbicides. At high water volumes, the concentration of adjuvants present in some herbicides are diluted thereby reducing herbicide uptake. Reducing the water volume or including additional adjuvant can avoid this issue. Using the correct adjuvant is critical. Some herbicides require wetting agents while others require oil-based adjuvants. Adding the incorrect adjuvant can lead to reduced weed control.

Dr. Rob Bramley

Getting useful information for almond producers from Precision Agriculture sensing technologies

CSIRO Agriculture Flagship, Waite Campus, PMB 2, Glen Osmond, SA 5064
email: rob.bramley@csiro.au

Precision Agriculture (PA) is an approach to agricultural production in which technologies such as remote sensing, yield mapping and electromagnetic soil survey are used to observe the farm or field at high spatial resolution, and so assist understanding of variability in the production system, thereby enabling the development of targeted management strategies. These might be focussed on ensuring that the right amount of an input (e.g. fertilizer) is applied in the right place at the right time or, in the case of systems like winegrape production, to promote selective harvesting and product streaming based on aspects of fruit quality. A presentation to the 2014 Australian Almond Conference outlined the potential opportunities that PA might afford Almond growers. This presentation seeks to build on that last one, by explaining what information growers might acquire about their almond orchards using PA technologies already available, so as to better understand orchard variability and how this might be responded to through targeted management. The particular focus will be on high resolution soil survey and both remote and proximal canopy sensing (including via drones), although opportunities associated with yield and quality mapping, if such technologies were available to almond growers, will also be highlighted. Suggestions about useful underpinning research to support adoption of PA in the almond industry will also be made.

Michael Clarke

Almond Strategic Investment Plan 2017-22
Some Early Insights

Michael Clarke, AgEconPlus, email: clarke@AgEconPlus.com.au

Strategic Investment Plans are Hort Innovation's blueprint for investing Research and Development (R&D) levies and Australian Government matching payments over a five year period. The Almond Industry Strategic Investment Plan 2017-22 will guide investment of more than $15 million. It is imperative that a well thought through Strategic Investment Plan is prepared. The Strategic Investment Plan should be owned by levy paying growers and should reflect their requirements. It should also provide industry and government investors with clear strategy, a limited set of priorities and measurable Key Performance Indicators to ensure an appropriate return on investment and accountability for funds received.

This presentation will provide early insights into strategic direction for almond industry R&D spending. Early insights will focus on research, development and extension needs pertaining to industry efficiency and sustainability, innovative technologies to improve productivity, industry development, extension and capacity building, driving long term domestic and export growth, product integrity and leading the industry to achieve operational excellence.

Early insights will address research needs associated with pest and disease management, biosecurity, pollination, planting material, water, soil health, production systems, harvesting, post-harvest storage, processing and sustainability. Innovative technology research will include precision agriculture systems for the almond industry, application of 'big data' to research trials and business decision making, the almond breeding program and robotics to reduce on-farm labour demand. Industry development will include extension, support for new growers, collection and analysis of industry data, communications, capacity building and the Australian almond industry's engagement with industries in other countries. The Strategic Investment Plan does not address promotion and market development which is managed through voluntary contributions. However, it does provide for domestic and international market research, better understanding of the health benefits of almond consumption and improvement in access to export markets. Particular attention is given to product integrity and R&D investments are suggested for maintaining high levels of food safety, the fumigation of stored product and the management of harvest and processing damage.

The presentation will address the approach used to compile the Strategic Investment Plan, the results of analysis and industry consultation along with next steps for priority setting. Next steps include the need for an analytical business case, monitoring and evaluation. Hard copies of a Strategic Investment Plan Discussion Paper will be available on the day along with invitation to provide written comment on early insights.

Abstracts

Assoc. Professor Alison Coates

Relationships between nut consumption and vascular and cognitive function

Alliance for Research in Exercise, Nutrition and Activity, University of South Australia; Adelaide, Australia
Contact email: alison.coates@unisa.edu.au

Nuts are nutrient-dense foods which are high in unsaturated fat, fibre, selected vitamins and minerals, and phytochemicals including phytosterols and polyphenols. This nutrient profile contributes to the observed reduction in risk of developing cardiovascular disease (CVD) among those who frequently consume nuts. Epidemiological studies have associated higher nut consumption with a reduced incidence of coronary heart disease and controlled laboratory feeding trials have demonstrated that consumption of most nut types results in cholesterol reduction. There is increasing evidence that nuts contain nutrients that can benefit multiple cardiometabolic functions, including arterial elasticity, blood pressure, inflammation, glucose regulation and vascular function. Many types of tree nuts as well as peanuts, contain a good source of nutrients known to modulate vascular function, including L-arginine, flavonoids, folic acid, and vitamin E. We have recently demonstrated an improvement in vascular function in middle-aged and older adults following 12 weeks of eating peanuts compared with a nut free diet. These findings support other studies that have demonstrated improvements in endothelial vasodilation (a marker of vascular function) with a variety of tree nuts. We hypothesise that impaired vasodilatation may also contribute to impaired cognitive performance due to poor cerebral perfusion. There is also some evidence that the interaction of all of the nutrients and other bioactive components in nuts can have a beneficial effect on the brain and cognition with a limited number of studies demonstrating improvements in cognitive performance following nut consumption. We have demonstrated that regular peanut consumption can improve a range of measures of cognitive function including short term memory, executive function and speed of processing. Furthermore, we found associations between improvements in vascular health and cognitive function associated with peanut consumption. Taken together these findings suggest that regular nut consumption as part of a healthy diet may contribute to limiting the vascular burden associated with age-related brain dysfunction. We are currently exploring this mechanism further in ongoing studies with almonds.

Vernon Crowder

California Almonds: Demand Persists

Rabobank, N.A. Address: 45 East River Park Place West, Suite 507, Fresno, CA 93720

California almond growers are expected to harvest a 907,000mt crop this fall—which is about twice as much as was produced ten years ago. While market prices are volatile, net returns to growers continue to rise, which has led to an additional 142,000 hectares planted during the last decade. California's Mediterranean climate, good soils, and water supplies make California very competitive in producing and marketing of almonds. Almond prices have fallen significantly since mid-2015, they remain profitable for most producers, which will stimulate more plantings, although at a slower pace. More plentiful harvests and now lower prices will encourage more consumption of almonds.

Recent short falls in production and the strengthening USD resulted in record high market prices during 2014 and 2015—stimulating development in California and other regions. Wholesale prices for the average almond variety, *Californias*, were USD 9.70/kg last August and have since rapidly declined to USD 4.41/kg in response to a larger than anticipated crop and reduced purchases.

California orchards account for nearly 80% of global production. Australia accounts for 7% of global almond production and may only increase to 10% because of water and land limitations. European production is small and obsolete farming practices hinder their ability to increase production.

Given the average commercial life of an almond tree is 25 years, it usually takes between three and four years for the rate of orchard removals and new plantings to adjust before prices recover. Most industry observers expect prices to growers for the 2016/17 crop to average from USD 4.41/kg to USD 4.96/kg for all varieties combined.

In addition to the 907,000mt crop, the 2016/17 carry-in is approximately 187,000mt, compared to the ten year average carry-in of 129,000mt—making this the largest marketable crop in history. While marketings have increased from recent low levels, it is likely prices will take two to three years to increase above the historic ten year average price of USD 5.14/kg.

While total almond production in California has doubled during the last ten years, planted hectares has only increased by 47%. About 20% of the hectares planted today are non-bearing, the highest proportion since 1998. At the same time, it is estimated that more than 73,000 hectares are 20 years or older. Growers with older orchards will consider retiring their trees, as current prices are no longer profitable for lower yielding trees.

Planted hectares in the Northern San Joaquin and Sacramento Valley have been expanding faster than that in the South Valley as land and water have been more available. Some of the almond orchards in the Southern San Joaquin Valley may not be replanted into almonds as higher quality surface water deliveries are unreliable, which would reduce yields for those who rely on saltier groundwater. Average yield gains of the total California almond hectares will slow, as plantings increase further north, where the crop will be vulnerable to frost and other inclement weather conditions.

Powering your orchard irrigation projects better

Shannon Power delivers *pole to pump* electricity infrastructure for Almond orchards and Olive groves. SPM advise, design and construct MV / LV grid connections, electricity reticulation systems, pumping substations, motor controls and communications.

Working with you - from idea to operations:

- **Option evaluation** – *MV? LV? HV? Embedded networks? Solar? Are you unsure about where and how to connect your project to the grid?* SPM delivers option studies to help you assess the best approach to power your project on time and reduce ongoing network charges. We advise on private MV networks, solar generation and load control, and liaise with Electricity Network operators on your behalf.
- **Pump to grid - *design and installation*** - in-house design of MV/LV works, VSD selection, electricity network operator permitting, equipment procurement, installation, and commissioning.
- **Ongoing Support** –scheduled and unscheduled electrical maintenance**.**

Our recent irrigation clients include:

- **CMV farms** 22,000 grid volt connection, 0.8 km of underground MV power reticulation and pumping substation.
- **Boundary Bend Olives** 22,000 volt connection and pumping substations for 3 pumping sites.
- **BrownPort Almonds:** 22,000 volt connection for 2 pumping sites and 8 km of underground power reticulation. Connection substations, motor controls and VSDs.
- **Select Harvests** Biomass generator controls and 22,000 volt connection.

Contact us to discuss powering your next irrigation project:

Richard Johnston m: +61 (0) 422 150 010 e. rjohnston@spml.com or Mike Austin m: +61 (0) 439 844 419 e: maustin@spml.com

Shannon Power Management Pty Ltd | t. +61 (0) 3 9819 9660 | e. accounts@spml.com | w. www.spml.com | Melbourne – Sydney - Ireland

Dr. Susanna Driessen

Plant Health Australia: Who we are and what we do

Plant Health Australia, Level 1, 1 Phipps Close, Deakin ACT 2600
www.planthealthaustralia.com.au

Plant biosecurity is defined in many ways across Australia and throughout the world, though in essence is considered the management of risks to the economy, environment and community, of pests and diseases entering, emerging, establishing or spreading.

Established in 2000 as a not-for profit member based company, Plant Health Australia (PHA) is the lead national coordinator of the government-industry partnership for plant biosecurity in Australia. PHA facilitates this partnership and drives action to improve policy, practice and performance of Australia's plant biosecurity system and to build capacity to respond to plant pest emergencies. In 2016, PHA members consist of 35 plant industry bodies representing Australia's growers and beekeepers, the Australian Government, and all state and territory governments.

PHA works with and for its members along the biosecurity continuum right to the farm gate, brokering agreements between members and key stakeholders and leading the development of tools, information and networks that contribute to minimizing the threat and potential impact of pests of concern to Australian agriculture and forestry. The almond industry, represented by its peak industry body the Almond Board of Australia, has been a member of PHA since 24 August 2006.

Several key areas from PHA's portfolio of activities regarding risk management and preparedness include:

- Development of Biosecurity Plans. A framework to support coordination of biosecurity activities and investment for Australian industry, enabling both government and industry to better prepare and respond to pest incursions. In January 2016 version 3 of the *Biosecurity Plan for the Tree Nut Industry* was endorsed, highlighting 10 high priority pests for the almond industry.
- Development of orchard/on-farm biosecurity manuals. A resource for growers to improve on-farm biosecurity.
- Strategic support and coordination of surveillance activities. PHA collaborates with the almond industry (and several others) in surveillance activities such as the *National Bee Pest Surveillance Program,* supporting early detection of high priority threats for honey bees and pollination reliant industries.
- Strategic support of diagnostic capability and capacity in Australia. PHA works in collaboration with government in the development of agreed National Diagnostic Protocols (NDP) and the National Plant Biosecurity Diagnostic Network. These support the rapid identification of significant pests, such as *Xylella fastidiosa* (cause of almond leaf scorch), in the event of incursions.
- Improved member response capability. PHA delivers online and face-to-face training, and simulation exercises, such as Workshop Acari that investigated the impact of a Varroa mite incursion on almond pollination

PHA is also the custodian of the Emergency Plant Pest Response Deed, a legally binding agreement between 33 industries and all Australian governments which outlines decision and investment roles and responsibilities in regard to post-border detections of emergency plant pests. The almond industry has been a signatory to this agreement since November 2006, one year after it came into effect. A decade later the almond industry has had cause to enact this agreement in partnership with 13 other industries and all government parties to eradicate an incursion of *Varroa jacobsoni* in Townsville, Queensland.

Dr. Gabriele Ludwig

Sustainability – The California Almond Journey, so far

Gabriele Ludwig, Ph.D., Director Sustainability & Environmental Affairs, Almond Board of California

As more questions are raised about how our food is grown, almond buyers, users, and consumers are in turn asking growers for some assurances on being "sustainable". What sustainable means is often in the eye of the beholder. Is it being a 4 or 5th generation almond grower? Is it only adhering to certain practices only? Is it organic?

The Almond Board of California started exploring sustainability more than 11 years ago – initially by defining it for California almond growers. The next step was developing a program that worked for us – the California Almond Sustainability Program – a voluntary grower and handler self-assessment program. The first grower self-assessments occurred in 2009 and since then the program asks about practices used in 8 areas (modules). In 2014 the first report was issued based on 5 seasons of grower self-assessments.

Many of the growing practices included in the program are based on the 40+ years of California almond grower funded research. That research has more recently extended to a life cycle assessment focused on energy and greenhouse gases, as well as a "water footprint". The data gathered on grower practices has been invaluable for dealing with the negative press for almonds during the California drought. We have also used it to assess outreach and research needs. Currently we are in the process of updating and streamlining the program, and exploring in what ways any analyses should be expanded with additional metrics.

Gavin McMahon

Fluid Assets - The Water World

Gavin McMahon, CEO Central Irrigation Trusts & Chairman, National Irrigators Council

"The pistachio trees at the village in southern Iran are long dead, bleached white by the sun—the underground water reserves sucked dry by decades of over-farming and waste." (The National, September 4 2016).

Water is the key ingredient to any agricultural enterprise, particularly those involved in perennial agriculture or horticulture and the value of water is being recognised globally as highlighted in the above quote. Those of us who use the water resource of the Murray Darling Basin find ourselves in the midst of significant change in the availability and value of this most important resource.

This presentation will outline the water reforms currently being undertaken in the Murray Darling Basin and the progress that has occurred to date. Whilst 72% of the 2750 GL of water recovery has been achieved to date, the remaining recovery is becoming more difficult to obtain and industry believes it will have significant impacts on local communities. There are still many issues to be resolved and industry is in discussion with governments to resolve them in a pragmatic way.

The Northern Basin Review is still in progress and the science for water recovery is being debated. Final water recovery targets are still being determined and industry is anticipating lower water recovery targets, which will deliver a more socioeconomic balanced outcome.

In the Southern Basin industry is also seeking to have solutions other than just flow recognised as environmental outcomes that can be achieved with reduced water recovery. Through the Sustainable Diversion Adjustment Mechanism the Industry is seeking to have non flow measures accepted as providing valid environmental benefits that can offset water recovery from the consumptive pool. Measures such as the carp herpes virus (*koi herpesvirus*) can provide significant improvements to our waterways and native fish populations by reducing European carp numbers. Such an environmental benefit could provide a 200 GL offset to the volume of water required to be recovered from the consumptive pool.

Even after the recovery of water for the Murray Darling Basin Plan is complete in 2019, a further 450 GL is legislated for recovery under the Efficiency Measurers Program. This program is legislated to be social and economic neutral. However, it will remove further water from the consumptive pool. Industry is attempting to ensure that this spending is directed more towards removing constraints in the river systems that limit environmental benefits, rather than recovering further consumptive water. Such an outcome will again minimise the impacts of water recovery on our communities.

The impact of decades of water being clawed back for the consumptive pool for environmental purposes is now being felt on the communities across the basin. These are difficult to measure but many communities and industries are reporting adverse economic and social impacts of water reform. Whilst the almond industry has been somewhat shielded from the impacts of water reform by higher prices, if the returns for other commodities improve the almond industry may also be impacted into the future by competition for a scarce resource.

Dr. Grant Thorp

Transforming almond orchards – tree architecture and advanced production systems

Dr Grant Thorp, Plant & Food Research Australia Pty Ltd, 7 Bevan St. Albert Park VIC 3206 Melbourne.

Abstracts

The Almond Board of Australia is supporting a programme of collaborative research to increase production and profits from existing and future almond orchards, funded through Horticulture Innovation Australia by the almond industry levy and the Australian Government. Our role in this research is to focus on tree architecture and the development of advanced production systems. In taking on this challenge our approach has been that new systems must:

- Involve no or minimal additional cost to the grower
- Reduce the time taken to produce the first commercial crop
- Reduce the time taken to reach breakeven point on the orchard investment
- Increase productive yield per hectare and thus increase grower profit.

Tree management

The first step has been to better understand the physiological constraints limiting production from current growing systems. Techniques we have evaluated include the use of pruning, reflective ground covers, trunk girdling and plant growth regulators. Important results have been that:

- "Selective limb removal" pruning, to remove branches from the shoulders of cropping trees, created open spreading tree canopies suitable for traditional orchards
- "Palmette" style pruning of young trees produced trees with a narrower canopy suitable for blocks with closer row spacing
- Reflective ground covers increased tree light interception and could have application in "shake and catch" harvesting systems
- Trunk girdles applied to 'Nonpareil' trees increased return bloom, but the girdles did not heal and produced smaller trees which had significant kernel abortion and subsequently lower yield
- Trunk girdles applied to polleniser cultivars, 'Carmel' and 'Price', did heal within 4 weeks, so girdling offers a real opportunity to increase yield and reduce tree size with these cultivars.

Tree architecture

Our approach with tree architecture has been to describe the "unmodified" architecture of one-year-old budded almond trees of a range of cultivars, and to use this information to design new advanced production systems specific to each cultivar. Our research has described how 'Carmel', 'Monterey' and 'Wood Colony' produce concentrated zones of branching along their trunks with relatively few, large/vigorous shoots, whereas 'Nonpareil', 'Aldrich' and 'Shasta' have more diffuse branching zones with numerous and relatively small/non-vigorous shoots. While 'Carmel', 'Monterey' and 'Wood Colony' may be suited to traditional growing systems using large "multiple-axis" trees, they may not be suitable for advanced production systems which have smaller "single-axis" trees in ultra-high-density plantings.

Advanced growing systems

Out of this work we have proposed the following systems for evaluation:

1. New growing systems for traditional orchards that increase the size and yields of 'Nonpareil' trees but that reduce the size of polleniser trees without reducing yield
2. New growing systems for new cultivars grown with minimal pruning to produce a central-leader tree suitable for closer within-row spacing
3. Ultra-high -density orchards optimised for new cultivars and rootstocks, utilising minimal pruning to produce central-leader trees for blocks which have closer within- and between-row spacing.

Dr. Itamar Nadav

VRDI: The New Generation in Drip Irrigation

R&D Department, NETAFIM

Variable irrigation rate techniques are being trialled to increase system efficiencies which may be translated to increased average yields and quality. This technique on a small scale has demonstrated when combined with developing technologies, NDVI, algorithmic interpretation and scheduling, increased efficiencies of fertilizers herbicides and pesticide. Variable rate application addresses the spatial variability in a given plot and aims to increase the efficiency of inputs applied. Netafim has developed a Variable Rate Drip Irrigation system (VRDI) that aims to eliminate or reduce the spatial variability usually driven by different soil depth and texture in orchards. Differential irrigation is applied according to variability measured in the field during the season. The VRDI system applies differential water volumes depending on plant growth in order to achieve uniform plant size, yield and quality. Irrigation scheduling is derived by NDVI images of the plot during the season. A trail was conducted in Israel on a vineyard where a VRDI system was installed on a 1.2-hectare plot. The plot was highly variable with reduced canopy size and yield along the rows, 25 tons/ha in the southern end, 13 ton/ha, in the northern end with varying water potential as measured by the pressure chamber method. Following the first year of trialing the VRDI system the physiological parameters of, water potential, LAI and yield were similar along the rows drastically reducing spatial variability. By using the VRDI system average yield was increased without increasing the total applied water in comparison to previous years. The next steps of development are cost reduction and system optimization and penetration to other crops such as almond, citrus and more.

Blake Sanden

Correlation of individual tree nut yield, evapotranspiration, tree stem water potential, total soil salinity and chloride in a high production almond orchard

Sanden, Blake[1]; Muhammed, Saiful[2]; Brown, Patrick[2]; Shackel, Ken[2]; Snyder, Rick[3]
1. Cooperative Extension, Kern County, University of California, Bakersfield, CA, United States.
2. Plant Sciences, University of California, Davis, CA, United States.
3. Cooperative Extension, University of California, Davis, CA, United States.

Increasing salt loads and managing fields for efficient irrigation present significant challenges for long term sustainability in the San Joaquin Valley of California. A five year fertility-irrigation study in almonds (Prunus dulcis) in northwest Kern County at the southern end of this valley was constructed to allow the assessment of nitrogen and potassium rate and source on tree nutrient status and kernel yield. To insure efficient irrigation, a total of 40 trees from different plots were monitored weekly for applied irrigation water, soil water content depletion and tree stem water potential (SWP). Soil samples were extracted annually in the winter to a depth of 2.7m and evaluated for total salinity as ECe, Cl and NO3. Average rootzone salinity to a depth of 1.5m ranged from 0.64 to 4.05 dS/m, but showed no relationship to yield despite being more than twice the published tolerance for almonds. Chloride concentrations ranged from 1.0 to 25.8 meq/l. Individual tree ET was estimated to range between 1227 to 1604 mm even though season long average SWP for all trees remained in the low to no-stress zone of -0.78 to -1.29 MPa. Elevated salinity and chloride, along with disease, did appear to contribute to early defoliation in year four, but there was no correlation between any of these parameters and total tree kernel yield, which ranged from the equivalent of 2,693 to 6,851 kg/ha.

Nelwood

ALMOND NURSERY

PLACE YOUR ORDER NOW!

Currently taking orders for 2018 (Autumn and Spring budded) delivery

Nemaguard and **Hybrid** rootstocks available (including Garnem, Brights & GF677)

The **only** South Australian commercial nursery sourcing 100% ABA repository material

Experience and Capacity to deliver large quantities of A-Grade trees to establish your development.

New varieties from the ABA's breeding program available.**Virus tested and certified material used**

NURSERY INSPECTIONS WELCOME

Contact Martin on 08 8595 8182 or 0439 740 259

Murtho Rd Paringa SA 5340

Dr. James Underwood

Intelligent Information Systems for Horticulture and Tree Crops

Dr. James Patrick Underwood, Senior Research Fellow
Australian Centre for Field Robotics (ACFR), University of Sydney

The Australian Centre for Field Robotics at The University of Sydney has been conducting research into intelligent robotics and sensing systems for orchards. An initial three year program, funded by Hort. Innovation, focussed on the application of the technology for almonds and apples. This talk presents the findings, including flower and fruit detection and counting, to estimate and map fruit yield and inflorescence per tree, across the orchard. We present our latest and ongoing research in developing the technology for mangos, avocados and macadamias as part of the National R&D for Profit program and developing decision support systems, funded by Apple and Pear Australia. The technology has the potential to support growers in their decision making, by providing accurate and timely information about the performance of every tree.

Alister Walsh

The Emergence of Water Trading Patterns: What it Means for Almond Growers

Aiister Walsh, Chief Executive Officer, Waterfind

As irrigators become more familiar with water markets, water trade patterns indicate that preparation is key to an optimal water year. Strategic purchasing during off-peak periods throughout the-season, paired with the utilisation of Carryover opportunities and Forward Water markets can mitigate volatile pricing and overcome the impact of low allocations.

Having monitored trading patterns across the Southern Connected System, which have matured in the past five years, Waterfind has seen increasing consistency in patterns. Through seasons of high and low rainfall, this continuity reinforces the importance of preparation to increase the success of an upcoming season.

Water allocation outlooks for the current 2016/17 water year emphasise the importance of a planned water management strategy. Due to the lower than average inflows, opening allocations were significantly down on previous seasons, which placed increased pressures on irrigators. Towards the end of last season, when these outlooks were released, we saw a shift in customers' focus towards preparing for a drier season.

Almond growers know their level of water requirements for their plantation in advance and planning for these needs is essential to save money and maximise outputs for the season. This strategic planning and utilisation of products like Forward Water markets and Carryover capacity provide alternate methods to manage risk with allocation variability. Paired with a purchasing strategy outside of peak periods, growers can continue to succeed through challenging conditions.

Dr. Gordon Wardell

The Biology Behind Preparing Honey Bee Colonies for Almond Pollination

Dr. Gordon Wardell, Director of Bee Biology, Wonderful Orchards, Shafter, California

Preparing honey bee colonies for almond pollination is one of the most difficult things we do as commercial beekeepers. Almonds are the first true commercial crop to bloom, and because of this the hive has not had the time to reach full strength. In Australia, almonds begin to bloom in late July and early August. The bees may be coming off a nectar crop but it is likely to have poor quality pollen, meaning the bees may make some honey but they won't be able to produce the large amount of young workers that will be necessary for almond pollination. Therefore, prior to going to almond pollination the beekeeper will have to pull the honey and feed protein supplements ensure the bees will be strong enough to be effective pollinators.

In the presentation, we will discuss the three distinct populations of bees in every hive (the immature, the house bees and the field bees) and the important role each of these groups plays in a successful almond pollination season. We will also explore how nature and the beekeeper work in unison to optimize the pollination potential of the hives and produce the best nut set possible.

In the United States, honey bee colonies from all corners of the country converge in the Central Valley of California during almond bloom. Although their origins vary from the wintery conditions in the north to the sub-tropical areas of Florida and Texas, all colonies are expected to have a minimum frame count. We will discuss the importance of strong colonies during almond bloom and even quantify the difference strong colonies can have on nut set and yield.

In an effort to promote bee health and ultimately improve pollination, the practice of planting supplemental forage for pollinators in California almond orchards is increasing. Last year, Project Apis m, a U.S. based nonprofit organization that promotes honey bee health and research, provided seed for over 1,200 hectares of supplemental forage that was planted in and around California almond orchards. Growers are readily adopting this practice, as both they and beekeepers see the benefits of this program. Estimates project plantings will exceed 2,000 hectares this coming season.

Finally, we will discuss the best management practices being used in California that are dramatically reducing colony damage during almond bloom and promoting a healthy almond crop. The cornerstone of this concept being grower-beekeeper communication, spraying only if it is necessary in order to minimize bee exposure and contact.

Ian Zadow

On Property Best Practice: Timing & Management of Hives

Ian Zadow, Principal, Zadow Apiaries & Former Chair, Australian Honey Bee Industry Council

There are many things that beekeepers and almond growers can do to achieve on property best practice in regard to timing and management of hives for almond pollination.

As almonds are the first crop to be pollinated after winter, management of the hives is critical to achieve hives in good condition for pollinating almonds. It is important that beekeepers supply hives to an agreed standard and is also important that the growers audit the hives supplied to ensure they meet the standard.

The timing of moving hives in and out of pollination is important to ensure good pollination and also minimise stress on the hives. Due to the high density of hives required for pollination, at the start and end of flowering there isn't enough flower to sustain all the bees and this can be a stress factor on hive health. By staging the movement of hives in and out of the orchard in relation to the amount of flower it helps reduce the stress on hives. Providing additional floral resources in the orchard also helps reduce this stress on hives.

Due to the high density of hives required to pollinate almonds and the close distance between different beekeepers hives, there is an increased risk of spread of bee diseases. This is of great concern to beekeepers and threat to the health of hives and beekeepers livelihoods. It is important that beekeepers don't bring diseased hives into pollination. Over the last three years the Australian Honey Bee Industry Council has developed a National Bee Biosecurity Program. This program is underpinned by a Bee Biosecurity Code of Practice which is minimum best practice for pest and disease control. All beekeepers will be required to complete a Certificate of Compliance to the Code of Practice and the Program will employ a Bee Biosecurity Officer in each state to assist beekeepers with disease control and enforce the code. We believe almond growers should be requesting a copy of the Certificate of Compliance each year from their beekeepers to ensure disease spread is avoided during pollination.

Chemical use around the orchard is another issue that is of concern to beekeepers and the health of their hives. We understand that chemicals need to be used to grow the crop but prefer minimum use while bees are present and that applications are made while the bees aren't working the crop. Communication with beekeepers about chemical use is also highly recommended.

LARAGON
PTY. LTD.
ALMOND PROCESSORS

Lindsay Point
via Renmark, SA

SPECIALISING IN QUALITY HULLING AND SHELLING

- Up to date, advanced, computerised equipment, using Satake electronic colour sorters
- Computerised product tracking and recording
- Catering for all producers, large and small

For enquiries contact
Mark Webber:
Ph: 08 8595 8080
Mob: 0429 807 315
E-mail:
mark@laragon.com.au

BORRELL
Equipment & Technology for Almonds
www.jborrell.com

BORRELL · B USA · FAM · COX & PLANT

Orchard-Rite Ltd, INC.

Orchard-Rite®
Bullet IIE Tree Shakers

www.orchard-rite.com

Parts and Service:
Specialty Maintenance Services
Graham Willcock
Ph: 0417372423 Fax: (03)50253611
Email: glwillcock@gmail.com

Tree Shaker Sales:
Jeremy DeBoer
Ph: 0011.1.209.480.2863
Email: jeremy@orchard-rite.com

Pure. Powerful. Performance.

108 Shaker Head
Almond and Walnut

Our most universal shaker head, the 108 Head can be used in a variety of trees. Compared to earlier models, the new 108 Head offers built-in sling studs and easy crop-specific pattern changes.

The 108 Head now has a stronger reinforcement of its case, pins and cylinders. It also has improved access to the drive sheave without changing the simplicity of the belt routing.

Functions / Operation

- **Auto Functions**
  - Open and Retract
  - Shake (timed)
  - Set Throttle
  - Auto-Brake (built in hill holder)
- **Back-up Camera**
  - Allowing better visibility for safer operation of equipment.
- **Push Button Sweeps**
  - Simply lift and lower sweeps with the touch of a button.
- **English / Spanish - Standard / Metric Displays**
  - Easily switch between languages for multiple operator use.
- **Two Speed**
  - Speed options allowing for harvesting or transporting between fields.
- **Digital Pressure Read Out**
  - Quickly identify machine operating conditions.
- **Tree Counter / Shake Timer**
  - Track productivity and overall shake time for ease of billing and managing.
- **Manual Option**
  - Allowing the operator to override automatic controls and operate in manual mode.

Shaker Chassis

Hydraulic Reversing Fan
Cleans debris from radiator screen and lowers engine temp

Sweeper Lift Cylinders
In-cab operation

Improved Radiator Access
Ease of maintenance

Reinforced Gimbal and Trunnion
Increased strength
Superior serviceability

Upgraded Steering System
Steering cylinder
Heavier hubs and spindles

Enhanced Access to the Valve and Engine Compartments
Superior serviceability

Shaker Cab

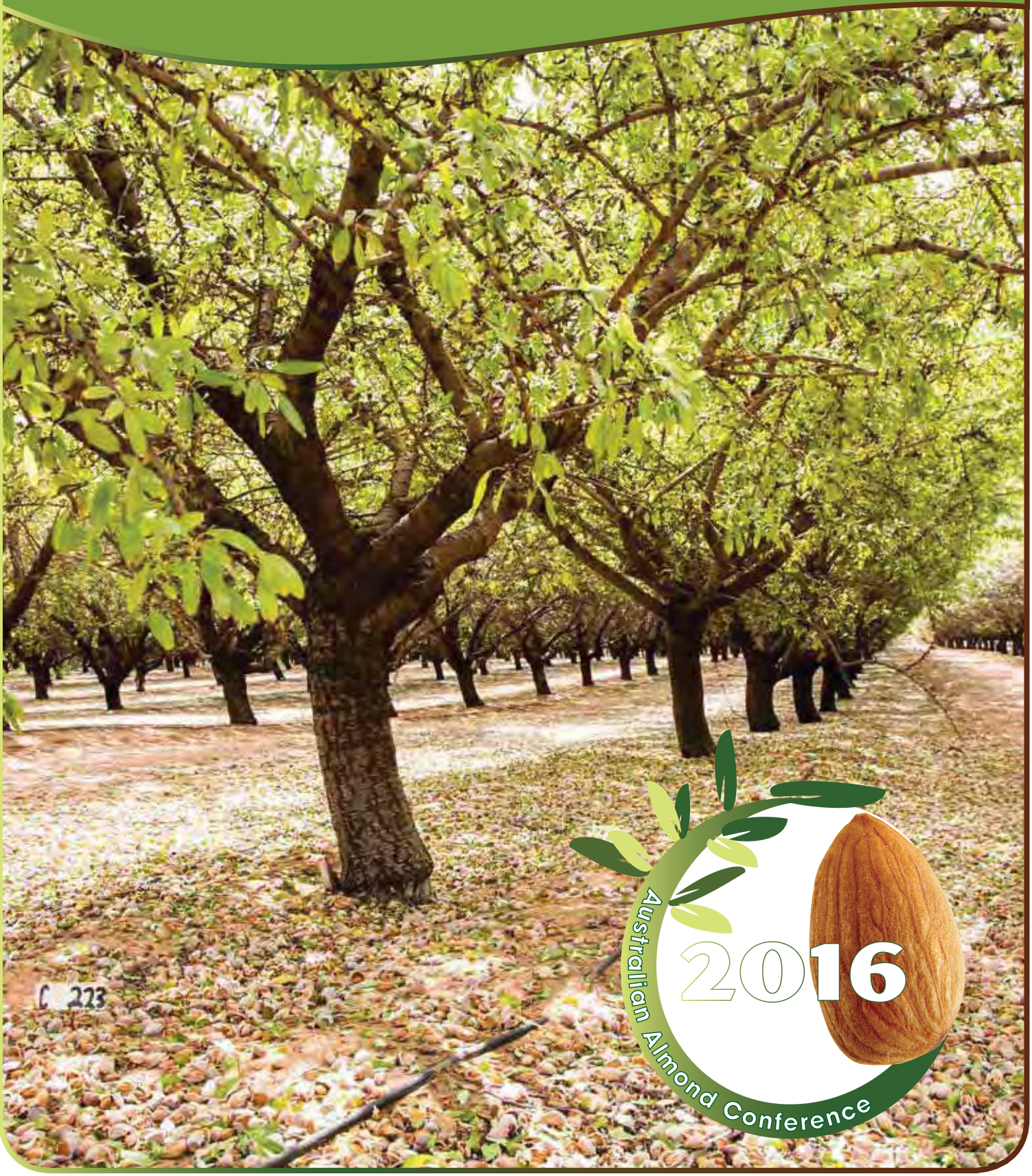
Pressurized cab
Dust control
Reduces exposure to harmful contaminates and debris

Large Cab
Increase operator comfort
Suspension seat
Higher visibility

Joystick
Egronomically shaped joystick
Ease of control
Immediate reactive response

Additional features include:
Telescopic steering wheel
Bluetooth stereo
Adjustable foot control pedals

Sponsors & Exhibitors



Sponsors & Exhibitors

Signature

Haifa

Platinum

Stoller
Unleashing the Power of Plants

Gold

omnia NUTRIOLOGY
Omnia Specialities Australia Pty Ltd

TAYPER

Silver

NETAFIM

Waterfind AUSTRALIA

YARA

BAYER

Knowledge grows

Bronze

nesa nu-edge solutions australia

Orchard-Rite

BARMAC

SATAKE

Plant & Food RESEARCH AUSTRALIA

Dinner

E.E. Muir & Sons

Welcome

Seasol THE SEAWEED SOLUTION

Exhibitors

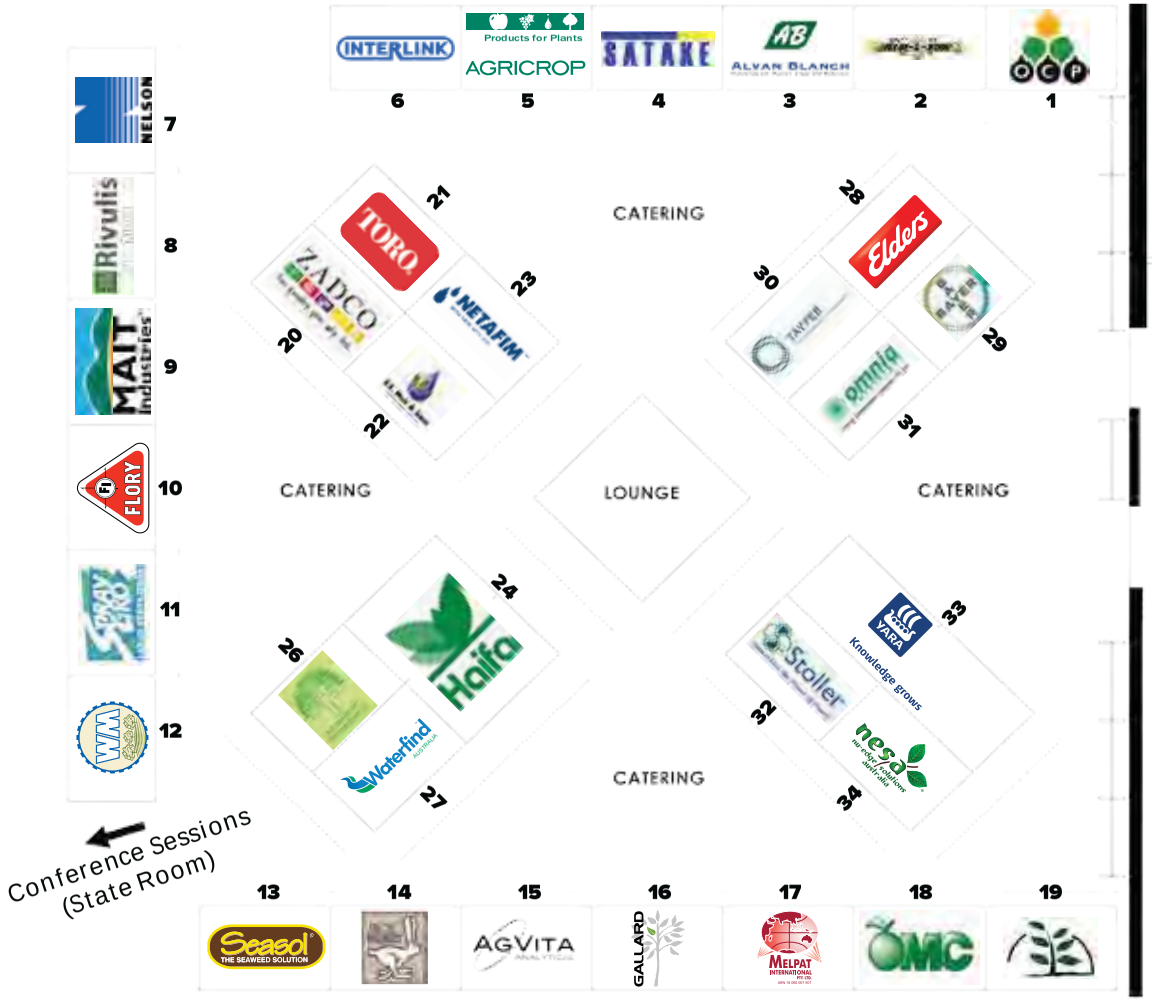
Haifa
E.E. Muir & Sons
YARA
SATAKE
Stoller
NETAFIM
TAYPER
Seasol THE SEAWEED SOLUTION
AGRICROP Products for Plants
omnia
INTERLINK
AIR-O-FAN
Waterfind AUSTRALIA
GALLARD shaping your trees future
ALVAN BLANCH
MAIT Industries
JACK RABBIT
BAYER
Elders
FLORY
OCP
OMC
MELPAT INTERNATIONAL
TORO
Rivulis Irrigation
SPRAY GRO LIQUID FERTILIZERS
WM
nesa nu-edge solutions australia
ZADCO for quality gro. pty. ltd.
NELSON
AGVITA ANALYTICAL

Supporting Sponsors

GALLARD
BORRELL
SATAKE
OMC
SPM
peats SOIL & GARDEN SUPPLIES
LMC LEWIS M. CARTER
NELSON
GRAHAM'S FACTREE
ANFIC
LARAGON
SPRAY GRO
FLORY
ZADCO for quality gro. pty. ltd.
AIR-O-FAN
WM

We sincerely thank our partners and sponsors of the 2016 Australian Almond Conference

Exhibition Floorplan



Booth	Exhibitor	Booth	Exhibitor	Booth	Exhibitor	Booth	Exhibitor
1	Oganic Crop Protectants	10	Flory Industries	19	Agromillora	29	Bayer CropScience
2	Air-O-Fan	11	Spraygro	20	Zadco for Quality Gro	30	Tayper Enterprises
3	Alvan Blanch Driers	12	Weiss McNair Ramacher	21	Toro Australia	31	Omnia Specialities
4	Satake	13	Seasol	22	EE Muir & Sons	32	Stoller Australia
5	AgriCrop	14	JackRabbit	23	Netafim	33	Yara Australia
6	Interlink Pumps & Sprayers	15	AgVita Analytical	24	HAIFA	34	Nu-Edge Solutions
7	Nelson Manufacturing	16	Gallard Machinery	26	Mossmont Nurseries	36	Australian Almonds
8	Rivulis Irrigation	17	Melpat International	27	Waterfind	37	Conference Information & Registration
9	MAIT Industries	18	Orchard Machinery Corporation	28	Elders		

Introducing the "New" 2850 Low Profile Sweeper

Powered by a John Deere 4045-T, Tier 4F, 74 HP engine, with NO DEF FLUID required, the 2850 is our newly updated low profile sweeper. The ground drive features two-speed piston motors with double-reduction gear boxes powered by a high efficiency hydraulic system.

With a cab height that is 12 inches lower than the standard height air cab sweeper, the 2850 is the perfect height for high density orchards with very low canopies.

The 2850 standard equipment includes rear view camera, large windows for improved visibility, and full heating & air conditioning in a dust-free, pressurized cab with an ergonomic seat, and fully illuminated dash panel switches.

MORE HARVEST PROFIT AT A LOWER COST

Call for Closest Dealer and a Demonstration:

(530) 891-6214

Weiss McNair

NUT HARVESTING EQUIPMENT

100 Loren Avenue, Chico, CA 95928 | (530) 891-6214 | Fax (530) 891-5905 | www.weissmcnair.com

Delegate List

HOSTED BY: Almond Board of Australia

SUPPORTED BY: Horticulture Australia Ltd

Sorted by Surname

Last Name	First Name	Organisation	Email Address
Abeysinghe	Subhashini	Dual Chelate Fertilizer	subhashini@dualchelate.com
Adams	Bill	Yara Australia	bill.adams@yara.com
Albert	Augustine	Olam Orchards Australia Pty Ltd	augustine.albert@olamnet.com
Alevras	Mike	Seasol International	mikealevras@seasol.com.au
Alexander	Matt	Onefarm	matt@onefarm.com.au
Andersen	Brian	Orchard Machinery Corporation	ba@shakermaker.com
Anderson	Kim	Almondcart Wines	k111anders@internode.on.net
Antebi	Amir	SiteTest	
Armstrong	Hugh	Bayer Crop Science	hugh.armstrong@bayer.com
Armstrong	Joel	CSIRO	joel.armstrong@csiro.au
Atwal	Sunita	Rmonpro Developments Pty Ltd	accounts@rmponpro.com.au
Austin	Simone	Simone Austin	simoneaustin@optusnet.com.au
Barry	Chris	Vicchem	chrisbarry@vicchem.com
Bartels	Wendy	Waterfind Pty Ltd	wendy.bartels@waterfind.com.au
Batten	Brad	Toro Australia	bradley.batten@toro.com
Bawden	Adrian	Rural Funds Management	jbenson@ruralfunds.com.au
Beem	Lance	Beem Agro Sciences Corporation	lance@beemconsulting.com
Bell	Cameron	Olam Orchards Australia Pty Ltd	cameron.bell@olamnet.com
Bennett	Neale	Cowanna Almond Harvesting	ndbenno@hotkey.net.au
Bennett	Jim	Nelson Manufacturing Co Inc	jimb@nelsonhardie.com
Bent	Anthony	Waterfind Pty Ltd	anthony.bent@waterfind.com.au
Bhandari	Jyothi	Nu-Edge Solutions Australia Pty Ltd	jbhandari@nu-edge.com.au
Binder	Peter	PDB Irrigation Solutions	peterbinder1@bigpond.com
Binder	Peter	Select Harvests	pbinder@selectharvests.com.au
Biondi Jr	Dan	QualiTech	danb@qualitechco.com
Birrell	Grant	Nut Producers Australia	gbirrell@nutproducers.com.au
Boddy	Charles	Borrell USA Corp	charles@jborrell.com
Boothe	Dusty	JackRabbit	dusty@jackrabbit.bz
Bougoure	Damian	Eurofins	damianbougoure@eurofins.com
Boulton	Ritchie	Landmark	ritchie.boulton@landmark.com.au
Boutsalis	Peter	Plant Science Consulting Pty Ltd	info@plantscienceconsulting.com.au
Bramley	Rob	CSIRO	rob.bramley@csiro.au

Last Name	First Name	Organisation	Email Address
Brander	Darryl	Nu-Edge Solutions Australia Pty Ltd	dbrander@nu-edge.com.au
Brooks	Rob	Aware Water	rbrooks@awarewater.com.au
Brown	Ben	Select Harvests	bbrown@selectharvests.com.au
Brown	Andrew	MAIT Industries	andrew.brown@mait.com.au
Brown	Craig	Seasol International	craigbrown@seasol.com.au
Brown	Des	Agristorage & Logistics Pty Ltd	des@agri-storage.com
Bruner	Grant	LMC Manufacturing Co. Inc	grant.bruner@lmcarter.com
Burgess	Neil	Horticulture Australia Ltd	neil.burgess@horticulture.com.au
Burgess	Ellyse	Eurofins Agrisearch	ellyseburgess@eurofins.com
Burkinshaw	Jock	Olam Orchards Australia Pty Ltd	jock.burkinshaw@olamnet.com
Burns	Michael	Walker Flat Almonds	mike@burnsceilings.com.au
Campbell	Alex	Western Rosella Farming	alex@wealthcheck.com.au
Camuglia	John	Nu-Edge Solutions Australia Pty Ltd	john@boogan.com.au
Cannard	Mary	Olam International Pty Ltd	mary.cannard@olamnet.com
Cannatelli	Joseph	JC's Quality Foods	joe@jcsqualityfoods.com.au
Cappello	Jason	Elders Rural Services Ltd	jason.cappello@elders.com.au
Carey	Nigel	Nut Producers Australia	nigel.carey@nutproducers.com.au
Carlon	Gary	Demopolis Pty Ltd	gcarlon7@bigpond.com.au
Carroll	Wayne	Carroll Partners	wfc@carrollpartners.com.au
Carter	Marcus	LMC Manufacturing Co. Inc	lmc@lmcarter.com
Cavallaro	David	Stoller Australia	david.cavallaro@stoller.com.au
Cavallaro	Domenic	Cavallaro Angle Vale Almond Trust	domenic@stoller.com.au
Cavallaro	Peter	Walker Flat Almonds	peter@wfas.com.au
Chamberlain	Steve	Conservis	schamberlain@conserviscorp.com
Chambers	Fiona	Wheen Bee Foundation	ceo@wheenbeefoundation.org.au
Childs	Gordon	Organic Crop Protectants	gordon@ocp.com.au
Christian	Kieran	Omnia Specialities Australia	kchristian@omnia.net.au
Christie	Bill	Toro Australia	Bill.christie@toro.com.au
Clarke	Michael	AgEconPlus Pty Ltd	jpippos@australianalmonds.com.au
Coates	Alison	University of South Australia	alison.coates@unisa.edu.au
Coates	Michael	University of South Australia	coamc002@mymail.unisa.edu.au
Cole	Peter	Sumitomo Chemical	peter.cole@sumitomo-chem.com.au

Last Name	First Name	Organisation	Email Address
Connolly	Owen	Vicchem	chrisbarry@vicchem.com
Cook	Daniel	Grainwright Industries	daniel@grainwright.com.au
Coombe	Ben	GroChem	ben@grochem.com.au
Coombes	David	Yara Australia	david.coombes@yara.com
Corona	Jon	HAIFA Australia	jon.corona@haifa-group.com
Corona	Fred	Weiss McNair LLC	fcorona@weissmcnair.com
Corona	Marie	HAIFA Australia	trevor.dennis@haifa-group.com
Costa	Phillip	Costa Produce Pty Ltd	phillip@costaproduce.com.au
Costa	Tony	Costa Brothers Pty Ltd	tony@costaproduce.com.au
Cox	Jim	Primary Industries & Regions SA	jim.cox@sa.gov.au
Cox	Robert	Bright Light AgriBusiness	lp.almonds@gmail.com
Cranna	Nick	Colliers International	nick.cranna@colliers.com
Crowder	Vernon	Rabobank	Vernon.Crowder@rabobank.com
Crowe	Raymond	ICMI Speakers & Entertainers	
Cullis	Katrina	HAIFA Australia	trevor.dennis@haifa-group.com
Cullis	Mark	HAIFA Australia	trevor.dennis@haifa-group.com
Cunningham	Paul	DEPI Victoria	paul.cunningham@ecodev.vic.gov.au
Curtis	Louis	Curtis Vineyards	curtisvin@bigpond.com
Daynes	Cathal	Tradecorp	cdaynes@tradecorp.sapec.pt
de Montemas	Simon	CW Pacific Specialties Pty Ltd	simon@cwpacific.com
Delham	Paul	Nut Producers Australia	paul.delham@nutproducers.com.au
Delves	Alex	Colliers International	alex.delves@colliers.com
Demmer	Larry	Weiss McNair LLC	ldemmer@weissmcnair.com
DeMont	Bob	JackRabbit	bob@jackrabbit.bz
Dennis	Trevor	HAIFA Australia	trevor.dennis@haifa-group.com
Dennis	Megan	HAIFA Australia	trevor.dennis@haifa-group.com
Devine	Matthew	1DAY Pty Ltd	mattdevine@ozemail.com.au
Dewil	David	Insero/AgOtter	office@gallardservices.com.au
Dinicola	Denis	Dinicola Management Pty Ltd	da.dinicola@bigpond.com
Dinicola	Annette	Dinicola Management Pty Ltd	da.dinicola@bigpond.com
Dinicola	Dean	Dinicola Management Pty Ltd	da.dinicola@bigpond.com
Doecke	Andrew	Omnia Specialities Australia	adoecke@omnia.net.au
Donkersley	Mike	SACOA Pty Ltd	mdonkersley@sacoa.com.au
Doorey	Craig	Satake Australia	cd@satake.com.au
Dowdy	Lachlan	AURORA	lachlan@shc.com.au
Dowdy	Ron	Mildura Ag Supplies	ron@shc.com.au
Downey	Alec	ICT International	sales@ictinternational.com.au

Last Name	First Name	Organisation	Email Address
Downs	Andrew		
Dreyer	Hans	Olam Orchards Australia Pty Ltd	hans.dreyer@olamnet.com
Driessen	Susanna	Plant Health Australia	sdriessen@phau.com.au
Dugo	Julie	Flory Industries	jdugo@goflory.com
Duncan	Jim	Alvan Blanch APAC	jim.duncan@live.com.au
Ebbage	Joseph	Almond Board of Australia	jebbage@australianalmonds.com.au
Edwards	Everard	CSIRO	everard.edwards@csiro.au
Elliot	Lorna	Stoller Australia	shane@stoller.com.au
Elliott	Paul		
Emery	Jeff	Mountview Partnership Pty Ltd	jeff.emery@collotype.com
Emery	Richard	Stoller Australia Pty Ltd	richard@stoller.com.au
Estes	Mike	Nelson Manufacturing Co Inc	mikeestes@nelsonhardie.com
Evans	John	Elders Ltd	john.evans@elders.com.au
Fares	Youssef	BARMAC	youssef.fares@barmac.com.au
Fethers	Simon	Fethers Horticultural Services	simon.fethers@gmail.com
Fielke	John	University of South Australia	john.fielke@unisa.edu.au
Fielke	Josh	Almond Board of Australia	jfielke@australianalmonds.com.au
Fitzgerald	Christopher	Labour Solutions Australia	cfitzgerald@laboursolutions.com.au
Flaherty	Stephen	Platinum Ag Services	sflaherty@ruralco.com.au
Fleming	Nigel	SARDI	nigel.fleming@sa.gov.au
Fleming	Libby	Graham's Factree	libby@factree.com.au
Fleming	Rebecca	Graham's Factree	bec@factree.com.au
Fleming	Shan	Graham's Factree	shan@factree.com.au
Fleming	Graham	Graham's Factree	graham@factree.com.au
Forster	Paul	Rmonpro Developments Pty Ltd	accounts@rmonpro.com.au
Forster	Bohden	Rmonpro Developments Pty Ltd	accounts@rmonpro.com.au
Fox	Russell	Insense Pty Ltd	russell@insense.com.au
Frahn	Rohan	Gallard Machinery	rohan@gallardservices.com.au
Freemantle	James	Omnia Specialities Australia	jfreemantle@omnia.net.au
Fremder	Andrew	Almas Almonds Pty Ltd	andrew@almasalmonds.com.au
Fuentes	Israel	Incus	ifuentes@incus.es
Fuentes	Antonio	Incus	ifuentes@incus.es
Fujimoto	Vino	Satake Australia	vino@satake.com.au
Gaisford	Nick	Alvan Blanch Driers	
Gallacher	Barry	Select Harvests	bgallacher@selectharvests.com.au
Gallard	Sam	Gallard Machinery	office@gallardservices.com.au
Gallard	John	Gallard Machinery	john@gallardservices.com.au

Last Name	First Name	Organisation	Email Address
Gallard	Alexandra	Gallard Machinery	alex@gallardservices.com.au
Galluccio	Frank	Sumitomo Chemical	frank.galluccio@sumitomo-chem.com.au
Gavenlock	Joshua	Oro Agri	jgavenlock@oroagri.com
Geister	Paul	Crop Care Australasia	paul.geister@cropcare.com.au
Giannini	Mark	Landmark	mark.giannini@landmark.com.au
Gordon	Justin	KC Horticultural Nursery	justin@kcvines.com.au
Gordon	Andy	KC Horticultural Nursery	andy@kcvines.com.au
Gorman	Aedan	Bayer CropScience	aedan.gorman@bayer.com
Gouk	Chin	DEPI Victoria	chin.gouk@ecodev.vic.gov.au
Graetz	Darren	SARDI	darren.graetz@sa.gov.au
Graham	Greig	Rivulis Irrigation	greig.grham@rivulis.com
Granger	Andrew	Plant & Food Research Australia	andrew.granger@plantandfood.com.au
Greig	Chris	Conservis	chrisgreig2011@bigpond.com
Gulack	Robert	Conservis Corp	rgulack@conservisorp.com
Gunawardena	Upul	Grow Green Pty Ltd	lisa@growgreen.com.au
Hamidi	Kerem	Alleasing	will.jackson@alleasing.com.au
Hancock	Roger	Select Harvests	rhancock@selectharvests.com.au
Harkins	Shannon	Almond Board of Australia	sharkins@australianalmonds.com.au
Harrison	Ben	Nut Producers Australia	ben.harrison@nutproducers.com.au
Hayes	Peter	Viti Vini	grapwine@senet.com.au
Haynes	Richard	Elders Ltd	richard.haynes@elders.com.au
Henry	Peter	Netafim	peter.henry@netafim.com.au
Henshall	Phillip	Laragon Pty Ltd	pchenshall@gmail.com
Heyward	Mark	Phytech	mark.h@phytech.com
Hicks	Darren	AgVita Analytical	dhicks@agvita.com.au
Hingston	Jason	Organic Crop Protectants	jasonh@ocp.com.au
Hojmark-Andersen	Johnny	Tradecorp	jhojmark@tradecorp.sapec.pt
Holden	Leonie	Rescom	leonie.holden@bigpond.com
Hossain	Mofakhar	DEPI Victoria	mofakhar.hossain@depi.vic.gov.au
Houlahan	Damien	Olam Orchards Australia Pty Ltd	dhoulahan@olamnet.com
Howatson	Rohan	Howatson PR Communications	rohan@howatsonpr.com.au
Howe	John	Satake USA Inc	jhowe@satake-usa.com
Howie	Martin	Nelwood Estates	martin.howie@nelwood.com
Hoyt	Leslie	Rabobank	
Hutchins	Deanna	Laragon Pty Ltd	laragon@bigpond.com
Itsiopoulos	Catherine	La Trobe University	C.Itsiopoulos@latrobe.edu.au
Iwaniw	Michael	Select Harvests	miwaniw@bigpond.net.au

Last Name	First Name	Organisation	Email Address
Izzard	Dean	Zadco For Quality Gro Pty Ltd	dean@zadco.com.au
Jackson	Tim	Almondco Australia Limited	timj@almondco.com.au
Jain	Sid	Satake Australia	sidjain@satake.com.au
Janse van Rensburg	Pierre	Olam Orchards Australia Pty Ltd	pierre.jvr@olamnet.com
Jarrott	Steve	Westchester	sjarrott@wgimglobal.com.au
Jasper	Corinne	Horticulture Innovation Australia	corrine.jasper@horticulture.com.au
Jeans	Gary	Swan Hill Chemicals Pty Ltd	gary@shc.com.au
Johansson	Asma	Zadco For Quality Gro Pty Ltd	asma@zadco.com.au
Johnson	Mark	Platinum Ag Services	mjohnson@ruralco.com.au
Jones	Dean	MWT Foods	djdirect@mwtfoods.com
Jones	Matthew	AsiaFruit Magazine	matthew@fruitnet.com
Jongebloed	Simon	Aroona Holdings Pty Ltd	simon@aroonafarms.com.au
Judd	Graeme	EE Muir & Sons Pty Ltd	gjudd@eem.com.au
Katis	Steven	Olam Orchards Australia Pty Ltd	steve.katis@olamnet.com
Katis	Nicholas	Aroona Farms VIC	nick.katis@aroonafarms.com.au
Keenan	Dan	Keenan Farm Co	dank789@hotmail.com
Keenan	Michael	Keenan Farm Co	keenanfarmco@bigpond.com
Keir	Ben	KMH Agronomy Pty Ltd	bpkeir@gmail.com
Kelly	Kevin	Lacton Pty Ltd	alacey@addept.com.au
Kelly	Jenny	Lacton Pty Ltd	alacey@addept.com.au
Kenneally	Zoe	Laguna Bay	zoe.kenneally@lagunabay.com.au
Kennedy	Tim	Select Harvests	tkennedy@selectharvests.com.au
Kolala	Ramkrishna	Delta Tree Nursery	ramk@deltatrees.com.au
Kotkar	Abhishek	Gold Star International Pty Ltd	abhishekkotkar@yahoo.com.au
Koutrikas	Nick	Select Harvests	nkoutrikas@selectharvests.com.au
Kreidl	Simone	DEPI Victoria	simone.kreidl@ecodev.vic.gov.au
Krishen	Ashok	Olam International Pty Ltd	sonia.gillow@olamnet.com
Lacey	Sarah	Lacton Pty Ltd	alacey@addept.com.au
Lacey	Jane	Lacton Pty Ltd	alacey@addept.com.au
Lacey	Rick	Lacton Pty Ltd	alacey@addept.com.au
Lacey	Catherine	Lacton Pty Ltd	alacey@addept.com.au
Lacey	Pam	Lacton Pty Ltd	alacey@addept.com.au
Lacey	Anna	Lacton Pty Ltd	alacey@addept.com.au
Lacey	Andrew	Lacton Pty Ltd	alacey@addept.com.au
Lake	Trevor	Olam Orchards Australia Pty Ltd	trevor.lake@olamnet.com
Lamacraft	Simon	Bayer CropScience	simon.lamacraft@bayer.com
Lamond	Mike	Good Fruit & Vegetables	mike.lamond@fairfaxmedia.com.au

Last Name	First Name	Organisation	Email Address
Lane	Simon	Almondco Australia Limited	nicolef@almondco.com.au
Lanz	Chris	Agricrop	chris@agricrop.com.au
Lean	Adam	Netafim	adam.lean@netafim.com
Lenaghan	Liam	goFARM Australia	liam@gofarmaustralia.com.au
Lewis	Tim	Rivulis Irrigation	tim.lewis@rivulis.com
Linsdell	Greg	EE Muir & Sons Pty Ltd	linsdell@eem.com.au
Lloyd	Matt	Netafim	monica.cole@netafim.com.au
Lloyd	Chris	BARMAC	chris.lloyd@barmac.com.au
Loechel	James	Aroona Holdings Pty Ltd	james.loechel@aroonafarms.com.au
Lopez	Martin	Frutos Secos Fuster	martin@fsfuster.com
Lorenz	Troy	Redox Pty Ltd	troy.lorenz@redox.com
Loxley	David	Bugs for Bugs	david@bugsforbugs.com.au
Lucas	Geoff	Lucas Group	goeff@lucasgroup.com.au
Ludwig	Gabriele	Almond Board of California	gludwig@almondboard.com
Lueth	Mark	Aroona Farms SA	mark.lueth@aroonafarms.com.au
Luke	Rod	Kilter Rural	rluke@kilterrural.com
Lynch	Lachlan	Laguna Bay	jenna.mason@lagunabay.com.au
Lynch	Stephen	Horticulture Innovation Australia	slynch@linvest.com.au
Madawala	Shan	La Trobe University	kawshan_m@yahoo.com
Manton	Ray	Western Rosella Farming	ray@rosellafarming.com.au
Manuel	Jesse	Colliers International	jesse.manuel@colliers.com
Maragozidis	John	Goanna Produce Pty Ltd	john@yunis.com.au
Martin	Cheryl	Nutwood Orchards	paul.martin@nutwood.net.au
Martin	Drew	Omega Orchards	drew@omegaorchards.com.au
Martin	Jan	Omega Orchards	tmartinoo@bigpond.com
Martin	Paul	Nutwood Orchards	paul.martin@nutwood.net.au
Martin	Tom	SureNut Pty Ltd	tom@surenut.com.au
Martin	Caren	Omega Orchards	drew@omegaorchards.com.au
Mason	David	Jakad Almonds	djamason@bigpond.com
Mason	Allyson	Jakad Almonds	djamason@bigpond.com
Matschoss	Shaun	Exact Contracting	office@gallardservices.com.au
McAnaney	Tania	Landmark	tania.mcananey@landmark.com.au
McDonald	Shannon	Air-O-Fan Products	shannon@airofan.com
McEachern	Sam	Spraygro Liquid Fertilisers	sam@spraygro.com.au
McKenzie	Scott	Century Orchards	tech@centuryorchards.com.au
McMahon	Debbie	Almond Board of Australia	admin@australianalmonds.com.au
McMahon	Gavin	Central Irrigation Trust	gavin.mchaon@cit.org.au

Last Name	First Name	Organisation	Email Address
Mecwan	Samir	Olam Orchards Australia Pty Ltd	samir.mecwan@olamnet.com
Meyer	Hendri	Olam Orchards Australia Pty Ltd	hendri.meyer@olamnet.com
Miatke	Jeremy	CMV Farms	jeremy.miatke@cmv.com.au
Millen	Tim	BASF	tim.millen@basf.com
Minahan	Paul	Elders Ltd	paul.minahan@elders.com.au
Minter	Darren	Minter Magic	dagsnco@bigpond.com
Moen	Matt	Conservis	mmoen@conservisorp.com
Monks	Dave	Agriculture Victoria	dave.monks@ecodev.vic.gov.au
Monson	Trevor	Monson's Honey & Pollination	monsonshoney@bigpond.com
Morelli	Renee	Riverland Almonds	renee.morelli@riverland-almonds.com.au
Moriconi	John	Nu-Edge Solutions Australia Pty Ltd	john@nu-edge.com.au
Morton	Stephen	Almondco Australia Limited	stephenm@almondco.com.au
Moss	Ian	Mossmont Nurseries P/L	mossmont@bigpond.com
Mousley	Marisa	Tayper Enterprises	marisa.mousley@tayper.com.au
Mousley	Brian	Tayper Enterprises	brian.mousley@tayper.com.au
Mueller	Melina	Walker Flat Almonds	melina@wfas.com.au
Muir	Ian	EE Muir & Sons Pty Ltd	imuir@eem.com.au
Muir	Andrew	EE Muir & Sons Pty Ltd	amuir@eem.com.au
Muller	Brett	Select Harvests	bmuller@selectharvests.com.au
Murnane	Alan	AgnVet Services	alanmurnane@agnvet.com.au
Murphy	Mathew	Solvay	mathew.murphy@solvay.com
Nadav	Itamar	Netafim	peter.henry@netafim.com.au
Nguyen	Lisa	Simarloo Aust Pty Ltd	leroy@simarloo.com.au
Nish	Mark	SLTEC Fertilizers	nishantha.udm@gmail.com
Nolen	Gerard	Grays	gerard.nolen@grays.com.au
Orth	Al	Flory Industries	aorth@goflory.com
Osborne	Alick	Seasol International	alicko@seasol.com.au
Palmer	Anna	Laguna Bay	jenna.mason@lagunabay.com.au
Paltridge	Alison	Select Harvests	spaltridge@selectharvests.com.au
Paltridge	Steve	Select Harvests	spaltridge@selectharvests.com.au
Parker	Marissa	Tayper Enterprises	marissa.parker@tayper.com.au
Pasqualotto	Mario	AgnVet Services	mariopasqualotto@agnvet.com.au
Pendle	Sharon	Nutwood Orchards	spendle@iinet.net.au
Petropolous	Peter	Select Harvests	ppetropoulos@selectharvests.com.au
Pettigrew	Stuart	Ag Dynamics	stuart@agdynamics.com.au
Phillips	Steve	Tanuki Pty Ltd	steve@tanuki.com.au
Piccirillo	George	Lindsay Rural	george.piccirillo@lindsayrural.com

Last Name	First Name	Organisation	Email Address
Pierson	Jim	AJS Pierson & Son	jibe@adam.com.au
Pilkington	Ashley	Adama	ashley.pilkington@adama.com
Pippos	Jo	Almond Board of Australia	jpippos@australianalmonds.com.au
Porter	Gavin	ANFIC Ltd	info@anfic.com.au
Price	Tim	Orchard-Rite Ltd INC	timprice@orchard-rite.com
Prinsloo	Johan	Omnia Specialities Australia	jprinsloo@omnia.net.au
Purdham	Craig	EE Muir & Sons Pty Ltd	cpurdham@eem.com.au
Read	Tony	Jubilee Almonds	tony.read1@bigpond.com
Reed	Ken	Lindsay Rural	ken.reed@lindsayrural.com.au
Reynolds	Peter	Select Harvests	preynolds@selectharvests.com.au
Rich	Owen	Campbells Fertilisers	mattu@eem.com.au
Richman	Troy	Almas Almonds Pty Ltd	troy@almasalmonds.com.au
Rimmer	Paul	Rimmer Consulting	primmer@bigpond.net.au
Roberts	Dion	Rivulis Irrigation	dion.roberts@rivulis.com
Roberts	Kaylan	Burchell Nurseries	mossmont@bigpond.com
Rohrlach	Peter	Nutwood Orchards	peter.rohrlach@nutwood.net.au
Rosenzweig	Brett	Almond Board of Australia	brosenzweig@australianalmonds.com.au
Ross	Peter	Select Harvests Ltd	pross@selectharvests.com.au
Ross	Richard	Helena Chemicals	richard@rcragri.com
Rowett	Michael	MAIT Industries	michael.rowett@mait.com.au
Rudd	Emily	Stoller Australia	emily@stoller.com.au
Ruffels	Michael	AgVita Analytical	mruffels@agvita.com.au
Ryan	Peter	Brownport Almonds	p.ryan@outlook.com.au
Sanden	Blake	University California Cooperative Extension	blsanden@ucdavis.edu
Sanders	Neil	Rmonpro Developments Pty Ltd	accounts@rmonpro.com.au
Saunders	Kris	Carroll Partners	sales@carrollpartners.com.au
Saunders	Alan	Agromillora Australia	alan@boulevarde.com.au
Schneider	Levy	Netafim	levys@netafim.com.au; monica.cole@netafim.com
Schofield	David	Stoller Australia	david@stoller.com.au
Scott	Bruce	Campbells Fertilisers	bscott@eem.com.au
Seton-Stewart	Andrew	Landmark	chrisbarry@vicchem.com
Shahzad	Zubair	Olam Orchards Australia Pty Ltd	zubair.shahzad@olamnet.com
Sharpe	Brenton	Sharpe Almonds	sharpeb@senet.com.au
Shearer	Tom	De Sangosse Australia	toms@desangosse.com
Sherriff	Matt	SACOA Pty Ltd	msherrifff@sacoa.com.au
Shirmohammadi	Maryam	University of South Australia	maryam.shirmohammadi@unisa.edu.au
Sidhu	Brendan	Jubilee Almonds	brendan@jubileealmonds.com

Last Name	First Name	Organisation	Email Address
Simes	Craig	Almondco Australia Limited	nicolef@almondco.com.au
Simpson	Jacquelyn	Dept of Primary Industries NSW	jacquelyn.simpson@dpi.nsw.gov.au
Sims	Leroy	Simarloo Aust Pty Ltd	leroy@simarloo.com.au
Singh	Tony	Takhar Almonds Pty Ltd	takhar@bigpond.com
Skellern	Richard	Grays	richard.skellern@grays.com.au
Skinner	Ross	Almond Board of Australia	rskinner@australianalmonds.com.au
Slater	Brian	Aroona Farms VIC	brian.slater@aroonafarms.com.au
Slaughter	John	Burchell Nursery	john@burchellnursery.com
Sloss	Neville	Australian Nutgrower	nutgrower@nutindustry.org.au
Smirnis	Anita	MAIT Industries	anita.smirnis@mait.com.au
Smith	Nathan	SJB Ag-Nutri Pty Ltd	nathan@sjbagnutri.com.au
Smith	Trevor	Austeck Pty Ltd	sales@austeck.com
Smith	Toby	Olam Orchards Australia Pty Ltd	toby.smith@olamnet.com
Smith	Harley	CSIRO	harley.smith@csiro.au
Smith	Graham	Seasol International	grahamsmith@seasol.com.au
Smith	Daniel	Olam Orchards Australia Pty Ltd	daniel.smith@olamnet.com
Spiers	Tony	AJ & MH Spiers	spierso@riverland.net.au
Spiers	Maureen	AJ & MH Spiers	spierso@riverland.net.au
Stanic	Rob	Oro Agri International	rstanic@oroagri.com
Stefanovic	Tom	Dinicola Management Pty Ltd	tomas.stefanovic@bigpond.com
Stefanovic	Jenna	Dinicola Management Pty Ltd	jenna.stefanovic@bigpond.com
Stoeckel	Amelia	Bunyip Reach Almonds	amelia.bunyipreach@gmail.com
Stott	Andrew	Yara Australia	andrew.stott@yara.com
Sykes	Omar	Airborne Data Acquisition	omar@adacq.com
Taffs	John	Olam Orchards Australia Pty Ltd	john.taffs@olamnet.com
Tana	Lisa	Indian Ocean Farms	lisa@nee.com.au
Taylor	Dean	MAIT Industries	dean.taylor@mait.com.au
Teitz	Leigh	SJB Ag-Nutri Pty Ltd	leigh@sjbagnutri.com.au
Teng	Kate	HAIFA Australia	trevor.dennis@haifa-group.com
Teng	Jason	HAIFA Australia	jason.teng@haifa-group.com
Thiris	John	Delta Tree Nursery	johnt@deltatrees.com.au
Thomas	Steven	SLTEC Fertilizers	steven.thomas@sltec.com.au
Thomas	Ben	Ben Thomas Consulting	benthomasconsulting@bigpond.com
Thomas	Robert	Blue Sky Water Partners	mhitchcock@blueskyfunds.com.au
Thomas	Dane	SARDI	dane.thomas@sa.gov.au
Thomas	Danny	JackRabbit	danny@jackrabbit.bz
Thompson	Paul	Select Harvests Ltd	pthompson@selectharvests.com.au

Last Name	First Name	Organisation	Email Address
Thornton	Danny	EE Muir & Sons Pty Ltd	dthornton@eem.com.au
Thorp	Grant	Plant & Food Research Australia	grant.thorp@plantandfood.com.au
Trainer	Shane	Bayer CropScience	shane.trainer@bayer.com
Trinick	Natalie	Tayper Enterprises	natalie.trinick@tayper.com.au
Turner	Melanie	Melpat International Pty Ltd	melaniet@melpat.com.au
Turner	Hamish	Melpat International Pty Ltd	hamisht@melpat.com.au
Turner	Craig	Seasol International	craigturner@seasol.com.au
Ulm	Tom	Graham's Factree	libby@factree.com.au
Underwood	James	University of Sydney	james.underwood@sydney.edu.au
Usatov	Serge	Agricrop	serge@agricrop.com.au
Van Kralingen	Hein	Olam Orchards Australia Pty Ltd	hein.vankralingen@olamnet.com
Van Nes	Peter	Graham's Factree	libby@factree.com.au
Van Zyl	Pieter	Olam Orchards Australia Pty Ltd	pieter.vanzyl@olamnet.com
Vitols	Maira	Lacton Pty Ltd	alacey@addept.com.au
Wachtel	Anthony	Century Orchards	anthony@centuryorchards.com.au
Wadhwa	Rahul	Ace Impex Corporation	ace_impex_corporation@hotmail.com
Wager	Shane	Stoller Australia	shane@stoller.com.au
Walker	Mandy	CSIRO Agriculture	mandy.walker@csiro.au
Walker	Cathy	Select Harvests	cwalker@selectharvests.com.au
Walker	Nick	Rivulis Irrigation	nick.walker@rivulis.com
Walsh	Alister	Waterfind Pty Ltd	alister.walsh@waterfind.com.au
Ward	Michael	Jubilee Almonds	michael@jubileealmonds.com
Ward	Matt	Elders Ltd	matt.ward@elders.com.au
Wardell	Gordon	Wonderful Orchards	Gordon.Wardell@wonderful.com
Wardell	Teresa	Wonderful Orchards	gordon.wardell@wonderful.com
Waring	Andrew	MWT Foods	awdirect@mwtfoods.com
Watkins	Garry	Select Harvests	gwatkins@selectharvests.com.au
Webber	Mark	Laragon Pty Ltd	mark@laragon.com.au
Weckert	Nick	DuPont Crop Protection	nick.p.weckert@dupont.com
Wedmann	Richard	Conservis	rwedmann@conserviscorp.com
Wells	Joe	Orchard Machinery Corporation	ba@shakermaker.com
Wheatley	Robert	Olam Orchards Australia Pty Ltd	robert.wheatley@olamnet.com
White	Abby	Almas Almonds Pty Ltd	abby@almasalmonds.com.au
Wilde	Jamie	Olam Orchards Australia Pty Ltd	jamie.wilde@olamnet.com
Wilkie	Tim	Bayer CropScience	simon.lamacraft@bayer.com
Willcock	Graham	Orchard Rite Australia	glwillcock@gmail.com
Willcock	Lynda	GL & LK Willcock	glwillcock@gmail.com
Winter	Daryl	Rural Funds Management	dwinter@ruralfunds.com.au
Wirthensohn	Michelle	University of Adelaide	michelle.wirthensohn@adelaide.edu.au
Woods	Patrick	Fairwood Estate Pty Ltd	pjwoods@fastmail.com.au
Woods	Julie	Fairwood Estate Pty Ltd	juliekschulz@gmail.com
Woolston	Brenton	Almondco Australia Limited	brentonw@almondco.com.au
Wright	Joe	Spraygro Liquid Fertilisers	joe@spraygro.com.au
Yates	Lisa	Nuts for Life	admin@nutsforlife.com.au
Zadow	Ian	Zadow Apiaries	immjzad@bigpond.com
Zady	Joseph	Zadco For Quality Gro Pty Ltd	joe@zadco.com.au
Zaiger	Grant	Graham's Factree	libby@factree.com.au
Zhou	Shuang-Xi	CSIRO Agriculture	shuangxi.zhou2014@gmail.com

Conference Feedback and Evaluation

Thank you for joining us at the 2016 Australian Almond Conference at the Pullman Melbourne Albert Park.

Before you consider deleting this email, we ask you for a few minutes of your time. Why? Because we care and know that your feedback will make us try harder to improve your conference experience next time!

We understand that people are always sending feedback surveys to be completed, and what sets us apart is that we genuinely listen. You can talk to us by either completing the short survey or sending me an email with your feedback - I want to hear from you!

It should take no longer than 5-10 minutes to complete and you can remain anonymous if you wish to do so.

Once again, thank you for your support of the 2016 Australian Almond Conference and we hope to see you again in 2018!

Jo Pippos
Conference & Communications Manager

1. Overall, how would you rate the organisational and administration aspects of the Conference?

	Excellent	Good	Satisfactory	Undecided	Unsatisfactory
Registration Process	☐	☐	☐	☐	☐
Choice of Facility/Venue	☐	☐	☐	☐	☐
Scheduling/Timing of the Conference	☐	☐	☐	☐	☐
Conference Catering (day catering)	☐	☐	☐	☐	☐
Conference Support Staff	☐	☐	☐	☐	☐
Number of Speakers & Sessions	☐	☐	☐	☐	☐
Length of Conference Sessions	☐	☐	☐	☐	☐
Length of Conference overall	☐	☐	☐	☐	☐

What do you think we could do to improve on the above?

2. What are the main reasons you attended this year's Conference? (Select all that apply)

- ☐ Keynote Speakers & Program
- ☐ Training & Professional Development
- ☐ Networking
- ☐ Other (please specify)

3. How did you hear about the event? (Select all that apply)

- ☐ Email
- ☐ Website
- ☐ Colleague
- ☐ 'In A Nutshell' newsletter

Other (please specify)

4. How well did the conference meet your expectations? Was it...?

- ○ A lot better than expected
- ○ Better than expected
- ○ About what I expected
- ○ Worse than expected
- ○ A lot worse than expected

5. Which parts of the Conference did you attend? (Select all that apply)

- [ ] I attended the Conference and the Events
- [ ] Conference Day Sessions ONLY
- [ ] Welcome Cocktail Function ONLY
- [ ] Conference Gala Dinner ONLY

Conference Sessions & Presenters

6. Please rate the following:

	Excellent	Good	Satisfactory	Undecided	Unsatisfactory
Conference Structure	☐	☐	☐	☐	☐
Relevance of Presentations	☐	☐	☐	☐	☐
Balance & Mix of Topics	☐	☐	☐	☐	☐
Quality of Speakers & Presentations (overall)	☐	☐	☐	☐	☐
Conference Value for Money	☐	☐	☐	☐	☐

Is there anything we could do to improve any of these aspects?

7. Our Speakers, Day 1 - How did they do?Please think about their topic, presentation, content and relevance.

	Extremely Engaging	Very Engaging	Average	Below Average	Poor
Californian Almonds, State of Play ***Richard Waycott, Almond Board of California*** *(Video Presentation)*	☐	☐	☐	☐	☐
California Almonds: Demand Persists ***Vernon Crowder, Rabobank USA***	☐	☐	☐	☐	☐
Marketing Australian Almonds ***Joseph Ebbage, Almond Board of Australia***	☐	☐	☐	☐	☐
Yield as a function of evapotranspiration and irrigation ***Blake Sanden, University of California***	☐	☐	☐	☐	☐
VRDI: The New Generation in Drip Irrigation ***Dr Itamar Nadav, Netafim Israel***	☐	☐	☐	☐	☐
Fluid Assets: - The Water World ***Gavin McMahon, Central Irrigation Trust/National Irrigators Council***	☐	☐	☐	☐	☐
The Emergence of Water Trading Patterns: What it Means for Almond Growers ***Alister Walsh, Waterfind***	☐	☐	☐	☐	☐
Sustainability – The California Almond Journey, so far ***Dr Gabriele Ludwig, Almond Board of California***	☐	☐	☐	☐	☐
Optimising Weed Control in Almond Orchards ***Dr Peter Boutsalis, Plant Science Consulting***	☐	☐	☐	☐	☐
Plant Growth Regulation and Pest Protection Strategies in California Almond Production ***Lance Beem, Beem Consulting/Beem AgroSciences Corp***	☐	☐	☐	☐	☐

8. Our Speakers, Day 2 - How did they do? Please think about their topic, presentation, content and relevance.

	Extremely Engaging	Very Engaging	Average	Below Average	Poor
Australian - Mediterranean Diet Research ***Professor Catherine Itsiopolous, LaTrobe University***	☐	☐	☐	☐	☐
Relationships between nut consumption and vascular and cognitive function ***Assoc. Professor Alison Coates, University of South Australia***	☐	☐	☐	☐	☐
Nuts for Life ***Lisa Yates, Nuts for Life***	☐	☐	☐	☐	☐
The Role of Almonds in Sports Recovery ***Simone Austin, Aus-Dietetics***	☐	☐	☐	☐	☐
Almond Strategic Investment Plan 2017-22: Some Early Insights ***Michael Clarke, AgEconPlus***	☐	☐	☐	☐	☐
Plant Health Australia: Who we are & What we do ***Dr Susanna Driessen, Plant Health Australia***	☐	☐	☐	☐	☐
The Biology Behind Preparing Honey Bee Colonies for Almond Pollination ***Dr Gordon Wardell, Wonderful Orchards USA***	☐	☐	☐	☐	☐
On Property Best Practice: Timing & Management of Hives ***Ian Zadow, Zadow Apiaries & AHBIC***	☐	☐	☐	☐	☐
Intelligent Information Systems for Horticulture & Tree Crops ***Dr James Underwood, Australian Centre for Field Robotics, University of Sydney***	☐	☐	☐	☐	☐
Transforming Almond Orchards: Tree Architecture & Advanced Production Systems ***Dr Grant Thorp, Plant & Food Research Australia***	☐	☐	☐	☐	☐
Getting useful information for almond producers from Precision Agriculture Sensing Technologies ***Dr Rob Bramley, CSIRO Agriculture & Food***	☐	☐	☐	☐	☐
Evolution of Management Practices of Select Harvests & GPS Planting ***Ben Brown, Select Harvests***	☐	☐	☐	☐	☐

9. Overall how would you rate the conference presenters and topics?

	Excellent	Good	Satisfactory	Undecided	Unsatisfactory
Demonstration of expertise on topics presented	☐	☐	☐	☐	☐
Effective responses to questions	☐	☐	☐	☐	☐
Clarity of presentations	☐	☐	☐	☐	☐
Level of new information provided	☐	☐	☐	☐	☐
Effectiveness of presentation	☐	☐	☐	☐	☐
Amount of new information learned	☐	☐	☐	☐	☐

Other comments?

10. Do you have any suggestions for future conference topics or speakers?

Social Events

11. Welcome Cocktail Function. What did you think?

	Excellent	Good	Satisfactory	Undecided	Poor
Timing of the event	☐	☐	☐	☐	☐
Length of the event	☐	☐	☐	☐	☐
Catering at the event	☐	☐	☐	☐	☐

Is there anything you think we could do to make the Welcome Function better?

12. Conference Gala Dinner. What did you think?

	Excellent	Good	Satisfactory	Fair	Poor
Timing of the dinner	☐	☐	☐	☐	☐
Length of the dinner	☐	☐	☐	☐	☐
Catering	☐	☐	☐	☐	☐
Entertainment by Raymond Crowe, Unusualist	☐	☐	☐	☐	☐

Is there anything that we could do to make the Conference Dinner better?

Lastly...

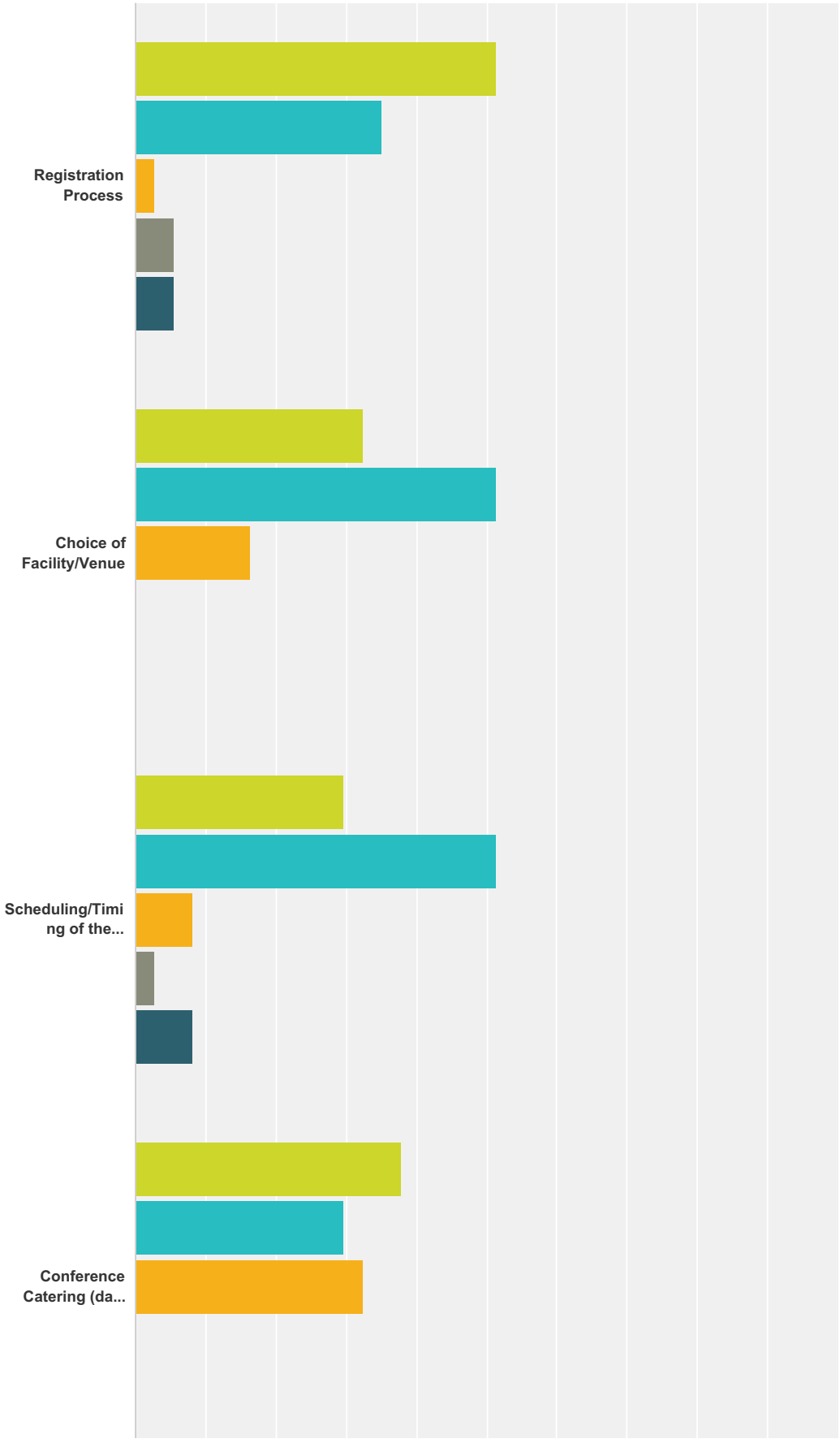
Please provide us with your contact details so that we can ensure you receive all of our future Conference and event invitations.
We promise not to spam you, and your details will NOT be shared with anyone.

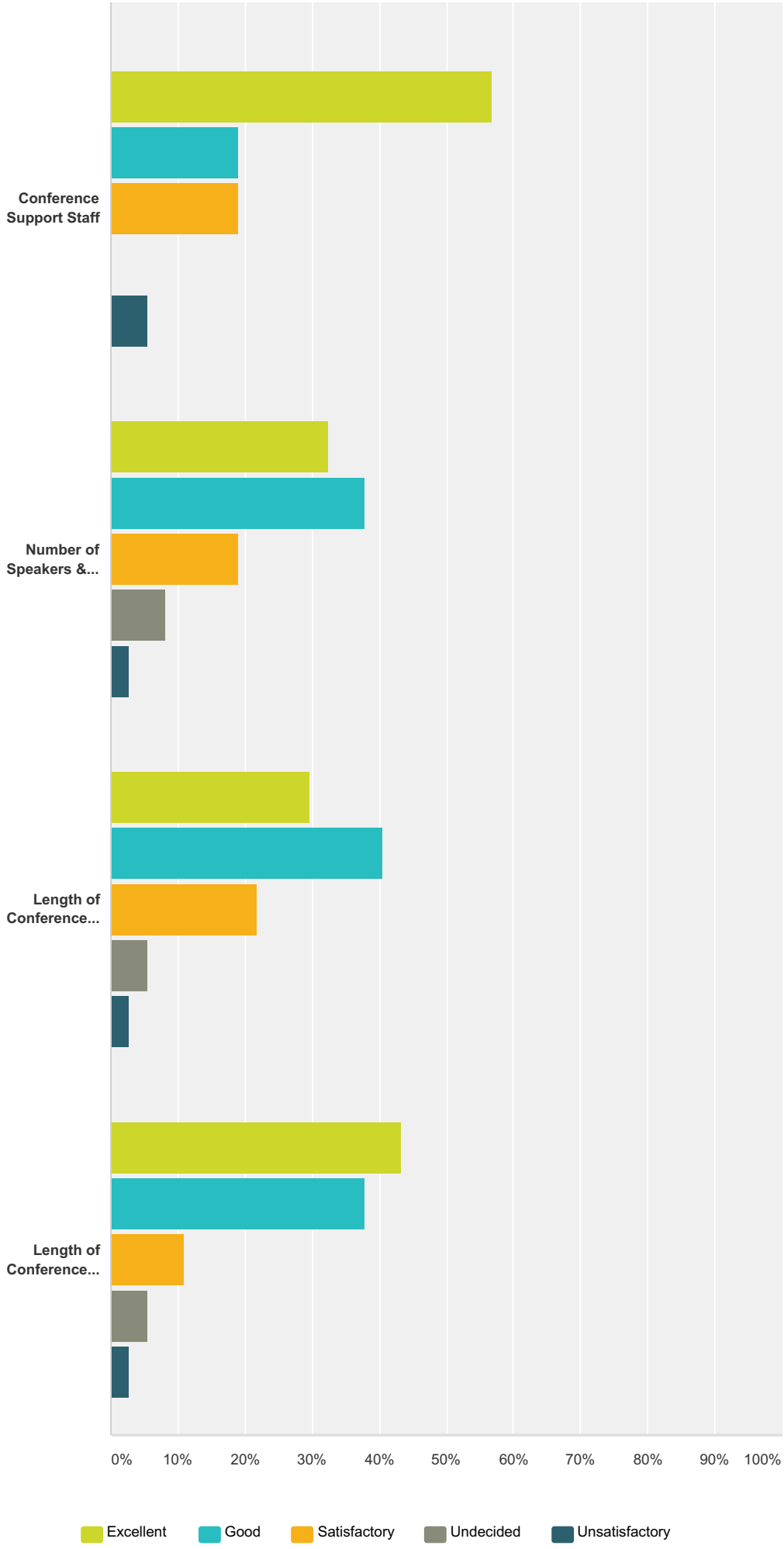
13. Please provide your details:

Name	
Company	
Email Address	

Q1 Overall, how would you rate the organisational and administration aspects of the Conference?

Answered: 37 Skipped: 0

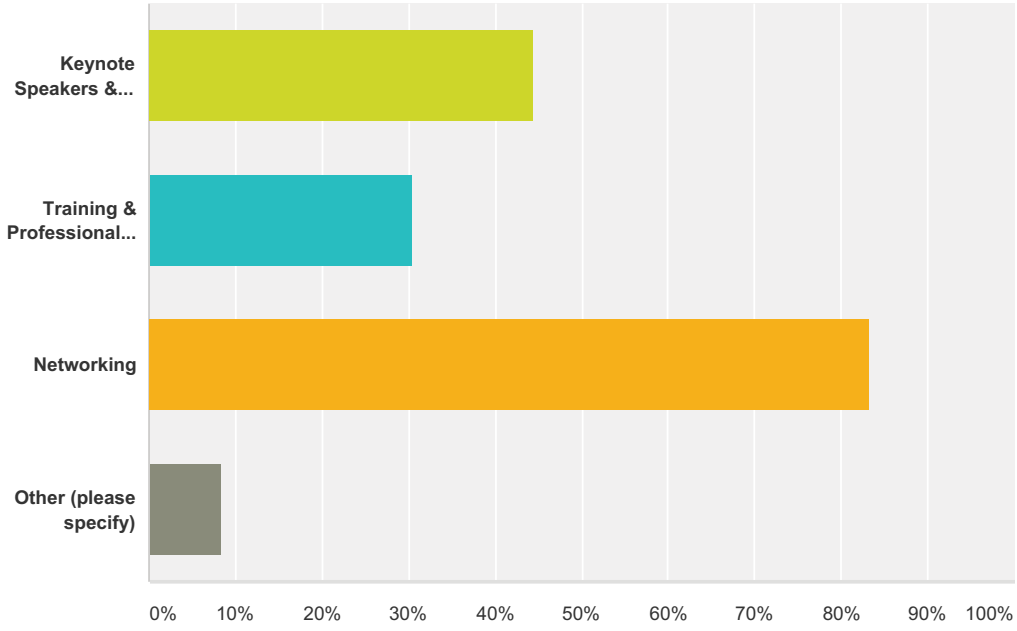



Conference Support Staff
Number of Speakers &...
Length of Conference...
Length of Conference...
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Excellent
Good
Satisfactory
Undecided
Unsatisfactory

	Excellent	Good	Satisfactory	Undecided	Unsatisfactory	Total Respondents
Registration Process	**51.35%** 19	**35.14%** 13	**2.70%** 1	**5.41%** 2	**5.41%** 2	37
Choice of Facility/Venue	**32.43%** 12	**51.35%** 19	**16.22%** 6	**0.00%** 0	**0.00%** 0	37
Scheduling/Timing of the Conference	**29.73%** 11	**51.35%** 19	**8.11%** 3	**2.70%** 1	**8.11%** 3	37
Conference Catering (day catering)	**37.84%** 14	**29.73%** 11	**32.43%** 12	**0.00%** 0	**0.00%** 0	37
Conference Support Staff	**56.76%** 21	**18.92%** 7	**18.92%** 7	**0.00%** 0	**5.41%** 2	37
Number of Speakers & Sessions	**32.43%** 12	**37.84%** 14	**18.92%** 7	**8.11%** 3	**2.70%** 1	37
Length of Conference Sessions	**29.73%** 11	**40.54%** 15	**21.62%** 8	**5.41%** 2	**2.70%** 1	37
Length of Conference overall	**43.24%** 16	**37.84%** 14	**10.81%** 4	**5.41%** 2	**2.70%** 1	37

Q2 What are the main reasons you attended this year's Conference? (Select all that apply)

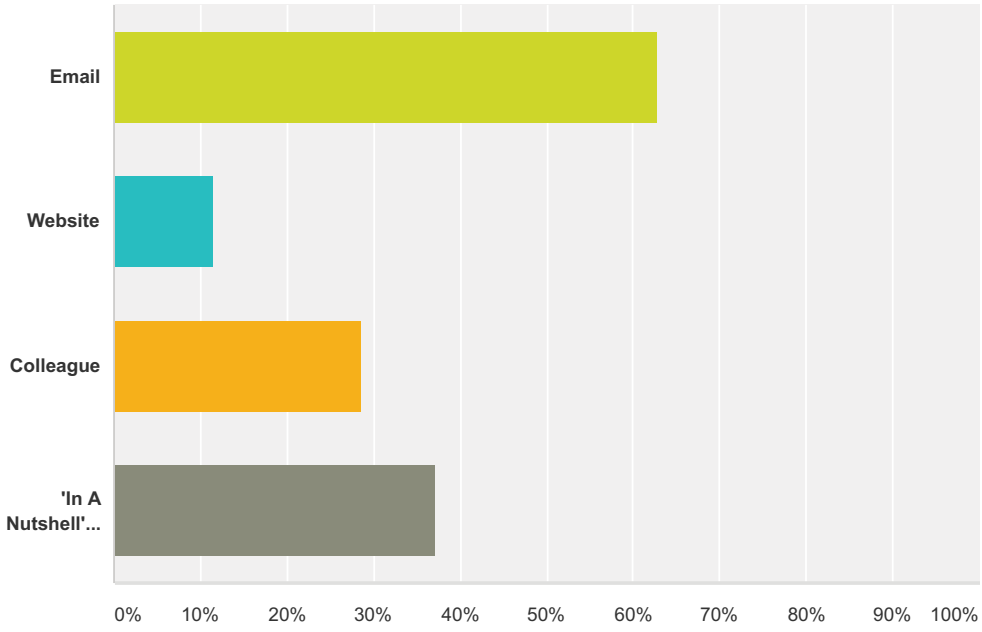
Answered: 36 Skipped: 1



Answer Choices	Responses	
Keynote Speakers & Program	**44.44%**	16
Training & Professional Development	**30.56%**	11
Networking	**83.33%**	30
Other (please specify)	**8.33%**	3
Total Respondents: 36		

Q3 How did you hear about the event? (Select all that apply)

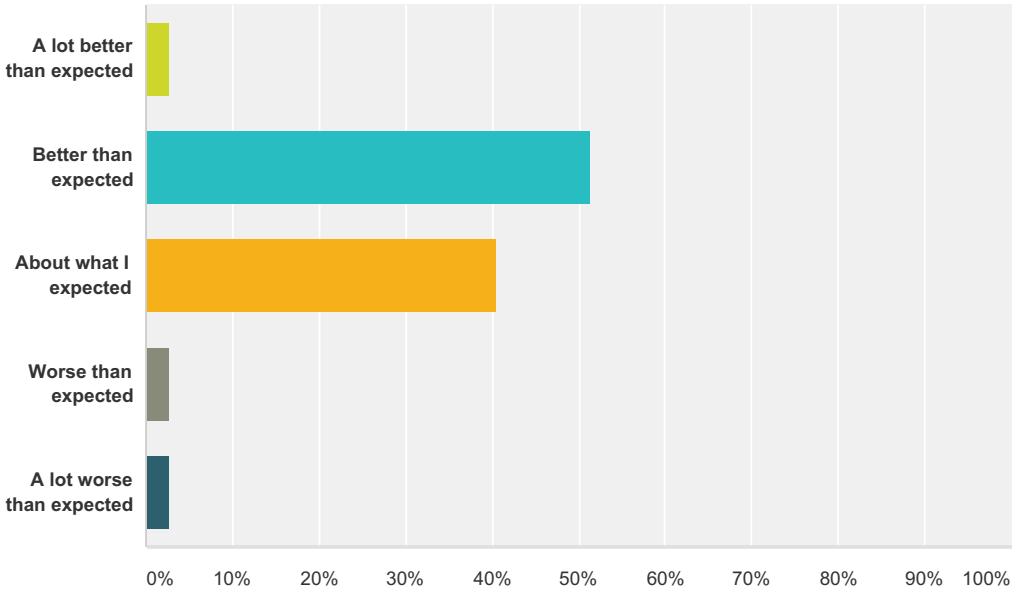
Answered: 35 Skipped: 2



Answer Choices	Responses	
Email	**62.86%**	22
Website	**11.43%**	4
Colleague	**28.57%**	10
'In A Nutshell' newsletter	**37.14%**	13
Total Respondents: 35		

Q4 How well did the conference meet your expectations? Was it...?

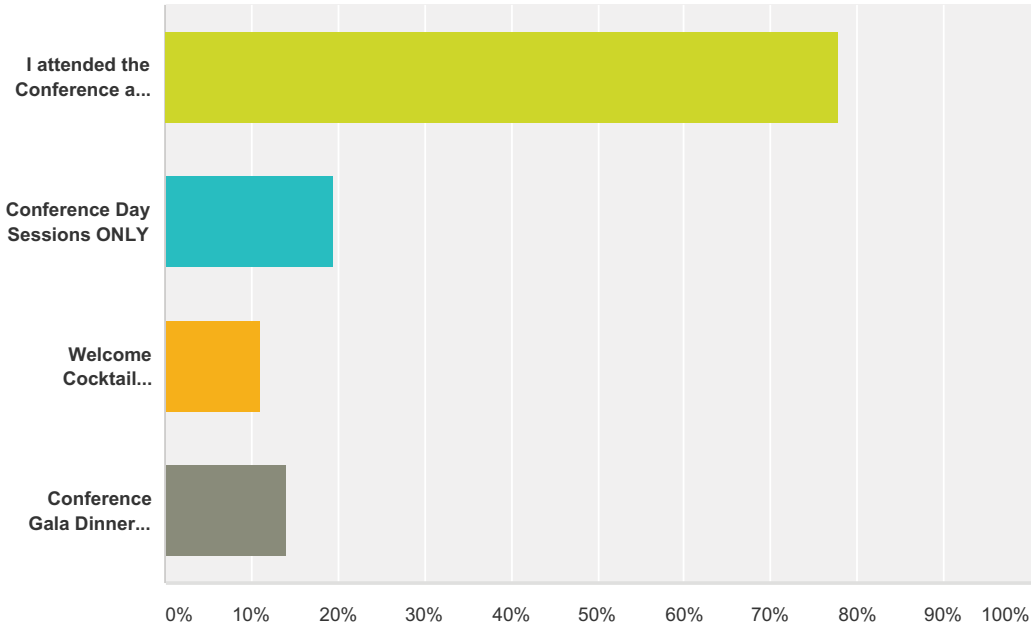
Answered: 37 Skipped: 0



Answer Choices	Responses	
A lot better than expected	**2.70%**	1
Better than expected	**51.35%**	19
About what I expected	**40.54%**	15
Worse than expected	**2.70%**	1
A lot worse than expected	**2.70%**	1
Total		**37**

Q5 Which parts of the Conference did you attend? (Select all that apply)

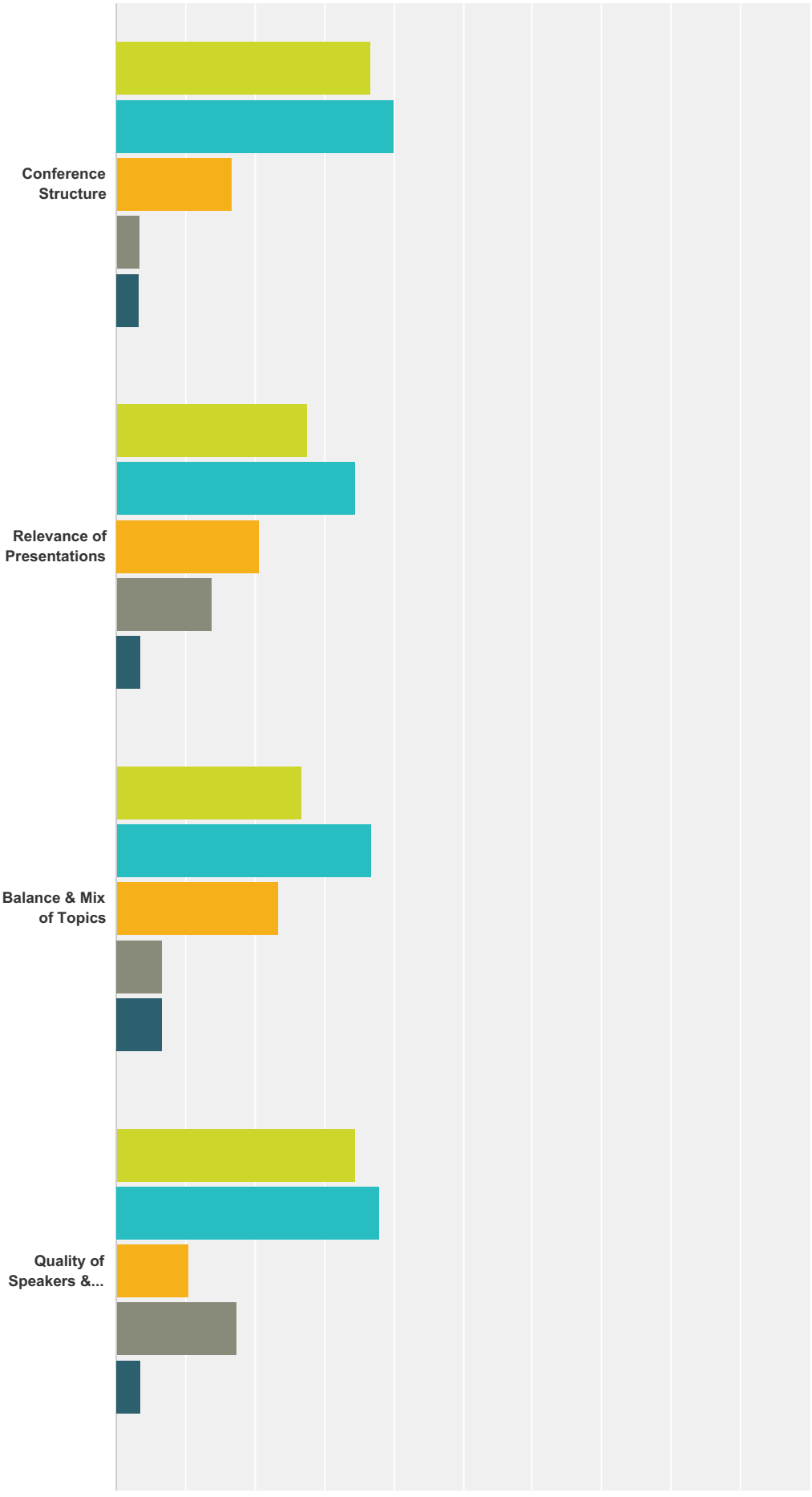
Answered: 36 Skipped: 1

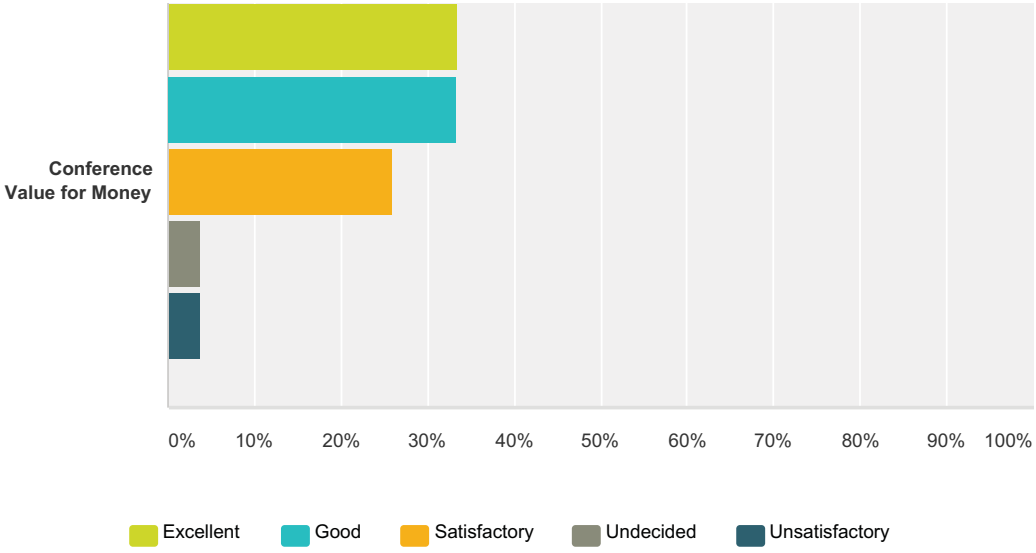


Answer Choices	Responses	
I attended the Conference and the Events	**77.78%**	28
Conference Day Sessions ONLY	**19.44%**	7
Welcome Cocktail Function ONLY	**11.11%**	4
Conference Gala Dinner ONLY	**13.89%**	5
Total Respondents: 36		

Q6 Please rate the following:

Answered: 30 Skipped: 7

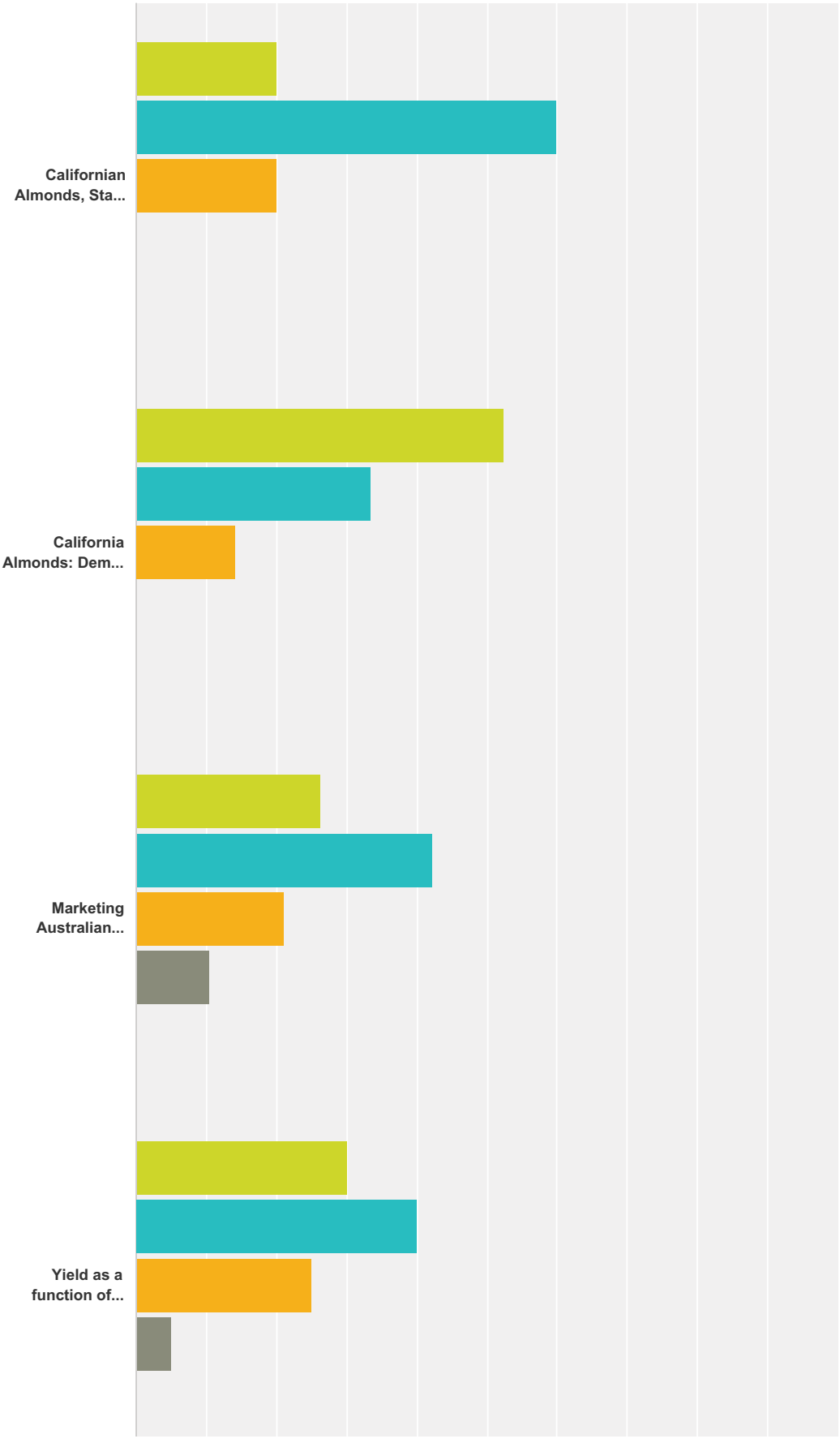


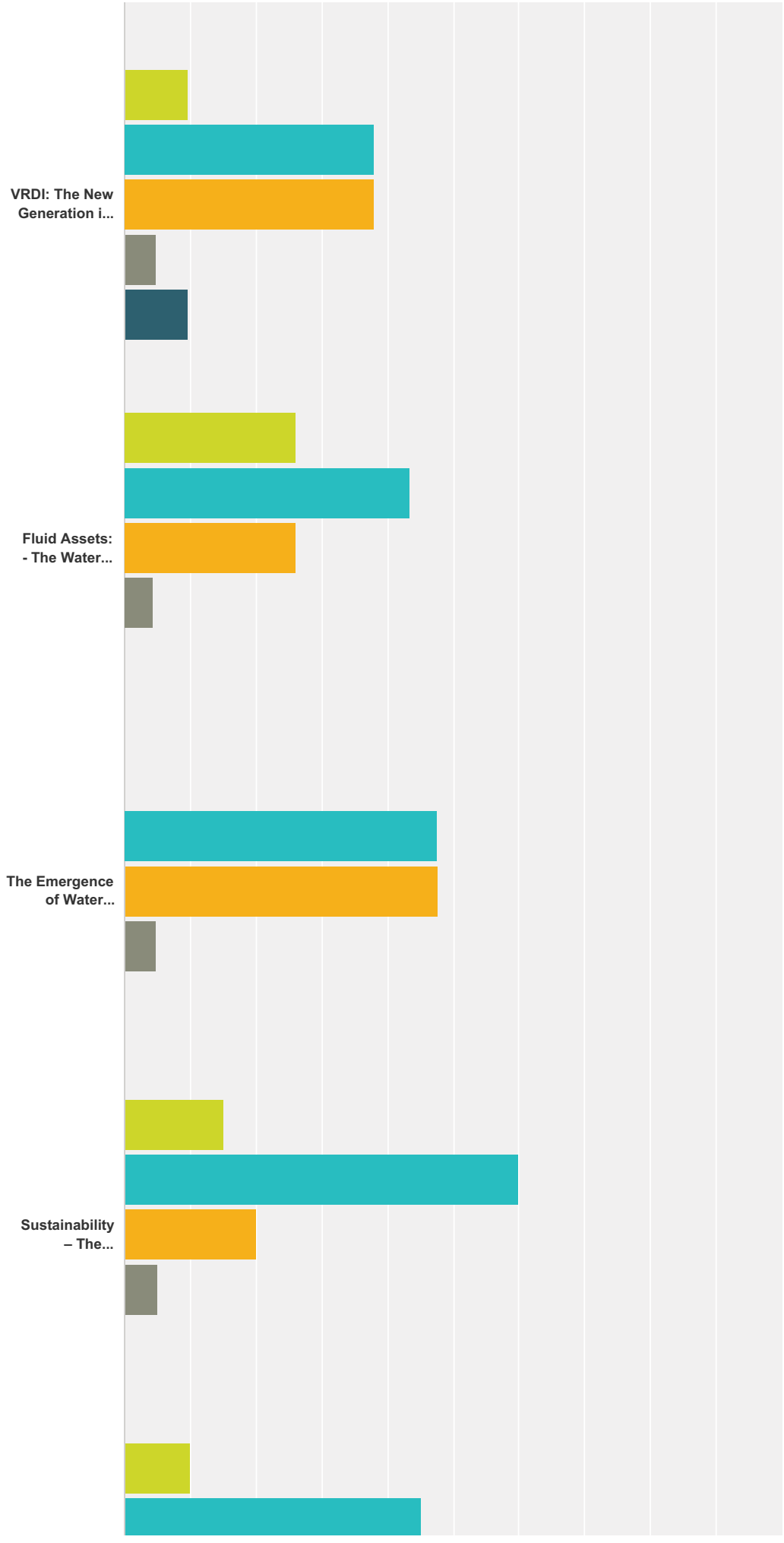


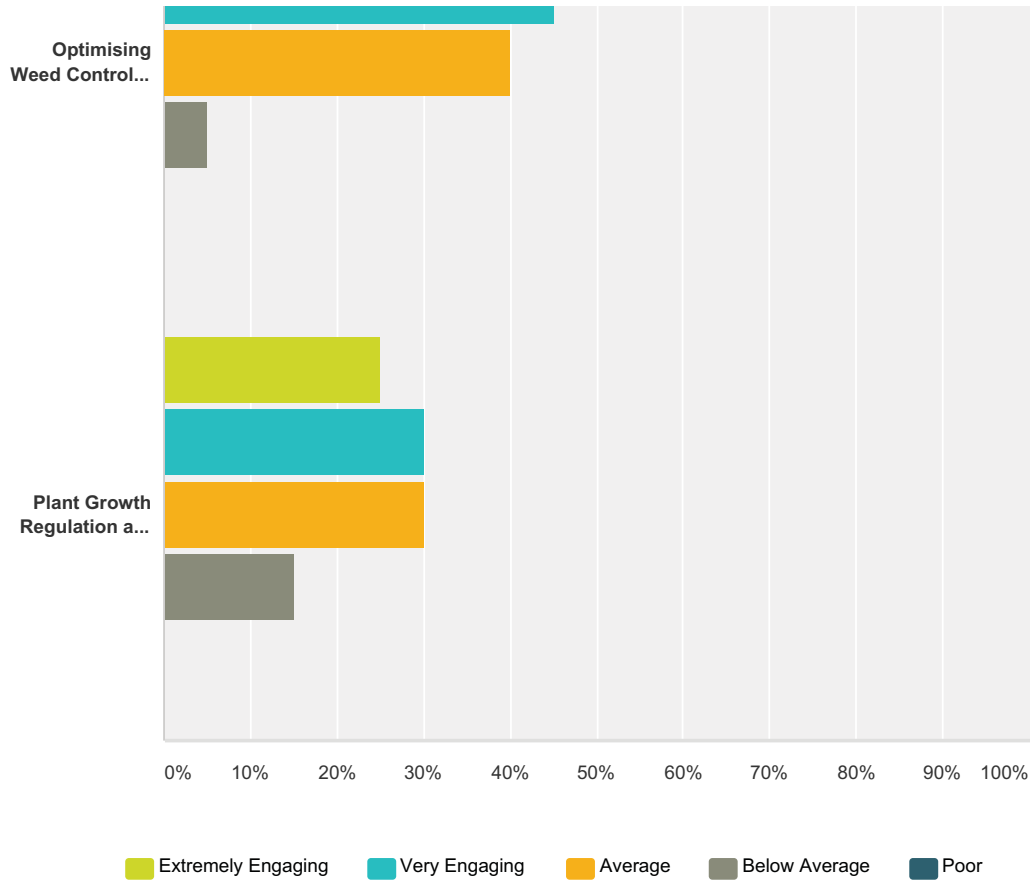
	Excellent	Good	Satisfactory	Undecided	Unsatisfactory	Total Respondents
Conference Structure	**36.67%** 11	**40.00%** 12	**16.67%** 5	**3.33%** 1	**3.33%** 1	30
Relevance of Presentations	**27.59%** 8	**34.48%** 10	**20.69%** 6	**13.79%** 4	**3.45%** 1	29
Balance & Mix of Topics	**26.67%** 8	**36.67%** 11	**23.33%** 7	**6.67%** 2	**6.67%** 2	30
Quality of Speakers & Presentations (overall)	**34.48%** 10	**37.93%** 11	**10.34%** 3	**17.24%** 5	**3.45%** 1	29
Conference Value for Money	**33.33%** 9	**33.33%** 9	**25.93%** 7	**3.70%** 1	**3.70%** 1	27

Q7 Our Speakers, Day 1 - How did they do? Please think about their topic, presentation, content and relevance.

Answered: 25 Skipped: 12



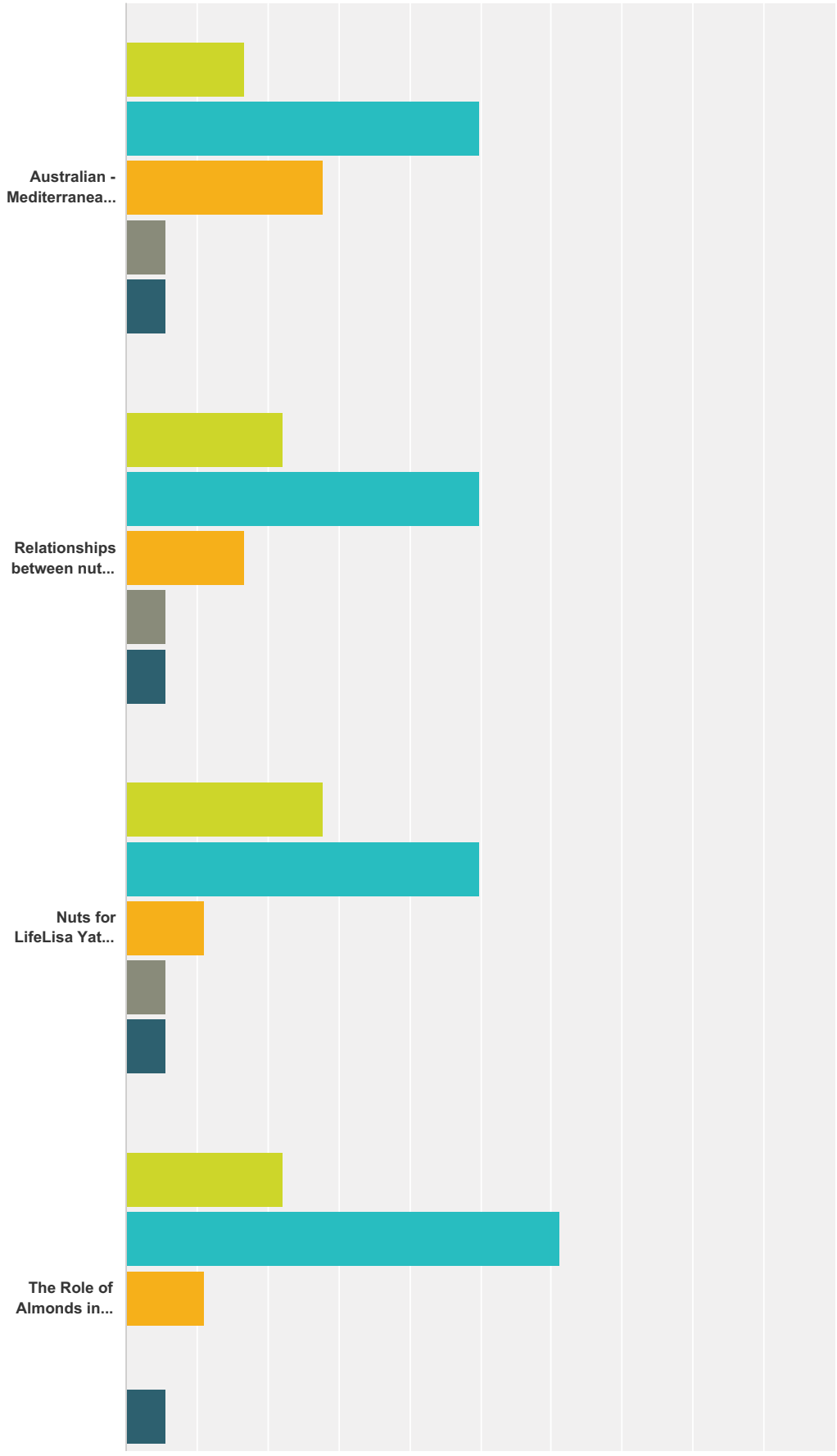

VRDI: The New Generation i...
Fluid Assets: - The Water...
The Emergence of Water...
Sustainability – The...

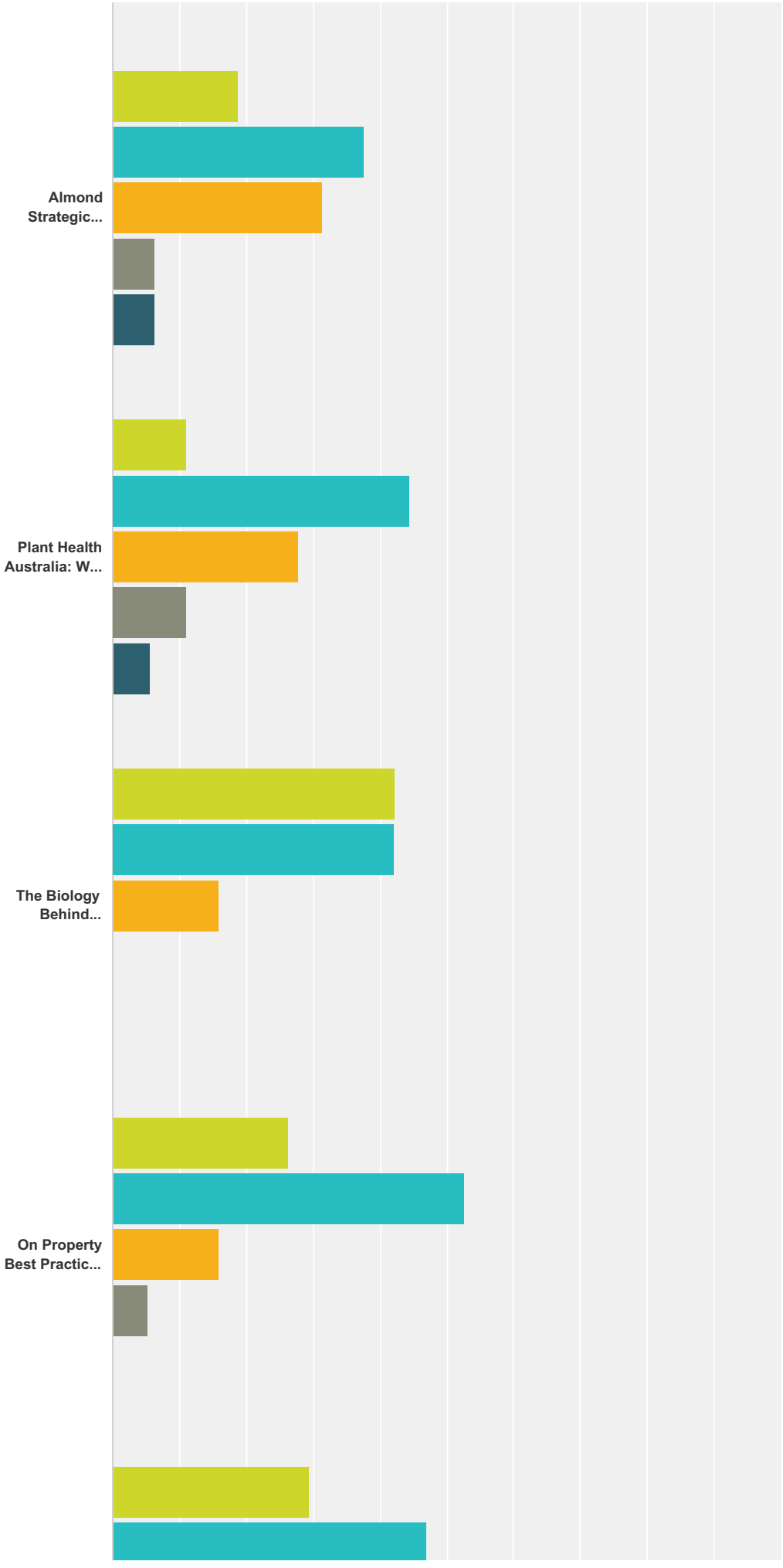


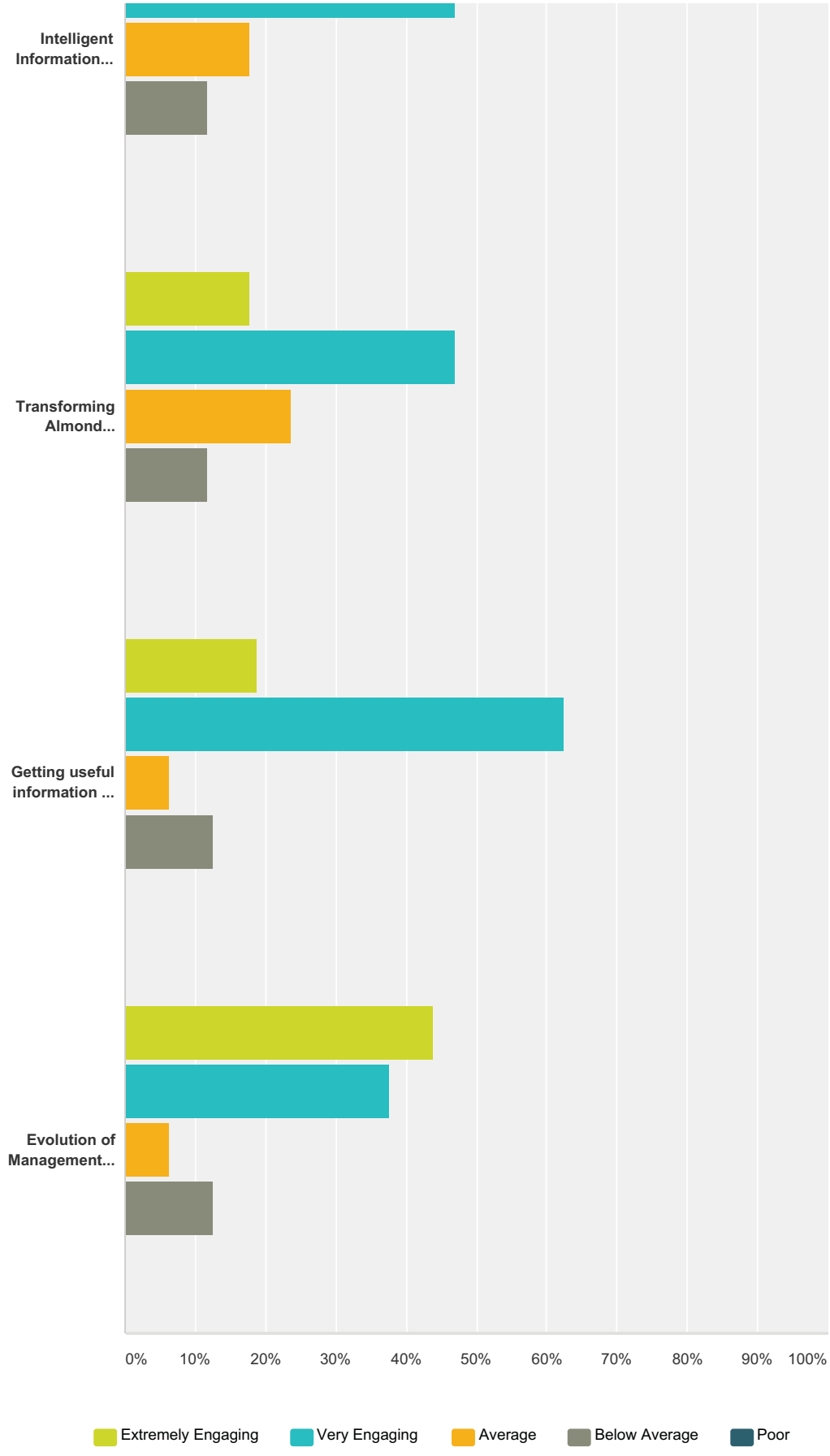
	Extremely Engaging	Very Engaging	Average	Below Average	Poor	Total Respondents
Californian Almonds, State of PlayRichard Waycott, Almond Board of California (Video Presentation)	**20.00%** 4	**60.00%** 12	**20.00%** 4	**0.00%** 0	**0.00%** 0	20
California Almonds: Demand PersistsVernon Crowder, Rabobank USA	**52.38%** 11	**33.33%** 7	**14.29%** 3	**0.00%** 0	**0.00%** 0	21
Marketing Australian AlmondsJoseph Ebbage, Almond Board of Australia	**26.32%** 5	**42.11%** 8	**21.05%** 4	**10.53%** 2	**0.00%** 0	19
Yield as a function of evapotranspiration and irrigationBlake Sanden, University of California	**30.00%** 6	**40.00%** 8	**25.00%** 5	**5.00%** 1	**0.00%** 0	20
VRDI: The New Generation in Drip IrrigationDr Itamar Nadav, Netafim Israel	**9.52%** 2	**38.10%** 8	**38.10%** 8	**4.76%** 1	**9.52%** 2	21
Fluid Assets: - The Water WorldGavin McMahon, Central Irrigation Trust/National Irrigators Council	**26.09%** 6	**43.48%** 10	**26.09%** 6	**4.35%** 1	**0.00%** 0	23
The Emergence of Water Trading Patterns: What it Means for Almond GrowersAlister Walsh, Waterfind	**0.00%** 0	**47.62%** 10	**47.62%** 10	**4.76%** 1	**0.00%** 0	21
Sustainability – The California Almond Journey, so farDr Gabriele Ludwig, Almond Board of California	**15.00%** 3	**60.00%** 12	**20.00%** 4	**5.00%** 1	**0.00%** 0	20
Optimising Weed Control in Almond OrchardsDr Peter Boutsalis, Plant Science Consulting	**10.00%** 2	**45.00%** 9	**40.00%** 8	**5.00%** 1	**0.00%** 0	20
Plant Growth Regulation and Pest Protection Strategies in California Almond ProductionLance Beem, Beem Consulting/Beem AgroSciences Corp	**25.00%** 5	**30.00%** 6	**30.00%** 6	**15.00%** 3	**0.00%** 0	20

Q8 Our Speakers, Day 2 - How did they do? Please think about their topic, presentation, content and relevance.

Answered: 25 Skipped: 12




Almond Strategic...
Plant Health Australia: W...
The Biology Behind...
On Property Best Practic...

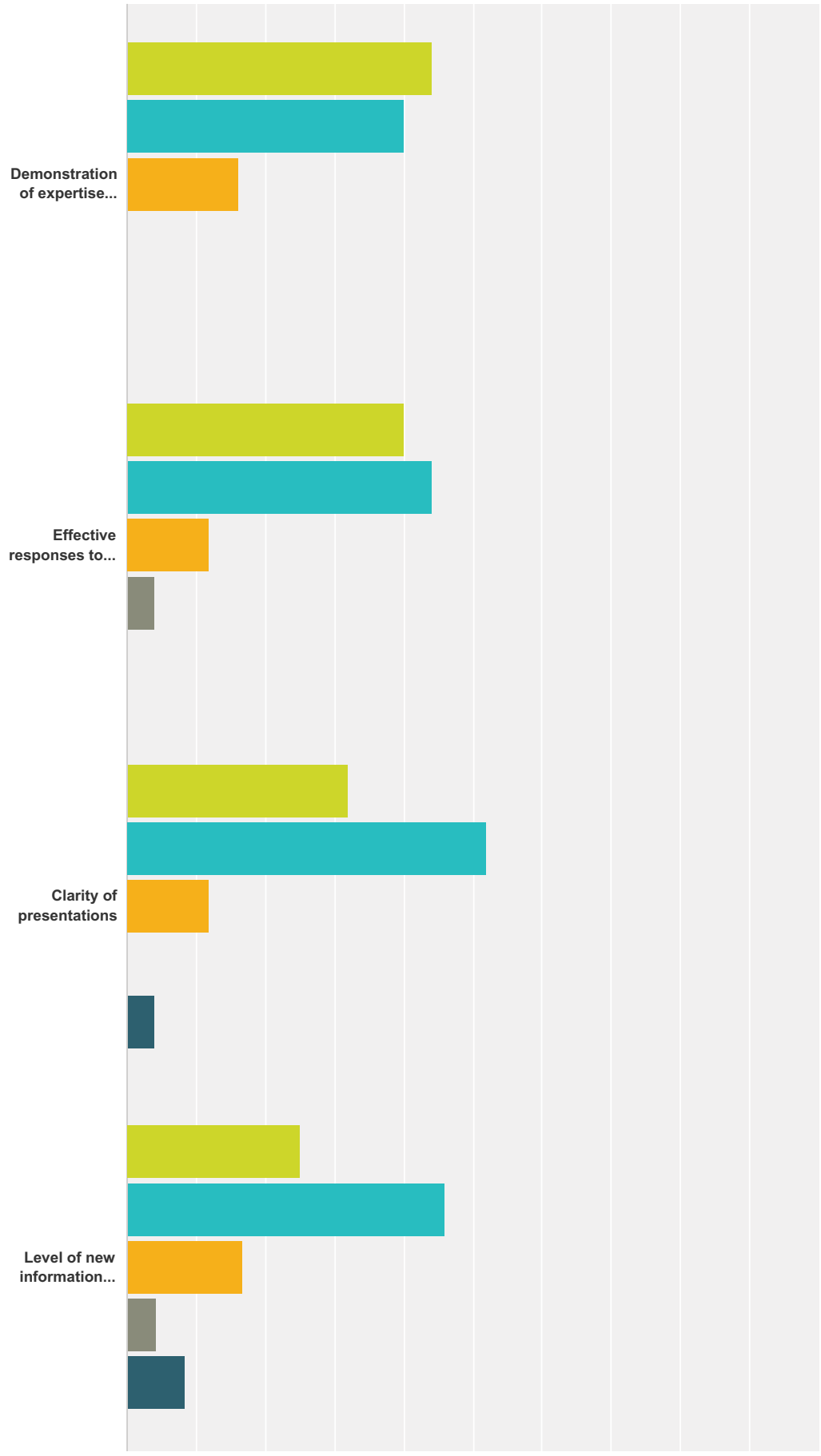


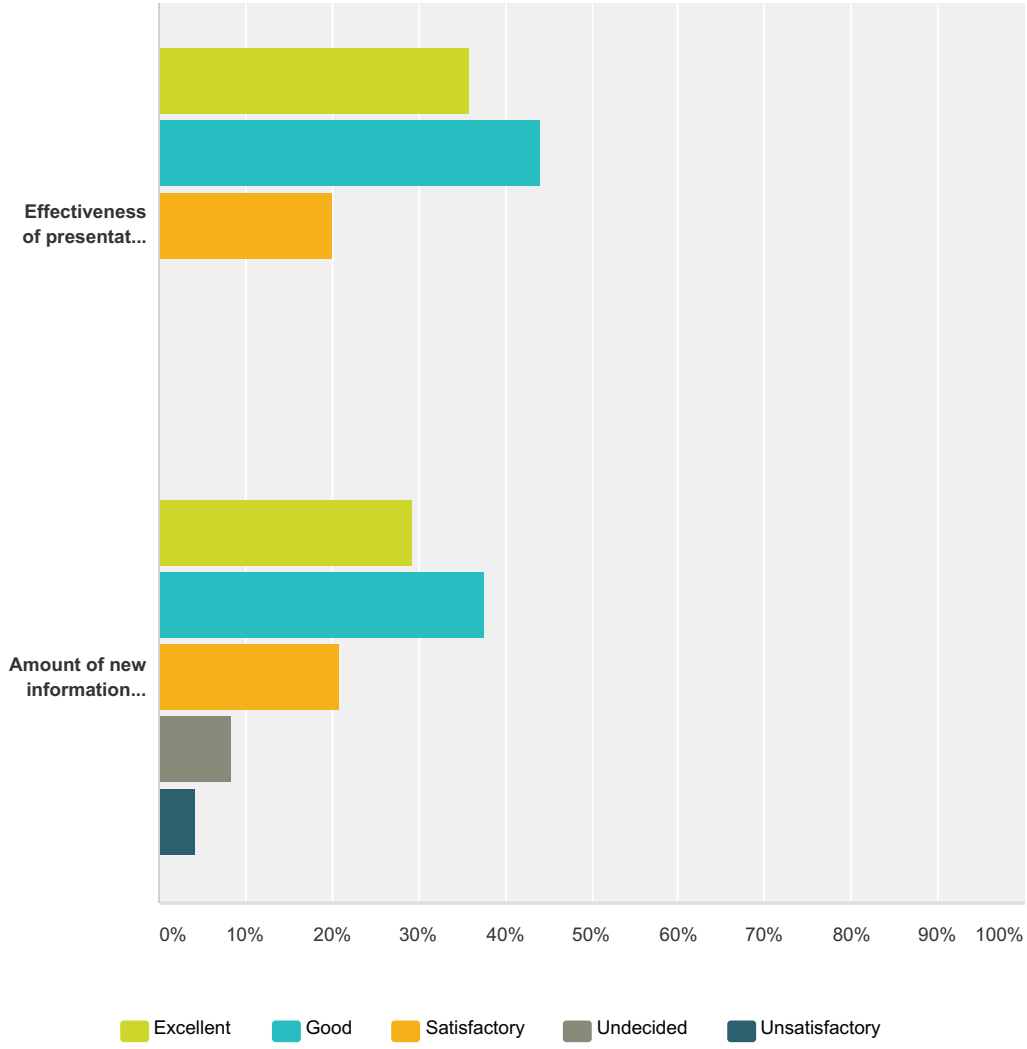
	Extremely Engaging	Very Engaging	Average	Below Average	Poor	Total Respondents
Australian - Mediterranean Diet ResearchProfessor Catherine Itsiopolous, LaTrobe University	**16.67%** 3	**50.00%** 9	**27.78%** 5	**5.56%** 1	**5.56%** 1	18

Relationships between nut consumption and vascular and cognitive functionAssoc. Professor Alison Coates, University of South Australia	**22.22%** 4	**50.00%** 9	**16.67%** 3	**5.56%** 1	**5.56%** 1	18
Nuts for LifeLisa Yates, Nuts for Life	**27.78%** 5	**50.00%** 9	**11.11%** 2	**5.56%** 1	**5.56%** 1	18
The Role of Almonds in Sports RecoverySimone Austin, Aus-Dietetics	**22.22%** 4	**61.11%** 11	**11.11%** 2	**0.00%** 0	**5.56%** 1	18
Almond Strategic Investment Plan 2017-22: Some Early InsightsMichael Clarke, AgEconPlus	**18.75%** 3	**37.50%** 6	**31.25%** 5	**6.25%** 1	**6.25%** 1	16
Plant Health Australia: Who we are & What we doDr Susanna Driessen, Plant Health Australia	**11.11%** 2	**44.44%** 8	**27.78%** 5	**11.11%** 2	**5.56%** 1	18
The Biology Behind Preparing Honey Bee Colonies for Almond PollinationDr Gordon Wardell, Wonderful Orchards USA	**42.11%** 8	**42.11%** 8	**15.79%** 3	**0.00%** 0	**0.00%** 0	19
On Property Best Practice: Timing & Management of HivesIan Zadow, Zadow Apiaries & AHBIC	**26.32%** 5	**52.63%** 10	**15.79%** 3	**5.26%** 1	**0.00%** 0	19
Intelligent Information Systems for Horticulture & Tree CropsDr James Underwood, Australian Centre for Field Robotics, University of Sydney	**29.41%** 5	**47.06%** 8	**17.65%** 3	**11.76%** 2	**0.00%** 0	17
Transforming Almond Orchards: Tree Architecture & Advanced Production SystemsDr Grant Thorp, Plant & Food Research Australia	**17.65%** 3	**47.06%** 8	**23.53%** 4	**11.76%** 2	**0.00%** 0	17
Getting useful information for almond producers from Precision Agriculture Sensing TechnologiesDr Rob Bramley, CSIRO Agriculture & Food	**18.75%** 3	**62.50%** 10	**6.25%** 1	**12.50%** 2	**0.00%** 0	16
Evolution of Management Practices of Select Harvests & GPS PlantingBen Brown, Select Harvests	**43.75%** 7	**37.50%** 6	**6.25%** 1	**12.50%** 2	**0.00%** 0	16

Q9 Overall how would you rate the conference presenters and topics?

Answered: 25 Skipped: 12





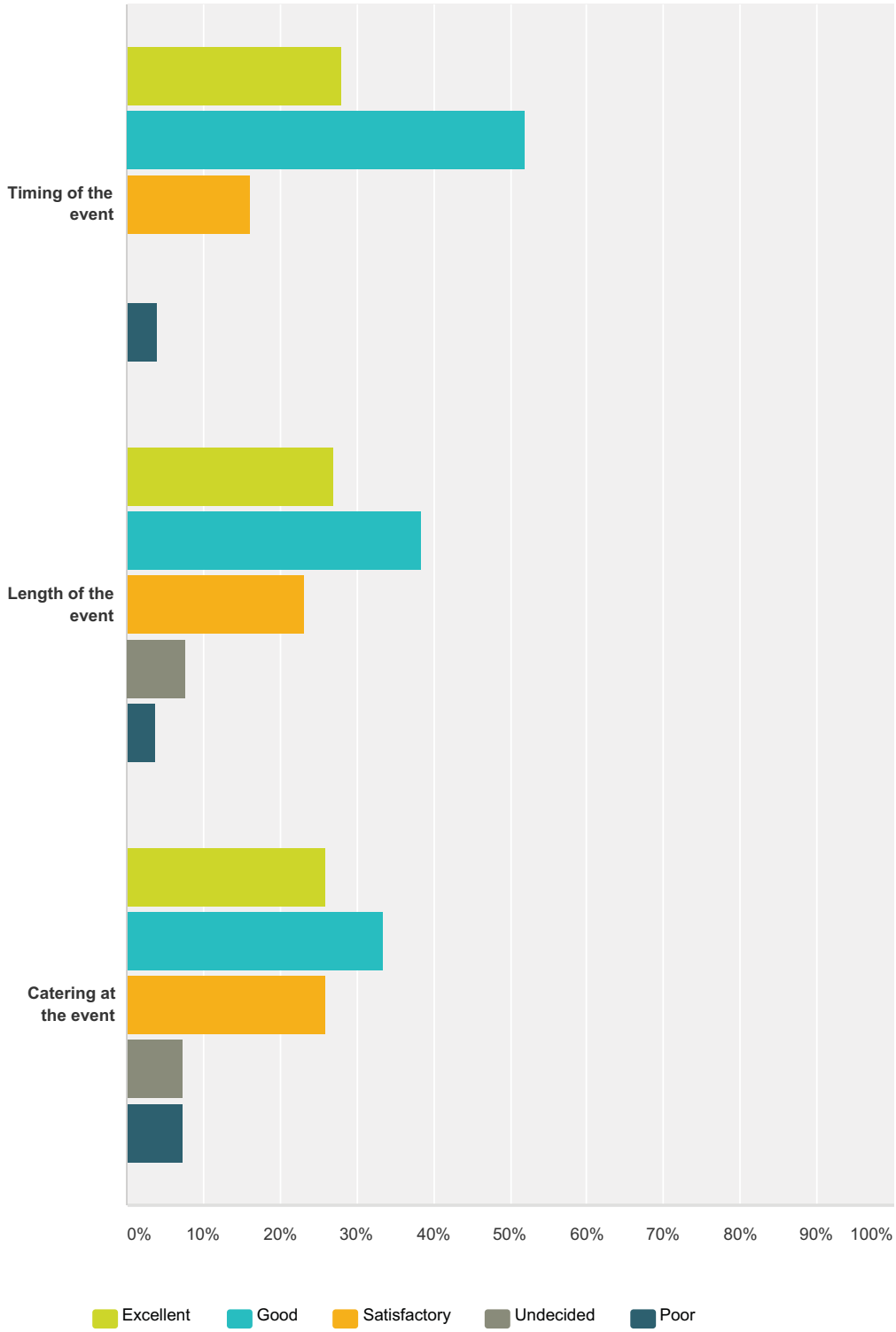
	Excellent	Good	Satisfactory	Undecided	Unsatisfactory	Total Respondents
Demonstration of expertise on topics presented	**44.00%** 11	**40.00%** 10	**16.00%** 4	**0.00%** 0	**0.00%** 0	25
Effective responses to questions	**40.00%** 10	**44.00%** 11	**12.00%** 3	**4.00%** 1	**0.00%** 0	25
Clarity of presentations	**32.00%** 8	**52.00%** 13	**12.00%** 3	**0.00%** 0	**4.00%** 1	25
Level of new information provided	**25.00%** 6	**45.83%** 11	**16.67%** 4	**4.17%** 1	**8.33%** 2	24
Effectiveness of presentation	**36.00%** 9	**44.00%** 11	**20.00%** 5	**0.00%** 0	**0.00%** 0	25
Amount of new information learned	**29.17%** 7	**37.50%** 9	**20.83%** 5	**8.33%** 2	**4.17%** 1	24

Q10 Do you have any suggestions for future conference topics or speakers?

Answered: 7 Skipped: 30

Q11 Welcome Cocktail Function. What did you think?

Answered: 27 Skipped: 10

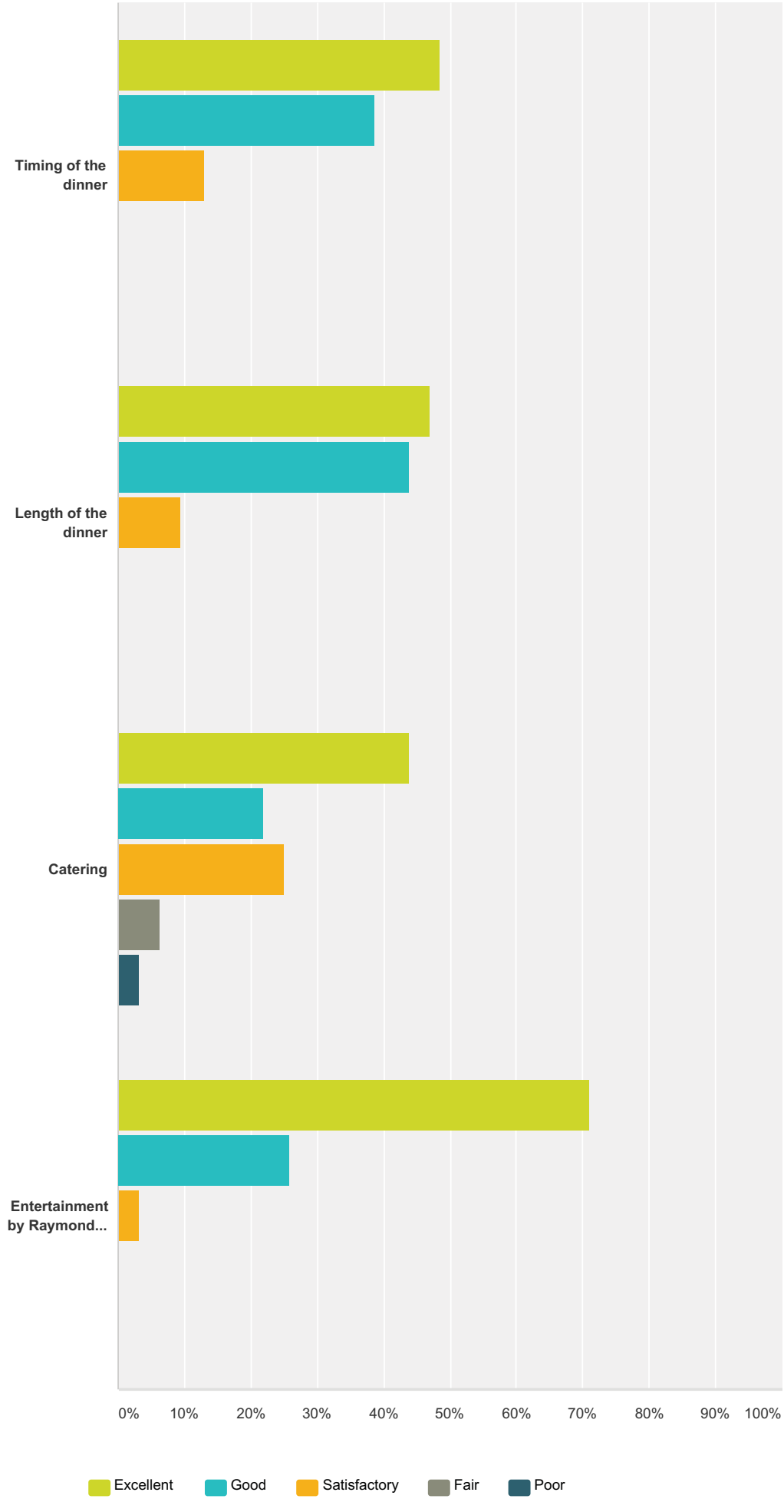


	Excellent	Good	Satisfactory	Undecided	Poor	Total Respondents
Timing of the event	**28.00%** 7	**52.00%** 13	**16.00%** 4	**0.00%** 0	**4.00%** 1	25
Length of the event	**26.92%** 7	**38.46%** 10	**23.08%** 6	**7.69%** 2	**3.85%** 1	26

Catering at the event	**25.93%** 7	**33.33%** 9	**25.93%** 7	**7.41%** 2	**7.41%** 2	 27

Q12 Conference Gala Dinner. What did you think?

Answered: 32 Skipped: 5


Timing of the dinner
Length of the dinner
Catering
Entertainment by Raymond...
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Excellent
Good
Satisfactory
Fair
Poor

	Excellent	Good	Satisfactory	Fair	Poor	Total Respondents
Timing of the dinner	**48.39%** 15	**38.71%** 12	**12.90%** 4	**0.00%** 0	**0.00%** 0	31
Length of the dinner	**46.88%** 15	**43.75%** 14	**9.38%** 3	**0.00%** 0	**0.00%** 0	32
Catering	**43.75%** 14	**21.88%** 7	**25.00%** 8	**6.25%** 2	**3.13%** 1	32
Entertainment by Raymond Crowe, Unusualist	**70.97%** 22	**25.81%** 8	**3.23%** 1	**0.00%** 0	**0.00%** 0	31

Q13 Please provide your details:

Answered: 26 Skipped: 11

Answer Choices	Responses	
Name	96.15%	25
Company	100.00%	26
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	100.00%	26
Phone Number	0.00%	0

australian almonds
ALMOND BOARD OF AUSTRALIA

In A Nutshell

Summer 2016

Driving Domestic Demand

Almonds remain the number #1 nut for new **Australian** products

wrap up Conference Conquered

Yet again **breaking** all the records. An event to remember

feature

Bee Aware

Varroa eradication underway

Healthy **honeybees** +more

HAIL mother nature's fury

Riverland and **Sunraysia** growers feel her wrath

interview

new face in our orchards

ABA appoints new Industry Development Manager

Pamper Today. Reap Tomorrow.

Haifa Multi-K

Potassium nitrate products
for healthy crops

Optimise your crops with Multi-K potassium nitrate

Treat your crops with Multi-K cutting-edge products to improve tomorrow's harvests. Multi-K potassium nitrate fertilisers help you to enhance quality, boost yields and reduce labour costs. Haifa's potassium nitrate is 100% used by plants, with no residual remaining in soils. Our world renowned, fully water soluble fertilisers include:

- **Crystalline Multi-K** plain or enriched for Nutrigation
- **Haifa-Bonus npK** for foliar application
- **Multi-K Prills** for soil application

FOR FURTHER INFORMATION, CONTACT YOUR HAIFA TEAM

Trevor Dennis, Managing Director
E: trevor.dennis@haifa-group.com **M: 0400 119 852**

Shaul Gilan, Senior Agronomist
E: shaul.gilan@haifa-group.com **M: 0419 675 503**

Peter Anderson, Qld Sales Agronomist
E: peter.anderson@haifa-group.com **M: 0459 488 850**

Jon Corona, Regional Agronomist, Mildura
E: jon.corona@haifa-group.com **M: 0408 568 605**

Jason Teng, Customer Service/Logistics
E: jason.teng@haifa-group.com **M: 0488 036 528**

Haifa

Pioneering the Future

Haifa Australia **Tel: 03 9583 4691** Email: info@haifa-group.com **www.haifa-group.com**

In A Nutshell

The Official Newsletter of the Australian Almond Industry

In A Nutshell

Published by: The Almond Board of Australia
Editor: Jo Pippos, Conference & Communications Manager
jpippos@australianalmonds.com.au

The Almond Board of Australia is the peak industry body representing the interest of almond growers, processors and marketers in Australia. In a Nutshell is published by the ABA to bring news to all industry contacts and members.

Advertising & Editorial Content
The Almond Board of Australia (ABA) acknowledges contributions made by private enterprise through placement of advertisements in this publication. Any advertising and/or editorial content supplied to this publication does not necessarily reflect the views of the ABA and unless otherwise specified, no products and/or services are endorsed by this organisation.

Funding
The Almond Industry Communications project has been funded by Horticulture Innovation Australia Limited (HIA Ltd) using the research and development almond levy and funds from the Australian Government.

Some articles within this publication refer to projects managed by Horticulture Innovation Australia Ltd (HIA).

Almond Board of Australia Inc, ABN 31 709 079 099
1801 Bookpurnong Road , PO Box 1507, LOXTON SA 5333
t +61 8 8584 7053 e admin@australianalmonds.com.au w www.australianalmonds.com.au

From the Executive

As 2016 draws to an end it is a good time to reflect on the year for the Australian almond industry.

As 2016 draws to an end it is a good time to reflect on the year for the Australian almond industry.

Our 2016 crop at 80,000 tonnes fell 2,000 tonnes short of the record 2015 crop. The first estimate on the 2017 crop has it slightly more than 85,000 tonnes but we still need to get it through to harvest. The recent hail and high wind storm caused severe damage on a few orchards and impacted on a number of others. It is always difficult to comment from an industry perspective that the impact overall was light when you know that there are those in the industry who have suffered badly.

We are now exporting three tonnes for every tonne sold domestically so the global supply and demand situation is critical to us. There is no bigger influence on the market outlook than the Californian production and shipments. The Californian crop in 2016 rose a little less than 10% and added to a sizeable carry-in tonnage. The stock on hand figure for the US would have been substantially higher had the lower prices in the 2016 calendar year not boosted demand around the world and in their domestic market.

Shipments of Californian almonds have continued at record pace since the start of their new marketing year in August and are far outstripping the percentage increase in their crop.

The analysis of our 2015/16 domestic sales shows the global price rise that peaked in September 2015 did not impact on demand to the same extent as on export due to supply contracts creating a lag in retailers having to increase the price of almonds on shelf. Household penetration data showed a fall in the number of households buying almonds but countering this the heavy users continued to buy more and more almonds. Downsizing of pack size by one of the major supermarkets also worked against sales volume as those retailers that held the 750 gram pack increased volume and sales value significantly. Overall the Australian domestic market increased the volume consumed by 6.5% (excluding imports) in 2015/16, and Australian consumption rose 4% to 971g per person.

More detail on the market development and promotional activities undertaken during the year can be found in the recently distributed Annual Report and on pages 11 and 12 of this edition of In A Nutshell.

A number of issues in major export markets has made 2016 a challenging year. Marketers have had to address defaulted contracts, credit squeezes in some countries, and additional product testing at EU ports.

The ABA assisted in having the EU testing of shipments return from 20% to the previous level of 5% and also in maintaining the EU MRL for fosetyl-al at 75ppm. The proposed reduction to 2ppm would have precluded exports to Europe as even almonds from organic orchards would not have complied. In managing these issues, the ABA had great assistance from the industry marketers, the Commonwealth Department of Agriculture and the Almond Board of California.

On other fronts, the ABA has had a busy year participating on management groups dealing with the incursions of Khapra Beetle and Varroa Mite, both of which appear to be well on the road to eradication, if not already achieved. American plum line pattern virus (APLV), not previously known to exist in Australia, was recently identified in apricot and plum

australian almonds
ALMOND BOARD OF AUSTRALIA

ABA Membership

Why become a member?

The ABA is the peak representative body for the Australian almond industry and as such addresses many issues that impact on all participants in the industry including growers, processors and marketers and those that supply inputs. These impacts can be positives such as free trade agreements or promotion to stimulate demand and hence prices or they can involve minimising negative situations such as food safety issues, market access problems, chemical registrations etc.

The ABA develops and drives the implementation of the Australian industry's strategic plan which is done to benefit all producers and other industry participants. The strategies involve building domestic and export markets, the key to strong grower returns, addressing a wide range of risks from the availability of production inputs to government policies that impact on costs and yields. These matters effect on the bottom lines of almond enterprises. The ABA's whole of industry strategies have been successful and have worked to ensure the large increases in production have been cleared.

The ABA operates a number of activities that support industry and generate revenue to fund its operations and keep membership fees at a low and affordable cost. Being an ABA member provides crucial support for your industry body that we need and appreciate. A strong membership base provides added force in our representation of industry to government and in the wider community.

Join the ABA today, in the knowledge you are assisting the industry and yourself to move forward as Australia's most valuable horticultural industry.

Join the ABA by visiting our website, phoning 08 8584 7053 or emailing admin@australianalmonds.com.au

trees and it appears containment rather than eradication is the only viable option.

Biosecurity is a major issue for the industry and becoming more and more so. The industry obligations under the Plant Pest Emergency Response Deed require the industry to share with government the cost of remediation activities, which for the Varroa Mite eradication plan totalled $2.6 million. The almond share of this is over $300,000 as we are heavily dependent on pollination services that will be impacted should Varroa Mite become established in European honeybee hives. In the US, where beekeepers need to control Varroa Mite, the cost of pollination services to the almond industry is more than double that paid in Australia. The cost of the four year eradication plan is less than a dollar per tonne, per annum for the period of the plan. This investment in the eradication of the mite seems sound when compared with an increase of $600 a hectare in the annual pollination cost if hive prices were to reach the level now being paid in the US.

During the year, the ABA's plan to establish a home for the industry's research trials took two further steps towards being realised. PIRSA entered an agreement to purchase 60 hectares near Loxton on which to locate the experimental and demonstration orchard and SA state government funding for the Almond Centre of Excellence was matched by the Commonwealth in a ten million dollar Rural R&D for Profit project to investigate Advanced Production Systems for Temperate Nuts.

The biosecurity risk management strategy of the ABA maintaining high health status

The Board of Directors and staff of the Almond Board of Australia are looking forward to 2017 and the further development of our industry. We extend seasons greeting and wish all industry members a great new year.

Neale Bennett, Chairman

Ross Skinner, CEO

motherplantings to supply industry nurseries with budwood has been praised by Plant Health Australia. In 2015/16, two million buds were supplied by the ABA to nurseries to produce trees with reduced risk of virus contamination that can stunt orchard development.

The industry expansion that is occurring brings us back to the need to develop markets for our almonds and the recent Free Trade Agreements in Korea, Japan and China have assisted. The lack of progress on an FTA with India is frustrating however, muted FTAs with the UK and Europe would be very beneficial.

There is no doubt that the health benefits of almonds and nuts in general is helping drive the demand for almonds in Australia and around the world. The ABA's strong promotion of the health benefits by engaging with health professionals, featuring in advertising, highlighting in PR and in social media is supported by the industry's investment in research. More often than not when perusing the weekend papers and also frequently on television, the benefits of eating almonds are being extolled. The recognition by consumers of almonds' health benefits is also driving its use as an ingredient in many new products finding their way on to supermarket shelves each year.

The proven health benefits in areas such as cardio health, brain function, muscle development, weight management and diabetes risk reduction were covered in presentations at the 2016 AAC held in November.

The AAC, conducted in Melbourne for the first time and attended by a record 409 delegates, was a great success and reinforced the collaborative and inclusive nature of the Australian almond industry.

New face in our orchards

ABA appoints new Industry Development Manager

The Almond Board of Australia recently appointed Andrew Downs to fill the Industry Development Manager's role.

Andrew will lead the ABA's programs in areas of research projects and extension, grower communication, biosecurity, plant improvement, pollination surety and other issues related to production. Andrew will also play a key role in the development of the almond industry's experimental orchard in Loxton.

Andrew joins the ABA with strong qualifications and a wealth of experience in agriculture and horticulture. He has a Bachelor of Agricultural Economics and a Graduate Diploma in Wine Business. In 2013, Andrew became a Fellow of the SA Governor's Leadership Foundation.

Andrew's career has seen him involved in: providing economic analysis for government and farming groups; in research, biosecurity and grower liaison in the wine industry; crop protection with chemical companies; and receival site management, strategic planning, logistics and customer relations in the grain industry.

Andrew brings to the IDM role a range of skills, knowledge and experience and importantly a capacity to develop strong relationships with industry members.

Located at the Loxton office, Andrew will provide day to day management of the industry development team of Brett Rosenzweig and Josh Fielke, and the grower communication aspects of the ABA's communications program delivered by Jo Pippos.

Andrew adds to the wide technical skills of the industry development team members and his management experience will be valuable to the ABA in delivering the varied programs and in developing and implementing the industry strategic plan.

The ABA Board of Directors and staff welcome Andrew to the Australian almond industry and look forward to his contribution in taking the industry forward.

Located at the Loxton office, Andrew will provide day to day management of the industry development team of Brett Rosenzweig and Josh Fielke, and the grower communication aspects of the ABA's communications program delivered by Jo Pippos.

5 minutes with... Andrew Downs

In coming issues of 'In A Nutshell' Editor Jo Pippos will spend 5 minutes with different industry personalities, from the growers with boots on the ground, the industry stalwarts, those who work behind the scenes - the people who make our industry so diverse and unique. We have some pretty amazing people with many backgrounds and personalities who have a real passion for what they do.

What better way to start the article series than with the ABA's newest employee, Andrew Downs.

Q: Andrew, tell us a little about yourself and your background.

I am originally from Brisbane, but spent some time growing up on the Yorke Peninsula that sparked my interest in agriculture. Since completing university, I have had a variety of roles working across the southern half of Australia.

A lot of my work has concentrated on irrigated horticulture, mainly winegrapes and stonefruit, from Echuca to Mildura. I have spent most of the last 10 years living in the Barossa Valley working in crop protection, and then with the Phylloxera Board (now Vinehealth Australia).

Q: What would you say most motivates you to do what you do?

To contribute to the profitability of farmers/producers with the flow on effects hopefully contributing to the sustainability of the rural communities that we operate in. It disappoints me to see rural communities lose facilities and services.

Q: What are you most excited or passionate about - personally and professionally?

Sport and travel. Plenty of overseas trips to do. Workwise, finding solutions to problems especially around production based issues in the agriculture sector.

Q: What are the goals you most want to accomplish in your work? Not so much the goals that are in your job description, but the goals you hold personally?

To contribute to an industry that grows in a sustainable fashion – increasing profit, adopting innovative solutions and increasing production whilst optimising inputs.

Q: I want to understand how and why you ended up at the ABA, what led you to this job? What attracted you to work for the ABA?

One of the big attractions was the opportunity to join a collaborative industry in the growth phase.

It's very exciting to be involved with the development of the Almond Centre of Excellence. The role brings together a lot of my previous experience and provides a great opportunity for further professional development.

"One of the big attractions was the opportunity to join a collaborative industry in the growth phase" **- Andrew**

Q: Where and what did you study? What led you to choosing that area of study? Have you done any further study since then?

I graduated from the University of Queensland with a Bachelor of Agricultural Economics. After spending part of my childhood growing up on a broadacre farm on the Yorke Peninsula, something clicked and rural production became my passion.

I have since completed a Graduate Diploma in Wine Business and completed the Governor's Leadership Foundation (SA) program.

Q: Did you have any key mentors or people who deeply influenced who you are, what you believe in and what you're committed to in your work and life?

There are a lot of people who I have learnt snippets from, with two main influencers being an old farming friend of my parents – Frosty and my father.

When posed with this question, it was interesting to realise that neither of them came from farming backgrounds but they both had similar modus operandis – they always challenged the norm. Of all the farmers within our community, Frosty and Dad always asked questions to understand why and not simply accept the practice because 'their fathers did it'!

Q: Did you have any life-changing experiences that put you on the path that led you to be doing what you're doing today?

Growing up on the Yorke Peninsula - the freedom, the farm work and the people which was a stark contrast from life growing up in Brisbane.

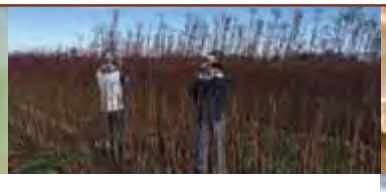
Q: When you think of the future of the work you will be undertaking with the almond industry, what excites you?

The collaboration amongst the industry and the learnings of how to get the most out of the orchards. The combination of cultivars (from the breeding program), the new rootstocks, pruning and irrigation and fertilizer to generate a whole of orchard proposal is challenging and extremely exciting.

Q: What are you looking forward to within your role as Industry Development Manager?

Getting to know the members, researchers and visiting orchards across the regions. Delivering on the strategic objectives of the industry, seeing the adoption of research and development recommendations and the Centre of Excellence established.






L&T Nursery – Supplying the Almond Industry with Quality Nursery Trees

Located within the irrigation district surrounding Robinvale, Victoria, L&T Nursery is a quality producer supplying growers in the area and across NSW and SA with almond trees. With over 20 years of experience in the almond sector and 30 years at a primary production level, L&T Nursery has a well-grounded understanding of how the industry operates. The company has a strong commitment to expanding the production of Australian almonds through the production and distribution of quality young trees.

The University of Adelaide has developed several new almond varieties; these new cultivars have opened up new pathways for growers and new opportunities for the industry. L&T Nursery are committed to supporting the almond industry in these ventures through providing an avenue for access to both traditional and new varieties. Traditional varieties have shown their capacity in relation to quality and yield, however, several varieties recently released have shown strong results in these areas. It is the distribution of these promising new varieties, alongside continuing production of traditional varieties that L&T Nursery is excited to explore. The growth of the Australian almond industry depends upon a solid foundation, with innovation and expansion from this central core. The approach that L&T Nursery has employed is modelled around this ideal.

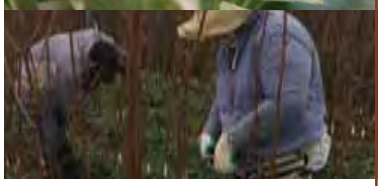
We have a commitment to unrestricted supply of high quality trees. It is a great time to visit and view the trees and see why feedback from growers has been so positive. L&T Nursery is excited about building upon this success with further growers, to help strengthen the Australian almond industry.

Alongside involvement in nursery production, L&T Nursery are also almond growers. This gives L&T Nursery a holistic understanding of the most important elements of almond production and the requirements of growers. This knowledge allows L&T Nursery to better cater to grower requirements in the production of young trees.

L&T Nursery understands that planning ahead and securing trees is critical to create a well-functioning orchard; as such **we are currently taking orders for both the 2017 and 2018 winter planting.** Orders are also currently being taken for the current winter season for any re-planting or development needs. L&T Nursery are happy to work closely with growers throughout the cultivation of their trees.

L&T Nursery have a good supply of the following rootstocks to support your almond variety requirements:
Traditional Rootstocks – Hansen (peach and almond hybrid), Bright's Hybrid (peach and almond hybrid).
Predominant Rootstocks – Nemaguard (peach seedling), GF677 (peach and almond hybrid).
New Rootstocks – RootPAC-R (plum and almond hybrid), Garnem (almond and peach hybrid).





Enquires relating to orders or nursery visits, may be directed to:

Tim on 0407 883 992 or timmillen68@gmail.com

or

Lynn on 0408 225 831 or lynntolley@live.com.au

BRANDT®

Manni-Plex®

MANNI-PLEX BORON & MANNI-PLEX ZINC
A POWERFUL COMBINATION

Manni-Plex Boron and Manni-Plex Zinc are based on the unique Manni-Plex technology, delivering essential plant nutrients combined with a proprietary blend of phloem and xylem mobile sugar alcohols to create highly efficient foliar fertiliser.

Each product on its own will deliver fantastic results, ensuring increased yields and nut quality. Together they will produce exceptional results by:

- ✔ Increasing flower fertility and % nut set
- ✔ Ensuring less % defects in kernels
- ✔ Increasing marketable yield

APPLY BOTH MANNI-PLEX ZINC AND MANNI-PLEX BORON PRIOR TO FLOWERING, DURING FLOWERING AND POST-HARVEST FOR BEST RESULTS IN TREE CROPS.

For more information on these products, contact your local Barmac Territory Manager on 07 3802 5050.

Barmac (A Division of Amgrow Australia Pty Ltd) ABN 22 069 900 456, A: 82 Christensen Road, Stapylton, Qld 4207 W: www.barmac.com.au

Faces of the Association

2017 Election Results

At the recent ABA Annual General Meeting held at the Pullman & Mercure Hotel in Melbourne during November, association members re-elected three long standing board members to the board, along with one new board representative.

Grant Birrell and Laurence Van Driel were re-elected to their positions as Marketing Representatives and Brendan Sidhu was re-elected to his position as Riverland Region Grower Representative.

Tim Orr was thanked by the ABA Board of Directors for his contribution as retiring Sunraysia Region Grower Representative. Tim held this position for six years, In addition to serving as an ABA Board member, Tim held positions on the Audit and Plant Improvement Committees.

The ABA welcomes Sunraysia almond, citrus and asparagus grower Darren Minter to fill the vacant position of Sunraysia Region Grower Representative, and we look forward to working with Darren in developing the future of the Australian almond industry.

Grant Birrell

Marketing Representative

Grant joined the nut industry in 2006 as CEO of Nut Producers Australia (NPA), managing the company's almond and pistachio businesses. Prior to this, Grant spent 20 years in the seafood industry which included involvement in several seafood industry bodies.

Grant has been a member of the Market Development Committee since 2007 and became an ABA Board member in 2008. He also serves as Chair of the Audit Committee and was a member of the Almond Industry Advisory Committee (IAC).

Darren Minter

Sunraysia Region Representative

Darren is Managing Director of Minter Magic, a large almond, asparagus and citrus property situated in Iraak, Victoria. Darren is a major shareholder in the Red Cliffs Almond Growers Co-op, started in 1985.

He is also member of the Australian Asparagus Council and a member of Citrus Australia.

Darren holds a Diploma of Production Horticulture and was the VFF Victorian Apprentice of the year in 1988 (Fruit Section).

Brendan Sidhu

Riverland Region Representative

Brendan is Managing Director of Jubilee Almonds in the Riverland. Brendan has been involved with the almond industry since 1983. Brendan was appointed to the ABA Board in 2007, and held the position of Chairman from 2009 - 2012.

He has held positions as both Secretary and Chair of the Riverland region of the Australian Almond Growers' Association (AAGA), and Almond Industry Advisory Committee (IAC), Remuneration Committee, Conference Committee and is Chair of the Market Development Committee.

Laurence Van Driel

Marketing Representative

Laurence has been involved in the trading and marketing of edible nuts and dried fruits for over 25 years, providing him with a sound understanding of shipping requirements, foreign currency, trade barriers and marketing strategies.

Laurence has also held senior purchasing and sales management positions with internationally recognised companies. He became a member of the ABA Board in 2011 and also serves on the Market Development Committee.

Almond Board of Australia Committees

ABA Board

Chair Neale Bennett
Deputy Chair Damien Houlahan

Regional Representatives
Adelaide John Maragozidis
Riverland Peter Cavallaro
Riverina Brendan Sidhu
Sunraysia Neale Bennett
Sunraysia Darren Minter

Market Development Representatives
Grant Birrell
Damien Houlahan
Laurence Van Driel
Brenton Woolston

ABA Plant Improvement Committee

Chair Peter Cavallaro

Committee
Andrew Lacey
Darren Minter
Tony Spiers
Daryl Winter
Michelle Wirthensohn

ABA Production Committee

Chair Peter Cavallaro

Committee
Ben Brown
Denis Dinicola
Ben Keir
John Kennedy
Drew Martin
Paul Martin
Ben Robinson
Peter Ross
Zubair Shahzad
Craig Simes
Robert Wheatley
Daryl Winter

ABA Pollination Committee

Chair Neale Bennett

Committee
Ben Brown
Drew Martin
Robert Wheatley
Ian Zadow

ABA Processing Committee

Chair Brenton Woolston

Committee
Nigel Care
Tony Costa
Tom Martin
Brenton Paige
Alison Smith
Toby Smith
Bruce Van Twest
Mark Webber
Russell Wickstein
Davin Wright

ABA Market Development Committee

Chair Brendan Sidhu

Committee
Grant Birrell
Damien Houlahan
Tim Jackson
Laurence Van Driel
Brenton Woolston

Australian Almond Conference Committee

Chair Neale Bennett

Committee
Damien Houlahan
Brendan Sidhu

Research & Development Forum Committee

Chair Neale Bennett

Committee
Peter Cavallaro
Darren Minter
Brendan Sidhu
Craig Simes

ABA Audit Committee

Chair Grant Birrell

Committee
Damien Houlahan
Brenton Woolston

ABA Remuneration Committee

Chair Neale Bennett

Committee
Damien Houlahan
Brendan Sidhu
Brenton Woolston

Hort Innovation Australia (HIA)

Strategic Investment Advisory Panel (SIAP)

Chair Peter Reading

Committee
Ben Brown
Domenic Cavallaro
Paul Martin
Troy Richman
Brendan Sidhu
Ross Skinner
Craig Simes
Toby Smith

Market Establishment & Growth Strategies

Export Market Development Program Update

Our Australian Almond Export Development Program is comprised of an established markets growth strategy and an emerging markets growth strategy.

Our key established markets include Europe, India and the Middle East & Africa and our emerging markets are North-East and South-East Asia.

Within the last three months, we have conducted export trade exhibitions in each of these sectors by promoting Australian Almonds at Asia Fruit Logistica in Hong Kong in September and Sial Paris in October.

ASIA FRUIT LOGISTICA

Hong Kong

More than 11,000 buyers and trade visitors from 74 countries attended this year's Asia Fruit Logistica from September 7 to 9 at Asia World Expo in Hong Kong, a 22% increase on last year.

Some 665 exhibitors from 37 countries participated at the trade fair which was 18% up on 2015.

Australian Almonds promoted at Asia Fruit Logistica to work toward building an almond category within the Fresh Produce section of Asian supermarkets. Currently, almonds and nuts are almost exclusively merchandised within the salty snack category of the supermarket (with the salted chips).

We know from our Australian retail experience that there is an opportunity to leverage the health benefits of almonds more directly within fresh produce. This is a strategic objective of the Australian Almonds export market development program within Asia.

Our booth was located within the Australia Fresh pavilion organised by Horticulture Innovation Australia.

2017 Program

We have a strong Export Development program coming up in the first half of next year with trade promotions in many of our key established and emerging markets:

February: Gulfoods in Dubai

March: Foodex in Tokyo

April: Food & Hotel Indonesia in Jakarta

May: Sial China in Shanghai

SIAL INSPIRE FOOD BUSINESS

Paris

Europe is our industry's largest export destination by region, accounting for approximately 40% of our export sales.

Each year, Australian Almonds exhibits at a major European trade fair alternating between Anuga in Cologne and Sial Paris. These trade events occur biennially.

This year's Sial Paris event attracted over 155,000 buyers and visitors from 194 countries with 70% international visitors. There were over 7,000 exhibitors from 109 countries promoting their products and brands.

The Australian Almond exhibition was within the INC Pavilion allowing us to leverage buyers' interest in the total nut offering. The 2016 Australian Almond booth attracted more buyer traffic than the same event two years ago.

Driving Domestic Demand

for Australian Almonds

Nielsen Homescan & Innova Highlights

The June 2016 Nielsen Homescan report indicates that household penetration of almonds for the 12 months to October 2016 was steady with the same period last year at 45.4%. It represents an increase from the June 2016 result of 44.5%.

The average spend per purchasing occasion increased over the past year from $8.72 to $9.28, and the total average spent per household on almonds over the past year has increased from $27.30 to $30.89. This is the highest of any of the nut categories.

Almonds remain the Number 1 nut for new products launched in Australia in the last 12 months.

Nut Category	Introductions
Almonds	269
Peanuts	179
Cashews	142
Hazelnuts	90
Macadamaias	49
Walnuts	26
Pistachios	8

Educating Health Professionals

The main activity in the last quarter was our exhibition at the annual Diabetes Educators Conference held at the Gold Coast Convention Center from August 24 to 26.

We engaged with over 1,500 health professionals who work in the diabetes education area including nurses, dietitians, nutritionists, and specifically accredited diabetes educators.

The HAL-HIAL funded project, AL12001, which ran for the past 3 years has concluded. Over the course of AL12001, Australian Almonds participated in 22 major health conferences.

Two of these engagements were in New Zealand and Indonesia.

During these conferences, we have engaged with more than 22,000 dietitians, sports nutritionists, general practice doctors and nurses, fitness trainers and diabetes educators.

More than 4,000 of these health professionals have requested our educational packs of snack tins and brochures to give to their patients and clients. This is a significant body of health advocates who are personally recommending almonds. A new Australian Almonds' Educating Health Professionals project will be developed and it is anticipated that a new three year program will commence in 2017.

Consumer Marketing

One of the ways we extend our health messaging to consumers is through fitness themed exhibitions. This was very positively received at three of our recent promotions at the Sydney Good Food & Wine Show, the Sydney City to Surf Expo and the Melbourne City to Sea Expo. Over 200,000 people moved through these very popular exhibitions.

In each of our promotions, we used our array of posters to communicate our 'Love the Crunch' theme as well as our key health messages of almonds as a source of healthy energy, a great recovery snack after a run or a work-out and a super-healthy after school snack for children.

We also offered our always popular snack tins with deliciously crunchy roasted almonds and invited our visitors to join our social media community.

Social Media Marketing

We have re-branded our key social media assets of Facebook, Instagram and Twitter with our 'Love the Crunch' theme. These communities continue to grow with close to 18,000 members on Facebook and 7,000 followers of our Instagram site.

Crops and Budwood Impacted by Cooler Weather

The cool spring and lack of hot weather pre-Christmas has delayed the maturity of most horticultural crops, almonds included. It has posed a serious challenge for the ABA's high health status budwood program in meeting the pre-Christmas demand from nurseries for buds.

The swap from producing trees over an 18-month period for sale to producing trees in 6-7 months has increased in recent years, however this practice puts pressure on the delivery of budwood of sufficient maturity early in the budwood season. It also compacts the grafting season for nurseries wanting to get as many trees as they can in the ground for as long as they can to maximise the growth period.

This year, the weather has meant that bud maturity has led to the program being three to five weeks behind normal. The ABA operates two motherplanting sites as a risk management strategy and to meet demand in period of heightened nursery tree production.

The sites at Monash in SA and Colbinabbin in Victoria produced over two million buds in 2015/16. The logic behind the risk management strategy was recently proven with the recent hail storm in the Riverland causing some budwood damage at the Monash site, whilst the motherplanting at Colbinabbin has suffered hail damage in the past.

The other major risk that having multiple sites mitigates is virus contamination. The core reasons for having industry motherplantings is to ensure buds are as close as possible to the original high performing trees and the management practices undertaken on-site to prevent the incursion of debilitating viruses that stifle potential tree development and future yields.

With the recent identification in Australia of two new viruses impacting Prunus trees, the need to source high health status budwood, where the trees are tested for viruses, is again highlighted. The new pathogens being Apricot Vein Clearing Associated Virus (AVCaV) and American Plum Line Pattern Virus (APLPV) which has symptoms like those for Prunus Necrotic Ringspot Virus (PNRV) and Apple Mosaic Virus (AMV).

With the release of the new University of Adelaide varieties the ABA is planning to establish a further motherplanting site at the Loxton Research Centre, and is receiving support in this from the South Australian Government through PIRSA and SARDI. The 0.8 hectare site will increase available buds from the five PBR'd varieties and other selections that are outperforming Nonpareil yields in trials and have favorable characteristics, including being self-compatible and with complete shell seals which reduces insect damage.

Along with the delayed maturity of budwood the nurseries are also needing to manage the delayed and slow growth of rootstocks.

Just before Christmas, the Colbinabbin site will be operating well below its production capacity with the mother trees yielding at less than a third the rate normally expected leading to the program there being at least a month behind the expected schedule (based the 2015/16 cutting season). The Monash site is faring better than Colbinabbin, producing approximately 10,000 buds per day during December, which is well below its optimum capacity. With the expected warmer days at Christmas, the capacity at Monash should increase to 15-20,000 buds per day. Both the Monash and Colbinabbin sites will be cutting during the Christmas and New Year period with enough cutters and de-leafers to achieve a capacity of 20,000 buds per day from each site. Regular updates on progress are being sent to nurseries as the push to increase bud yields is managed.

Brett Rosenzweig, ABA, Industry Development Manager at the ABA Monash budwood site

With the unseasonal weather being experienced currently there is a chance of an extended summer and associated growing period for the trees in the nurseries which may increase the size of trees come winter.

One of the industry's producers with substantial orchard expansion occurring recently noted that the move to relying on one year old trees was a risk strategy as many things can impact on getting trees to a sufficient size. When plans are being made, two year old trees should be part of the thinking.

SHOCKWAVE

AFTERSHOCK

IMC

SHAKERS AND MOVERS OF THE AG INDUSTRY FOR OVER

100 YEARS

MATERIAL HANDLING SYSTEM
SE-180 ELEVATOR

MATERIAL HANDLING SYSTEM
SD-36 FIELD ELEVATOR

MATERIAL HANDLING SYSTEM
SP-36 ELEVATOR

MATERIAL HANDLING SYSTEM
CC-350 CONVEYOR CART SERIES II

MATERIAL HANDLING SYSTEM
AR-450 SERIES II

MAGNUM
SPRINT SERIES V

MATERIAL HANDLING SYSTEM
AR-400SD

WESCO by IMC

FAST™
Fully Automated Shaker Technology
PAT.6,658,834 12/255,009

MAIN HEADQUARTERS

2700 Colusa Highway Yuba City, CA 95993

Tel: (530) 673-2822 Fax: (530) 673-0296

www.ShakerMaker.com

Almond Industry Research & Development Strategic Investment Plan (SIP) almost complete

Corrine Jasper
Relationships Manager - Hort Innovation

A workshop was held on Friday the 18th of November with members of the Almond Strategic Investment Advisory Panel and board members of the Almond Board of Australia to work through and prioritise Almond Research & Development priorities for the industry over the next five years. Michael Clarke, consultant from AgEconPlus Pty Ltd, provided the Almond Strategic Investment Plan (SIP) 2017-22 Draft Paper for discussion. The draft SIP, which was also made available for comment at the recent Almond Industry Conference in Melbourne, contains priorities raised by Industry members across all growing regions that were collected through one on one interviews and via an electronic survey made available through the ABA newsletter 'In A Nutshell'.

Early insights addressed at the conference

Some of the early insights Michael addressed at the Almond Conference were research needs associated with pest and disease management, biosecurity, pollination, planting material, water, soil health, production systems, harvesting, post-harvest storage, processing and sustainability, innovative technology research, the almond breeding program and robotics to reduce on-farm labour demand. Industry development was highlighted to include extension, support for new growers, collection and analysis of industry data, communications, capacity building and the Australian almond industry's engagement with industries in other countries.

The draft SIP also provides for domestic and international market research, better understanding of the health benefits of almond consumption and improvement in access to export markets. Particular attention has been given to product integrity and R&D investments suggested for maintaining high levels of food safety, the fumigation of stored product and the management of harvest and processing damage.

Next steps

Michael Clarke and Mike Williams are finalising the draft of the Almond Industry Research and Development SIP for completion by the end of December 2016. The draft will then be released for comment and feedback from all growers in January/February 2017 through the Hort Innovation website www.horticulture.com.au and through the ABA communications, prior to formal completion.

UPDATES Research & Development Project Updates

Recently contracted:

AL16000 Australian Almond Industry Communications Programme

AL16003 Almond Industry Statistics and Data Collection 2017-2019

MT16010 Horticultural Trade Data 2017-2019

To be procured:

AL16004 Development of High Health Status Motherplantings for new Australian Almond Varieties

AL16701 Almond Study Tour

MT16005 Enhanced National Bee Pest Surveillance Program 2016–2021

Request for proposal:

AL16001 Australian Almond Industry Innovation and Adoption Program

Final reports available

AL12016 Developing Export Markets for Australian Almonds

AL11012 Evaluation of Potential Prunus Rootstocks for Almond Production

AL11005 Australian Almond Industry Communications

AL12000 Australian Almond Industry Liaison and Extension Project

AL12701 Almond International Networking

Contact
Corrine Jasper
Relationship Manager
0439 433 885 corrine.jasper@horticulture.com.au

BEE AWARE

Varroa eradication underway

Varroa Mites have made their way to Australia. It was to be expected given that we are surrounded by countries that have them. Fortunately, it occurred in Northern Queensland and it was Varroa *jacobsoni* that look for Asian Honey Bees (AHB) as a host. It is the Varroa *destructor* mite that preys on European Honey Bees. However, it should be noted that there are reported cases of Varroa *jacobsoni* on European Honey Bees.

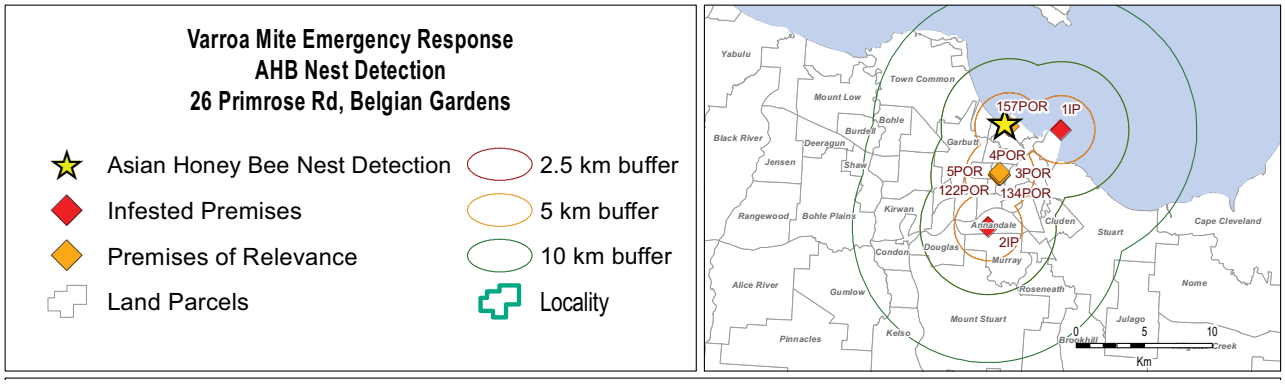
The first detection of Varroa Mite occurred at the port of Townsville in June 2016. Five mites were discovered in a nest of AHB in a container stand at the port. The incursion occurred just before the almond pollination season was to commence, but the initial review indicated that it was likely to be isolated to the Townsville area and a ten kilometre zone was put in place under the Movement Control Order.

The ABA, as a signatory to the Plant Health Australia Emergency Plant and Pest Response Deed (EPPRD) and as an affected party, was part of the working group developing the response plan. This group is bound by confidentiality, particularly in the first few days as efforts to quarantine the initial 10 kilometre zones were established as it was important that hives were not moved until the Movement Control Order was put in place.

One of the key information points considered was that there were no commercial beekeepers operating in the Townsville region which limited the likelihood of the Varroa *jacobsoni* crossing to European Honey Bees and being spread as a result of normal hive movement before the incursion was detected.

The response plan developed to eradicate the Varroa Mite, at an estimated cost of $2.6 million, has focussed on finding and eliminating AHB hives in the region. So far there have been 10 feral hives discovered and dealt with. These subsequent discoveries of AHB hives in other areas of Townsville has seen the zone expanded.

On 17 July, a single Varroa *jacobsoni* was found in an AHB nest on a property in Annandale. This property is about nine kilometres south west of the Townsville port.



AHB Nest Detection Map as at November 2016

The tenth detection of Asian Honey Bee occurred on Friday, 11 November. National Varroa Mite Eradication Program staff conducting surveillance for Asian honey bee detected and destroyed a suspect feral nest at Queens Park located three kilometres west of the initial detection at the Port. Most of the nest was sampled and no varroa mites were detected on the bees or the comb. Genetic analysis results indicate that all the AHB tested from the first nine feral AHB detections are related to each other, suggesting they all originated from the same incursion.

Biosecurity Queensland is continuing its surveillance activities that involve sweep netting flowering plants, setting feeding stations to attract any foraging bees, analysis of rainbow bee-eater pellets collected from known roosting sites, and aerial pheromone traps to detect male Asian honey bees.

Catch boxes and sentinel hives that are set permanently around the Townsville port continue to be checked.

The Movement Control Order remains in place, which restricts the movement of bees, bee hives, bee products, and used bee keeping equipment from the zone.

To date the incursion is showing signs of containment and successful eradication.

On other biosecurity matters, the Khapra Beetle incursion in South Australia appears to have been successfully dealt with. Eradication appears the likely result although monitoring is ongoing.

The ABA was advised on 21 November, that American Plum Line Pattern Virus (APLPV) had been detected in one apricot sample from Queensland and two plum samples from Victoria.

The virus is likely to have been present for some time as it was detected in old trees growing in Mildura, Melbourne and Brisbane.

The symptoms associated with APLPV can be confused with other viruses occurring in prunus in Australia.

The virus is transmitted via vegetative propagation or grafting of infected material. Spread via other means such as vector, pollen or seed is not known.

The case for using virus tested budwood in producing almond nursery trees is further strengthened.

HOW POLLINATION WILL CHANGE IF VARROA DESTRUCTOR MITE ESTABLISHES IN HIVES IN AUSTRALIA

Currently Australia has a high concentration of feral honey bee colonies that pollinate crops. Overseas experience has shown, if there should be an incursion of the honey bee parasite Varroa destructor in Australia, this invader would kill off unmanaged hives.

Since Varroa destructor mites are found in the rest of the world, including New Zealand and our northern neighbours, Australia needs to be prepared.

The latest project is a series of videos available on YouTube and the BeeAware website, to explain the threat posed by Varroa destructor to our honey bees, how beekeepers can best protect their apiaries from pests, and the likely implications for plant producers.

According to Dr Jenny Shanks from PHA, beekeepers will need to change their beekeeping practices. They will need to visit hives more often to check for mites and to control them, which will put up the cost of pollination services.

Jenny urges beekeepers and growers alike to seek more information from the new videos or the pollination section of the BeeAware website, to achieve best results.

The health of the bees has a major impact on pollination results. Jenny emphasises that beekeepers must follow good biosecurity practices so that hives function well for producers.

“Clearly if hives are diseased or half empty, a grower is not getting the full benefit from that hive,” Jenny said. “Growers who hire hives are entitled to inspect them, to make sure they’re getting their money’s worth.”

Recently, PHA developed the Australian Honey Bee Industry Biosecurity Code of Practice in consultation with beekeepers and governments to provide a framework for best-practice biosecurity measures.

Some sections of the Code are already mandatory under existing state and territory legislations. Some parts of the Code apply to all beekeepers; others apply only to beekeepers with 50 or more hives. The Code is available at beeaware.org.au/code-of-practice.

All of this will become crucial should Varroa destructor establish here, but producers may find that they benefit from the services of managed hives now.

See the honey bee biosecurity short videos at beeaware.org.au/videos

HEALTHY HONEY BEES

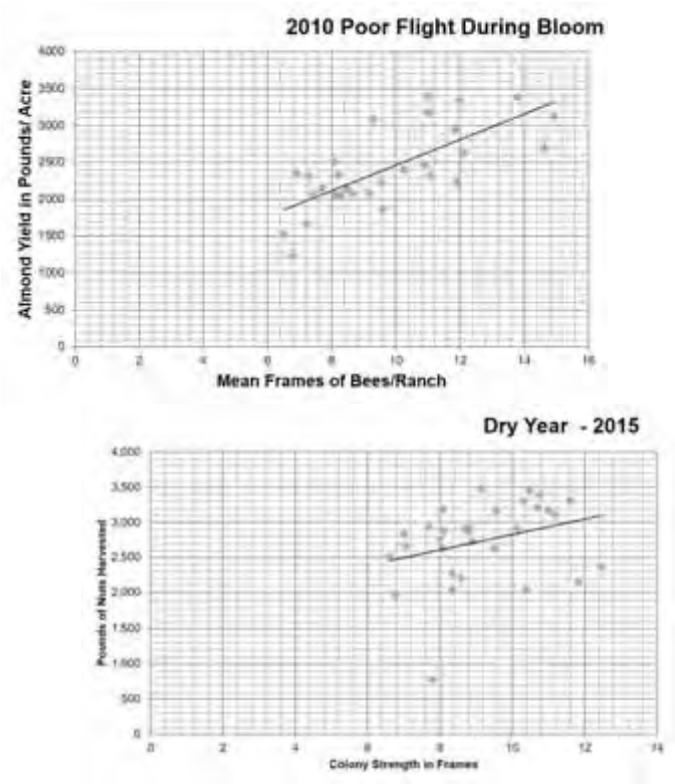
Its all in the biology....

During the recent 17th Australian Almond Conference two speakers spoke about honey bee health: Dr Gordon Wardell, Director of Pollination Operations at Wonderful Orchards (ex Paramount Farms), presented 'Biology Behind Preparing Honey Bee Colonies for Almond Pollination' and Ian Zadow from Zadow Apiaries presented 'On Farm Best Practice' guidelines

Dr Gordon Wardell's presentation started with an overview of the almond production area in California which covers 445,000 Ha (2015 data) over 800km, starting in Tehama county in the north down to Kern county in the south. There are 6,800 almond growers and whilst there are some very large almond farms, over 90% are family run and 67% are 100 acres or less. The California almond industry needs approximately 2 million honey bee hives for pollination each season. The focus of Gordon's presentation was pollination on Wonderful Orchards, which used to be known as Paramount Farms. Wonderful Orchards comprises 15,000 Ha of almonds which need 70,000 honey bee hives, 17,000 Ha of pistachios which are wind pollinated and approximately 5,000 Ha of pomegranates which need 13,000 honey bee hives.

Each year the hives are inspected and a team of inspectors are trained or re-trained in how to correctly grade hives. There are four teams of inspectors who grade 14,000 hives in three weeks. The aim of the inspections is to monitor hive health and strength as this forms the basis for payment of pollination services. There is a base fee set for an 8-frame hive, which must be a minimum of 5 frames. If the hive is healthy, a bonus structure applies: $7.50 for frames 9 and 10 followed by $5.00 for frames 11 and 12. Hence the total bonus payment for a 12-frame hive is $25.00. A hand-held data recorder incorporating a GPS is used when inspecting hives. This allows grading maps to be produced for each farm which in turn can be overlayed with the measured yield at harvest. Figures 1 and 2 show the relationship of hive strength and yield measured during a wet pollination period (2010) and a dry one (2015).

Another aspect of Gordon's presentation was how to improve honey bee health during winter to have stronger hives for almond pollination. Several research articles appear to be suggesting that rising carbon dioxide levels as part of a changing climate, are impacting the protein levels in pollen. The references to these articles can be found in Gordon's Conference presentation which is located on the Almond Board of Australia website. Why does low levels of protein in pollen impact honey bees? Young bees consume protein in pollen and produce royal jelly which in turn has the following benefits: increases brood production, stimulates greater pollen demand and promote longevity of the hive. How can extra protein be supplemented to the hive? Protein patties are placed inside the hive on top of the frames as a supplement to improve hive strength before pollination. The ABA has extended an invitation to Gordon to visit Australia next year during bloom to share more insights into improving pollination practices and honey bee hive health.



Above: Relationship of hive strength and yield during wet & dry pollination period

Left: Protein patties are placed inside the hive on top of the frames as a supplement to improve hive strength before pollination

Ian Zadow presented some practical aspects to be considered before and during almond pollination. The key points are:

- Almonds are the first crop to be pollinated after winter and management of hives is critical to ensure hives are in good condition.
- Hive standards for pollination should be set by growers.
- The current minimum standard used is 6 frames of bees with an active laying queen and adequate stores of honey.
- Beekeepers should check hives are to standard prior to delivery to pollination.
- Growers should audit their beekeepers hives to the agreed standard.
- Ideally the audit should be done within 7 days of the hives being delivered and about 10% of hives checked.
- If dead or very weak hives are found action needs to be taken to remove and replace them.

The timing of moving hives in and out of pollination is important to ensure good pollination and minimise stress on the hives:

- Due to the high density of bees required for pollination, at the start and end of flowering there aren't enough flowers to sustain all the bees and this can be a stress factor on the bees.
- By staging the movement of hives in and out of the orchard in relation to the amount of flowers it helps reduce the stress on the hives.
- Moving the hives out should also be staged in relation to the amount of flowers.
- After full bloom and as the flowers starts to reduce, the hive numbers should also be reduced from the orchard.
- Providing additional floral resources in the orchard can help reduce stress on hives.

Due to the high density of hives required for pollination and the close distance between different beekeepers' hives, there is an increased risk of disease spread.

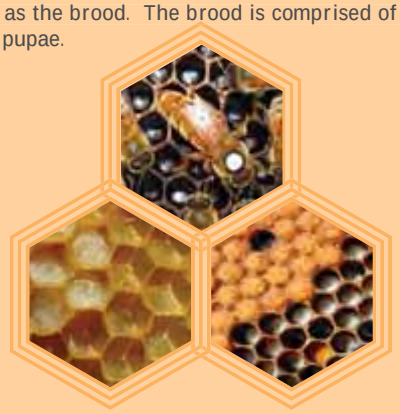
- If dead or weak hives are brought to pollination they pose a huge threat of disease transfer and if the bees are left in too late at the end of flowering, there is a great risk of disease transfer through robbing.
- It is important that beekeepers don't take diseased hives to pollination.

Chemical use around the orchard is another issue of concern to beekeepers and the health of their hives.

- We understand that chemicals need to be used to grow your crop but prefer minimal use while the bees are present and that applications are made while the bees aren't working the flowers.
- Communication with your beekeepers about your chemical usage during flowering is highly recommended.

Q. Do you know how many populations of bees there are in each colony? A. Three.

The first distinct population is the immature bees known collectively as the brood. The brood is comprised of the eggs, larvae and pupae.



The second population are the hive bees, comprising nurse bees, hive cleaners, wax builders, honey and pollen processors, undertakers and guards. Each type of bee has a specific job to do and yes, undertaker bees do exactly as the name suggests, they remove dead bees from the hive! The hive bees generally stay in the hive for about four weeks before moving onto the next stage.

The last population of bees are the field bees which are foragers of pollen, nectar, water and propolis (resinous mixture that honey bees produce by mixing saliva and beeswax with exudate gathered from tree buds, sap flows, or other botanical sources. It is used as a sealant for unwanted open spaces in the hive). They generally have a life span of two weeks.

In the Orchard

Brett Rosenzweig INDUSTRY DEVELOPMENT OFFICER

Harvest will be here before you know it and now is the time to focus on food safety issues that can be avoided at harvest by being proactive before harvest begins. This topic has appeared in the 'In A Nutshell' newsletter before, but is it a message that is worth repeating. Why? Our reputation in the market is built on providing 'quality' almonds. That means free of chips and scratches, mould, staining, damage from pests and kernel at moisture levels which safe for storage by minimising the introduction of storage moulds and aflatoxin. The Australian almond industry can't compete on the world stage in regard to tonnage or price, but we can deliver quality almonds that attract premium prices e.g. Barossa Shiraz vs hot climate goon.

Food safety

Similar to the comments regarding harvest machinery, ensure areas around stockpads are free of debris from last year's crop. Any trash containing almonds should be incinerated or buried deeply. Carpophilus Beetle can fly long distances so dumping the trash on another part of the property is not an option. Make sure to check kernels for any signs of insect or beetle activity as this could be a warning sign for storage pests in this year's crop. If you do see signs of insect or beetle activity, consider setting traps to monitor populations before control methods are considered. Likewise, all mummies and windfalls in the orchard from last year should have already been swept into the midrow and destroyed by flail mowing. It's critical to remove the habitat and food source for Carob Moth and Carpophilus Beetle before hull split and this year's harvest.

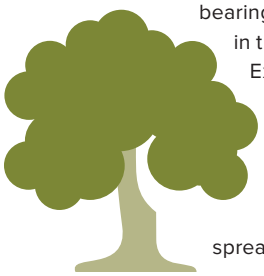
Ensure all irrigation system repairs are completed, especially drip lines, submains and around valve/filter assemblies. If these items are constantly leaking, ruts can be formed in the row causing problems with sweeping and picking up at harvest. Any crop that is harvested into excessive wet areas (even if the area is small) can cause staining or promote Salmonella or Aflatoxin contamination. Another factor that is often not thought about is tree stress. Excessively wet soils (even if only around one tree) can cause long term tree decline through the introduction of secondary pathogens. Tree stress caused by overwatering can lead to a weakening of the trees defence mechanisms and allow the entry of Phytophthora and Bacterial Cankers.

Harvest machinery

Check all machinery to make sure there is no residue of last year's old crop that can contaminate this year's new crop. Residue from the old crop that are mouldy and/or full of insects will put this year's crop at risk. Mould spores could be transferred to the new crop if conditions are suitable and likewise storage pests can move from the old crop to new crop. Even if the new crop is not directly contaminated, there's always the potential for quality downgrades at the processor if some of the old crop is mixed in with the new crop.

Orchard Maintenance

One aspect of food safety that is often overlooked is the maintenance of the orchard canopy. If the canopy is dense and overgrown it might be wise to consider starting an orchard hedging program. The best hedging program I've seen, based on a 7m row spacing, is a wide cut at the top (about 1.5-2m) angled to a narrower cut at the bottom (1-1.5m). Only half the orchard should be hedged at a time and only every second row. The aim is to hedge the orchard over 4 years and then re-assess the need to re-hedge after that. Most growers would be hesitant to embark on such a big hedging cut but if only a quarter of the orchard is done per year the impact on yield is minimised. The amount of new growth in hedged rows and increase in spur bearing wood in the lower canopy helps to offset yield loss from hedging. Hedging helps to reinvigorate new growth in the tree and, if carefully managed, will maintain long-term yields whilst not contributing to excessive shading. Excessive shading in an orchard can lead to increased food safety risks through delayed drying of crop at harvest and increased risk of Salmonella contamination. If the canopy is excessively shaded, another way of speeding up the drying of the crop is to 'condition' the windrows after sweeping i.e. run the pickup over the windrow to remove the dirt and leaves and then place back into a windrow for further drying. A simple chute can be fitted to the back elevator on the pickup to put the crop back into a windrow. With the windrow now on top of the ground instead of half buried, it will dry faster. Alternatively, removing the crop from the orchard completely and spreading on headlands or vacant areas may be needed to dry the crop more quickly.



In Summary.....

Food safety starts in the orchard! It should be the aim of every grower to produce and deliver the best quality almonds possible for the kernel market. If more product is needed for secondary processing those segments can be supplied accordingly. However, if almonds are delivered with Carob Moth damage it will never make the grade, hence reducing potential marketing options. Whilst all processors have adopted pasteurisation protocols to improve safety, it should not be an excuse to deliver poor grade product. Poor grade product adds to the cost of processing and slows down the production line i.e. instead of operating at a capacity of 7T/hr, processing is reduced to 3T/hr due to hand sorting required to removed defect almonds. In the worst case, marketers may have to sell an inferior grade specification product to a customer at a lower price. In the end, costs of production go up, revenue from sales go down and the reputation of Australian almonds in the world market takes another hit.

HIPPO CLAMP

Easy to use Hippo irrigation clamps

✓ COMMERCIAL ✓ AGRICULTURAL ✓ DOMESTIC

One-hand installation and removal

Secure latch system – for a positive lock

Designed to clamp tight, first time, every time

Made from quality stainless steel

Smooth edges to prevent tube/ fitting damage

Tight fitting band - provides maximum hold

REQUEST A FREE SAMPLE

hippoclamps.com.au
1300 130 898

STAINLESS STEEL IRRIGATION CLAMPS BY TORO

17th Australian Almond Conference

Pullman Hotel Melbourne, Albert Park, Victoria

November 8th - 10th, 2016

Conference Conquered

The 2016 AAC was an event to remember by all standards. The Conference was by far and away the most well attended event in the 17 year history, with 409 attendees. Registrants came from all over the globe to join us, and it is wonderful to see that the Australian almond industry has gained such a well respected status worldwide, and that the Australian Almond Conference is a must attend event on the horticultural calendar.

This year's program of speakers addressed developments across the supply chain and future initiatives. With the largest ever line up of international and domestic keynote speakers, presentations of the latest information and the interaction between audience and presenters drew out much valuable information and opinion.

The significant expansion of the Conference trade exhibition boasted 37 exhibitors showcasing the latest products and innovations, with opportunities to network during the breaks, as well as a dedicated Welcome Function in the exhibition space on Tuesday night. The layout and quality of exhibits was a first for both the ABA and the Conference venue, with a number of new suppliers joining us this year. It was good to hear that stands were busy throughout the event with a steady stream of interested visitors and lots of connections and positive conversations held.

The ABA's Annual General Meeting commenced proceedings on Wednesday morning, with Ross Skinner and Neale Bennett reporting on the ABA's activities, and Shannon Harkins presenting the financial statements for 2015/16. The ABA Board election saw three directors appointed, three returning directors, Grant Birrell, Brendan Sidhu and Laurence Van Driel remained in their respective positions on the Board, and Darren Minter from Minter Magic was voted into the position of Sunraysia Region Representative, replacing Tim Orr (more information on pages 10-11).

Neale Bennett, ABA Chairman and Trevor Dennis, Managing Director of Signature Sponsor, HAIFA Australia jointly opened the official Conference proceedings on Wednesday morning. The two-day conference program included 27 presentations covering many aspects of almond growing and key industry issues such as: water and irrigation management; pollination; pest control; biosecurity; domestic and international marketing activities and strategic planning.

Following on from the Annual General Meeting a video address on the State of the Industry from Almond Board of California President and CEO, Richard Waycott discussed reflections on their industry, the ABC's accomplishments over the past year and what lies in store for 2017. The highly anticipated presentation from Vernon Crowder, Senior Vice President and Senior Analyst, Food & Agribusiness Research and Advisory of Rabobank USA followed. Vernon manages the team which analyzes and conducts market research on California agribusiness as well as the North American fresh fruit and produce sectors. His presentation covered topics including the anticipated Californian harvest of 907,000mt, the largest marketable crop in history, and how the rise of net returns to growers has led to increases in plantings over the last decade.

The Conference's afternoon sessions continued with presentations from international guests Blake Sanden, Irrigation and Agronomy Farm Advisor from the University of California and Dr Itamar Nadav from Netafim. Blake Sanden's presentation on "Correlation of individual tree nut yield, evapotranspiration, tree stem water potential, total soil salinity and chloride in a high production almond orchard" highlighted information from a five year fertility-irrigation study in almonds in Kern County that allowed the assessment of nitrogen and potassium on tree nutrient status and kernel yield, whilst Dr Nadav introduced a comparative presentation on variable rate drip irrigation (VRDI) on winegrapes.

Sponsors & Exhibitors

Signature

Haifa

Platinum

Stoller
Unleashing the Power of Plants

Gold

omnia NUTRIOLOGY
Omnia Specialities Australia Pty Ltd

TAYPER

Silver

NETAFIM

Waterfind
AUSTRALIA

YARA

Knowledge grows

BAYER

Bronze

nesa nu-edge solutions australia

Orchard-Rite

BARMAC

SATAKE

Plant & Food RESEARCH
AUSTRALIA

Dinner

E.E. Muir & Sons

Welcome

Seasol
THE SEAWEED SOLUTION

Exhibitors

Haifa
E.E. Muir & Sons
YARA
SATAKE
Stoller
NETAFIM
TAYPER
Seasol THE SEAWEED SOLUTION
AGRICROP
Products for Plants
omnia NUTRIOLOGY
Omnia Specialities Australia Pty Ltd
Horticulture Innovation Australia
AIR-O-FAN
Waterfind AUSTRALIA
GALLARD
shaping your trees future
ALVAN BLANCH
MAIT Industries
BAYER
Elders
FLORY
OCP
OMC
MELPAT INTERNATIONAL PTE LTD
TORO
Rivulis irrigation
SPRAY GRO
WM
nesa nu-edge solutions australia
ZADCO
for quality gro. pty. ltd.
NELSON
AGVITA

Supporting Sponsors

GALLARD
BORRELL
SATAKE
OMC
SPM
peats
LMC
LEWIS M. CARTER
NELSON
GRAHAM'S FACTREE
ANFIC
LARAGON
SPRAY GRO
FLORY
ZADCO
for quality gro. pty. ltd.
AIR-O-FAN
WM

We sincerely thank our partners and sponsors of the 2016 Australian Almond Conference

Feature Article - Conference Conquered

Gavin McMahon from the Central Irrigation Trust and National Irrigators Council and Alister Walsh from Waterfind followed on, with Gavin presenting an outline of the water reforms currently being undertaken in the Murray Darling Basin and the progress that has occurred to date. Alister's presentation emphasized that water allocation outlooks for the current 2016/17 water year show the importance of a planned water management strategy, and that almond growers should know their level of water requirements for their orchard in advance and planning for these needs is essential to save money and maximise outputs for coming seasons.

Dr Gabriele Ludwig, Director, Sustainability and Environmental Affairs of the Almond Board of California, Dr Peter Boutsalis from Plant Science Consulting, and Lance Beem, President of Beem Consulting/Beem AgroSciences Corp USA rounded out the days presentations covering issues such as Californian Almond Sustainability and their Journey so far, Optimising Weed Control in almonds and Plant Growth Regulation and Pest Protection Strategies.

The Annual Conference Dinner, once again supported by EE Muir & Sons was a great end to the first day's proceedings. The evening's program included honoring the 10th Inductee to the Australian Almond Industry Hall of Fame, Mr Andrew Lacey. Andrew's contributions was noted in an audio visual presentation, followed by the presentation of a framed portrait outlining his achievements, his portrait will join the gallery on the walls of the ABA's office and copies of the framed portraits were presented to the inductee's family. The Lindsay Rural photo booth at the dinner was a great addition to the frivolity of the evening, and the photos were a hit with attendees, being shared on social media for all to see. Australia's only 'Unusualist' Raymond Crowe was spectacular, for those not in the know, an Unusualist is a master of intricate hand shadow puppets, ventriloquism, physical comedy, world class illusion and brilliant audience participation. His amazing signature hand shadow piece performed to the Louis Armstrong classic What a Wonderful World, was a global YouTube sensation that has now been seen by an estimated 20,000,000 people, and definitely left the audience in awe.

Thursday's Conference Program not only presented delegates with a perfect day weather wise, but with some enthusiastic and entertaining speakers. Professor Catherine Itsiopolous, Head of School of Allied Health from La Trobe University, Associate Professor Alison Coates from the University of South Australia, Lisa Yates from Nuts for Life, and Simone Austin, Accredited Sports Dietitian & Accredited Practising Dietitian began the days presentations with an informative, insightful and enthusiastic sessions on Mediterranean Diet, the Relationships between nut consumption and vascular and cognitive function, Nuts for Life and their role in supporting the Australian almond industry, and the Role of Almonds in Sports Recovery. Michael Clarke from AgEconPlus rounded out the first morning session with some early insights into the Almond Strategic Investment Plan 2017-2022.

The most highly rated session of this year's conference in the 2016 Conference Evaluation included presentations by Dr Gordon Wardell, Director of Pollination Operations from Wonderful Orchards USA, Ian Zadow, Zadow Apiaries and former Chair of the Australian Honey Bee Industry Council (for more information on these presentations see article on pages 20 and 21. Their presentations on The Biology Behind Preparing Honey Bee Colonies for Almond Pollination and On Property Best Practice: Timing and Management of Hives, were the talking point of the entire conference.

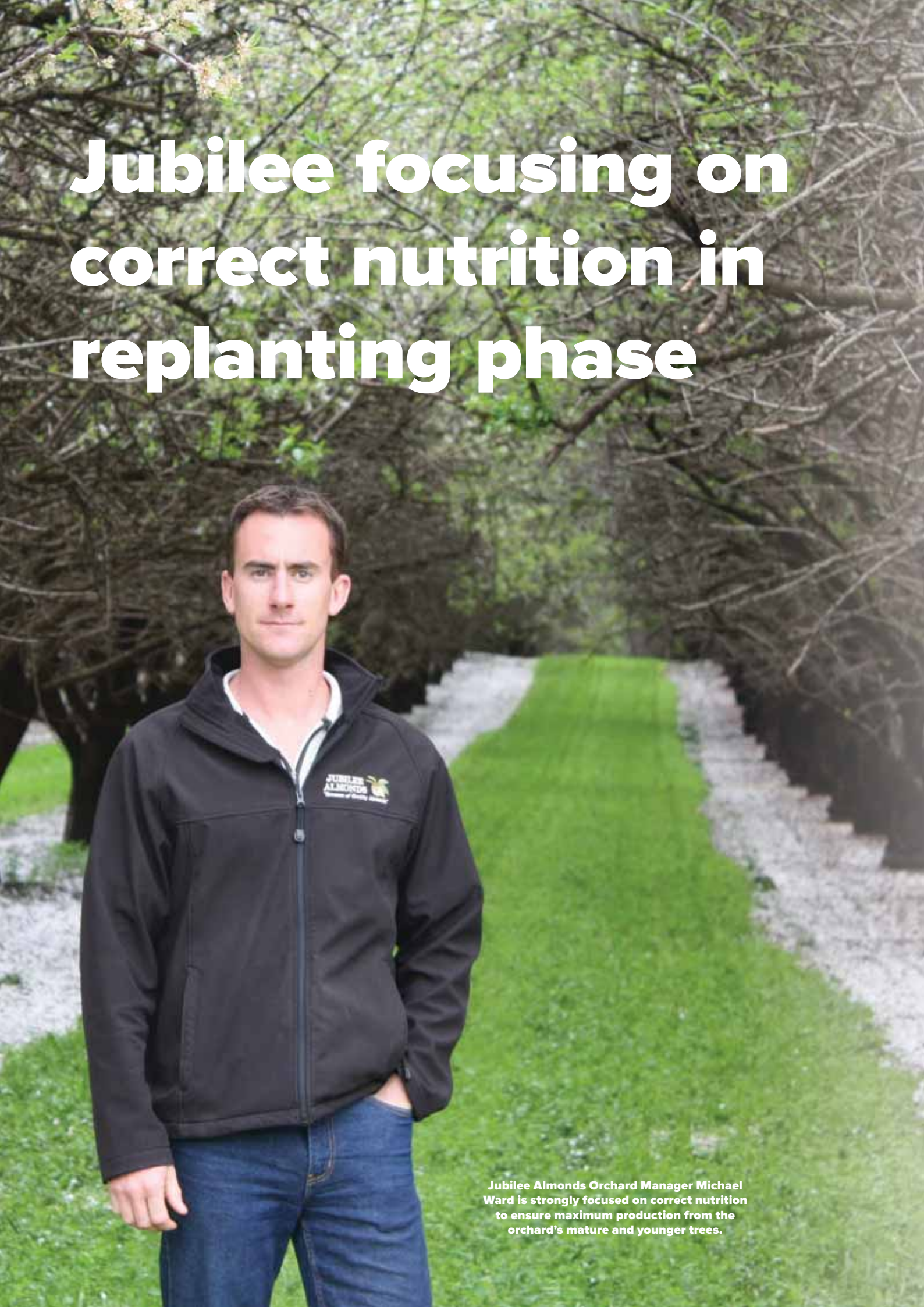
The final session to round out the conference included Intelligent Information Systems for Horticulture and Tree Crops from Dr James Underwood of the Australian Centre for Field Robotics, University of Sydney; Transforming Almond Orchards: Tree Architecture and Advance Production Systems from Dr Grant Thorp of Plant & Food Research Australia; Getting Useful Information for almond producers from Precision Agriculture Sensing Technologies with Dr Rob Bramley of CSIRO Agriculture and Food and finally; Evolution of Management Practices of Select Harvests & GPS Planting with Ben Brown from Select Harvests.

The ABA would like to thank the delegates, sponsors and presenters for making this year's event a showcase of which the Australian almond industry can be proud of. By any measure the 2016 conference was a success, it is our premier forum for sharing information that benefits our industry and its participants and promotes us to the broader horticultural community. Many thanks to everyone for their never-ending enthusiasm and support and for making the conference a great success.

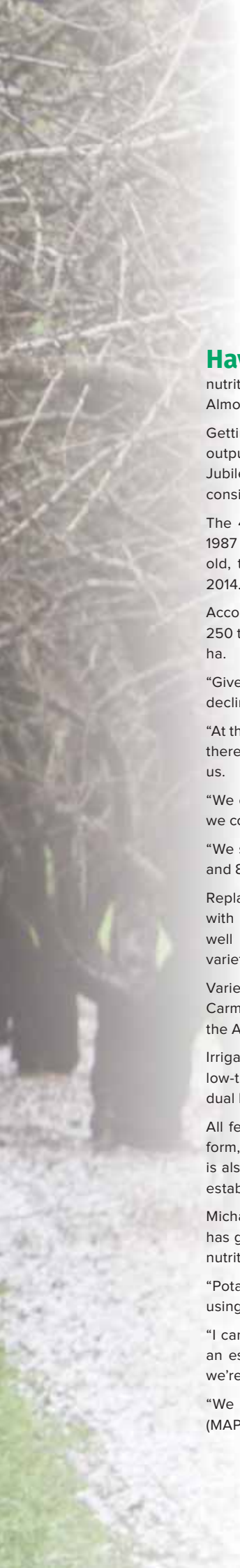
As the Conference has now moved to a biennial event, the ABA will be holding a dedicated Research & Development Forum and Field Day in every off-conference year. Australian almond industry committees and collaborating researchers will partake in this R&D Forum to present the latest updates on almond projects. On June 12 2013, the inaugural 'Activated Almonds Forum' was held with an open invitation to all industry stakeholders to attend. The Forum was a great success with over 75 industry stakeholders attending and has grown to numbers in excess of 100. This event enables industry to converse with researchers, network and provides an ideal opportunity for collaboration/conversations across the supply chain and between researchers and industry. This Forum will become the principal event for growers and industry to hear dedicated research information and outcomes from ABA projects and industry research providers.

For more information on ABA Events such as the AAC please contact Conference Manager Jo Pippos on +61 8 8584 7053 or email jpippos@australianalmonds.com.au

Jubilee focusing on correct nutrition in replanting phase



Jubilee Almonds Orchard Manager Michael Ward is strongly focused on correct nutrition to ensure maximum production from the orchard's mature and younger trees.



Having entered a replanting phase, a well-managed nutrition program is more vital than ever at the Jubilee Almonds orchard in Waikerie, South Australia.

Getting nutrition right is essential for achieving maximum output from both mature and younger trees, which is why Jubilee Almonds Orchard Manager Michael Ward carefully considers all products used in their program.

The 485-hectare orchard was established by Jubilee in 1987 and, with the oldest trees now approaching 27 years old, the company embarked on a replanting mission in 2014.

According to Michael, the mature trees were planted at 250 trees/ha, while replanting began in 2014 at 310 trees/ha.

“Given the age of the trees, we were starting to see a small decline in yields,” Michael said.

“At the time of planning, almond prices were quite low and there were some government subsidies available to help us.

“We could hand back water for a certain dollar value and we could utilise that to kick-start the replant process.

“We started with 39ha in 2014, then we did 70ha in 2015 and 80ha this year.”

Replanting at Jubilee involves replacing the rootstocks with higher yielding and more aggressive rootstocks, as well as replacing current varieties with higher yielding varieties.

Varieties in the orchard currently include Non Pareil, Carmel, Price and Wood Colony, while new varieties from the Australian Almond Board (ABA) are also being trialled.

Irrigation is being changed from a previous under-tree, low-throw system to a surface drip irrigation system, with dual lines per row.

All fertiliser is applied through the irrigation in a soluble form, injected into the main line, while a sprinkler system is also being installed for frost protection and cover crop establishment.

Michael has been with the company for nine years, which has given him plenty of time and experience to refine the nutrition program for the Waikerie orchard.

“Potassium nitrate is our main product and we have been using Haifa’s Multi-K for a long time – it’s a staple,” he said.

“I can’t remember the last time we didn’t use Multi-K. It’s an essential product in the program. We get the results we’re after, which is why we continue to use it.

“We also use tech grade mono ammonium phosphate (MAP), urea, ammonium nitrate and some blends of macro/micro nutrients, potassium sulphate and calcium nitrate.”

Multi-K, manufactured by Haifa, is the basis of a whole line of plain and enriched potassium nitrate products, essential for plant nutrition and growth.

Michael said they had also been trialling Haifa’s Multicote Agri in the younger orchards for the last three years and were expanding the trial area this year.

Based on Haifa’s polymer coating technology, Multicote Agri releases nutrients into soils in a gradual manner, matching plants’ requirements.

It differs from other controlled release fertilisers because its release rate is governed by temperature, not moisture, so nutrients being supplied to plants are not lost during periods of high rainfall or over-watering.

Multicote Agri combines polymer-coated granules of nitrogen, phosphorus, potassium and magnesium, as well as non-coated, readily available nutrients.

“You get the initial hit and then it just depends on the coating level as to how it releases over time,” Michael said.”

As a controlled release product, Multicote Agri feeds crops continuously throughout the growing season, achieving optimal growth and yield production.

“Because it’s available 100 per cent of the time, the trees are always sitting there with fertiliser,” he said.

“We inject on our normal fertigation program five days a week with our drip irrigation system. I can see the benefits of the Multicote, especially in sprinkler orchards, of putting it around the root system and just having it available all the time rather than trying to get your fertigation system highly in-tune over large areas.

“This means you only have to worry about the irrigation rather than the fertigation requirements.”

Michael said they were also involved in some fertiliser and foliar trials with Haifa Regional Agronomist Jon Corona, which he said had already yielded interesting results that would be beneficial for them going forward.

Replanting is set to continue for the next four years at Jubilee, with 100ha planned for next year.

“We’ve been averaging yields of 3.3 tonnes/ha, but with the replanting of new varieties and rootstocks, we would like to be aiming between 3.8-4t/ha across all varieties,” Michael said.

“We’d expect to be achieving those yields by the time these trees reach year seven.”

Media information: Jon Corona, Haifa Australia, on 0408 568 605.

Horticulture Innovation Australia

More than 20 horticulture scholarships up for grabs

The nation's Horticulture research and development corporation, Horticulture Innovation Australia (Hort Innovation), today urged growers and people working in the supply chain to apply for one of 22 scholarships to help propel their business to the next level.

Closing on December 31, the Masterclass in Horticultural Business scholarships include 15 for vegetable businesses, three for the nursery industry, and four for general horticulture.

Hort Innovation Chief Executive John Lloyd said the Masterclass in Horticultural Business will arm participants with world-best-practice skills that can immediately be put into practice.

"This scholarship opportunity is ideal for upcoming leaders looking to learn how to apply practices that have proven effective not just in horticulture locally but also overseas," he said.

Delivered with world leading agriculture university, Wageningen in the Netherlands, renowned university Lincoln in New Zealand and key provider, the University of Tasmania, the Masterclass is the first of its kind in Australia.

Offered online with three face-to-face sessions, the Masterclass will run from February 2017 to December 2017, with around eight to 10 hours per week of engagement required.

Key areas of study include:

- Horticultural Management
- People and Culture
- Supply Chain Management and Logistics
- Financial Management and Law
- Horticultural Marketing and Communication
- Global Trends and International Business
- Innovation and Entrepreneurship
- Business Development and Strategy

Mr Lloyd said scholarships will be awarded by a selection committee based on the perceived contribution applicants will make to the future of their industry, with a particular focus on innovation.

"Australian horticulture sectors are hugely innovative with a strong appetite for delivering a consistent, quality product for consumers while increasing production efficiencies and ultimately boosting farm-gate returns," he said.

"We look forward to seeing some great outcomes from the scholarship participants in this course, and encourage anyone with a drive to take their sector to new heights to apply."

For more information, including an application pack, go to the University of Tasmania website.

MEDIA CONTACT: For more information, please contact Kelly Vorst-Parkes on 0447 304 255 or kelly-vorst-parkes@horticulture.com.au

HAIL mother nature's fury

While much of the clean-up following last month's major storm event has been completed, the mental and financial scars left by the 11 November storm will be felt for years to come.

Despite the 11 November storm hitting more than a month ago, many families and individuals are still coming to terms with the loss of their home or livelihood.

The severe wind and hail that hit parts of the Riverland and Sunraysia regions caused damage to some almond orchards in the direct path of the storm.

Reports from industry growers received indicate that orchards in Lyrup, Overland Corner, Paringa, Lake Cullulleraine, Merbein and Redcliffs had varying degrees of damage ranging from light to very severe. The damage caused by the hail is the worst, with crop and foliage stripped from trees, whilst the wind caused some nut fall and limb damage and in some cases uprooted trees.

The level of damage is not consistent across the industry, with most orchards having no or minor damage, whilst a few have been severely impacted with both crop loss and damaged trees that will also reduce next year's production.

The spread of industry orchards along 600 kilometres of the Murray and also in the Riverina has helped limit overall crop damage.

It appears the damage will reduce the industry's 2017 crop by a few percent at most, but given much of the severe damage has been suffered by a small number of growers it is particularly hard on them.

Growers know the uncertain nature of producing crops, but it is upsetting to see the efforts of industry members and other producers devastated.

Sunraysia

Agriculture Victoria met with more than 1,350 primary producers across the Mallee following the 11 November storm and estimates nearly 4,000 hectares of horticulture crops and more than 21,000 hectares of broadacre crops were lost due to the storm.

Agriculture Victoria has appointed an Agriculture Recovery Manager to work with growers and industry associations to provide advice on recovery strategies and options.

The Victorian and Federal Governments earlier this month announced additional disaster assistance for those affected by the 11 November storm.

Funded through the jointly-funded Commonwealth-State Natural Disaster Relief and Recovery Arrangements (NDRRA), concessional low interest rate loans of up to $200,000 are now available for primary producers, small businesses and not-for-profit bodies who have suffered direct damage or a significant loss of income as a result of last month's storm.

Riverland

A storm recovery hotline (0476 834 530) set up in the wake of the disaster received calls from over 80 primary producers.

The damage assessment will form the basis of any government financial relief packages and growers have been encouraged to report all storm damage.

Agriculture Minister Leon Bignell flew to the area near the state's eastern border for talks with primary industries officials and Opposition Leader Steven Marshall also headed there to discuss crop damage with regional MP Tim Whetstone and growers.

Mr Bignell said the damage bill for Riverland horticultural properties could reach $100 million, at a time when agriculture had faced some harsh setbacks across several South Australian regions.

Help is at hand

Sometimes after a distressing event there are many emotional reactions, including fear - children may fear storms, or find they have nightmares. You may also experience fear about damage from future storms, or be angry or have anxious moments.

Decision-making may be more difficult than normal – you may be unable to concentrate, your sleeping patterns may change, or you may blame others when things don't work out.

Talk over your thoughts and feelings with trusted loved ones, or consider writing down your thoughts.

Try to keep to your normal routine, keep yourself occupied - maybe watch a movie. Make time for fun and relaxation. Ask family and friends to join in and help.

Give yourself time as physical and emotional reactions are a normal response after a distressing or frightening event.

Seek professional advice if you are finding it difficult to cope – the sooner you seek help the sooner you recover.

Certificate III in Rural Operation AHC 32810

Developed specifically for the Australian almond industry in consultation with the Almond Board of Australia

Image source - http://www.almondinvestors.com.au

This course has been developed by SuniTAFE in collaboration with the Australian Almond Board and is tailored for the Almond industry.

This program will equip growers and other industry stakeholders with the skills and knowledge to take advantage of opportunities in this vibrant industry.

Where
Mildura Campus - SuniTAFE Farm - On site

Study Mode
Part-time

Duration
12 - 24 months, training days to be mutually agreed upon

Course Start
February 5, 2017 (ongoing)

To enrol or learn more contact
Ross Humphreys Commercial Manager
T 03 50223790
E rhumphreys@sunitafe.edu.au

Great future for Almonds = Great opportunities

"The Australian Almonds industry is entering an exciting growth phase, with massive new marketing opportunities to supply Domestic and Export markets … If you are working in horticulture and have a passion to succeed, there is no better time to step up to the next level by enrolling in SuniTAFE's Almond specific courses."

1300 4 SUNITAFE 1300 4 78648

Learn more at **sunitafe.edu.au**

SuniTAFE

Mildura Campus
Benetook Avenue

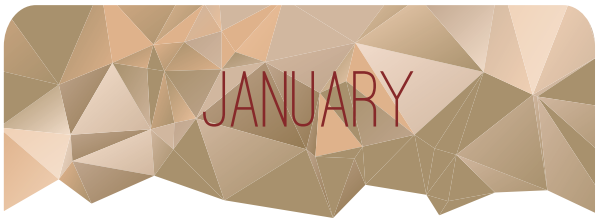
Mildura VIC 3500

T 03 5022 3790
E rhumphreys@sunitafe.edu.au

Sunraysia INSTITUTE of Technical and Further Education

SuniTAFE... you can be anything!

2017 Events



SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

January

2 New Years Day Public Holiday Observed

3 ABA Office Re-Opens for 2017

20 Almond Centre of Excellence Committee Meeting, Loxton Research Centre

26 Australia Day Public Holiday

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

February

1 Market Development Committee Meeting, Glenelg, Adelaide

2 ABA Board Meeting, Glenelg, Adelaide

8 Production Committee, Plant Improvement Committee & Pollination Committee Meetings, Loxton Research Centre

26 Gulfoods Exhbition begins, Dubai UAE

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

March

2 Gulfoods Exhibition ends, Dubai UAE

7 Foodex Exhbition begins, Tokyo, Japan

9 Almond Centre of Excellence Committee Meeting, Loxton Research Centre

10 Foodex Exhibition ends, Tokyo, Japan

13 Adelaide Cup Public Holiday, South Australia
Labour Day Public Holiday, Victoria

27 Australian Nut Conference begins, Melbourne

29 Australian Nut Conference ends, Melbourne

Happy Holidays

from the ABA

Board & Executive

Neale **Bennett**
Damien Houlahan
John Maragozidis
Peter **Cavallaro**
Brendan Sidhu
Denis Dinicola
Darren **Minter**
Grant Birrell
Laurence Van Driel
Brenton Woolston
Ross **Skinner**

Market Development

Joseph Ebbage

Industry Development

Andrew Downs
Josh **Fielke**
Brett Rosenzweig

Finance & Administration

Shannon **Harkins**
Debbie McMahon

Communications & Conference

Jo **Pippos**

2017

Media Release

International speakers headline 17th Australian Almond Conference

18 October 2016

The 17th Australian Almond Conference features an impressive line-up of speakers including Vernon Crowder, Senior Vice President & Senior Analyst, Food & Agribusiness Research and Advisory, Rabobank (USA), Dr Itamar Nadav, Project Manager & Chief Agronomist, Research & Development Department, Netafim (ISRAEL) and Dr Gordon Wardell, Director of Pollination Operations, Wonderful Orchards (USA).

This line-up of international speakers will join a strong list of industry experts from Australia such as Professor Catherine Itsiopolous, Head of School of Allied Health at La Trobe University and Dr James Underwood, Senior Research Fellow of the Australian Centre for Field Robotics at the University of Sydney, to present at the Australian Almond Conference, to be held in Melbourne between November 8 and 10, 2016.

This year's Conference will include presentations by respected researchers and experts focusing on the entire supply chain from both a domestic and an international perspective. Speakers will address issues of industry interest; from pollination to promotion and product quality to price prediction.

The Conference is an event attended by many involved in the almond industry covering the majority of orchard acreage planted in the Murray Valley and Western Australia, the processors, marketers and other industry stakeholders. Now held every two years, the Australian Almond Conference will be attended by more than 350 delegates including international visitors.

Delegates receive a briefing on improved on farm and post-harvest practices as well as an

understanding of the broad range of activities to further develop the domestic and export markets for the record 2015 crop and this season's harvested in early 2016.

“The conference has been extremely well attended in the past. It attracts growers and others in the industry from across Australia and internationally,” advises Jo Pippos, Almond Board of Australia's Conference & Communications Manager.

“Almonds are a real success within the horticulture industry and our Annual Conference gives all stakeholders a valuable chance to network with their peers, share ideas and learn from experts in their respective fields.”

“This year the Conference Organising Committee has done an excellent job in putting together a diverse and exciting array of high-profile speakers and knowledgeable experts that attendees will enjoy and find informative.”

The Conference has a wide program with topics to be covered including:

- Global economic outlook
- Market development
- Water availability in future
- Pollination surety
- New varietal improvement
- Sustainability issues and how they are being addressed in California
- The use of drones in orchards
- The impact of nutrition on human wellbeing
- Development of orchard practices

The Australian almond industry is in the midst of further significant growth and the interest in almonds is very strong. Almonds are a fast growing industry and in 2015/16 was Australia’s most valuable horticultural export crop servicing an expanding domestic market and 50 countries worldwide.

For more information about the 17th Australian Almond Conference, go to:
http://growing.australianalmonds.com.au/conference/

and our Conference Speakers here:
http://growing.australianalmonds.com.au/conference/conference-speakers/

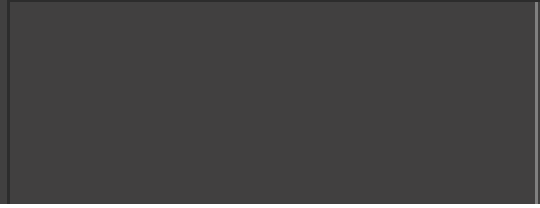
MEDIA PASSES
To obtain a media pass for this event please visit:
http://growing.australianalmonds.com.au/australian-almond-conference-media-pass-application/

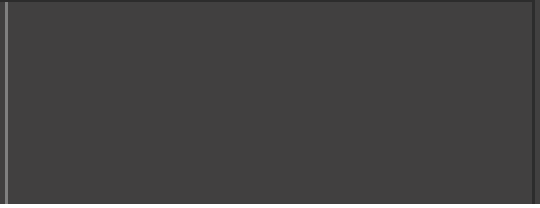
~~ENDS~~

For further comment, information and photos to accompany this Media release please contact:

- **Jo Pippos**, Conference & Communications Manager on 08 8584 7053

Pictures available to accompany this media release:





Vernon Crowder, Senior Vice President & Senior Analyst, Food & Agribusiness Research and Advisory, Rabobank (USA)

Dr Itamar Nadav, Project Manager & Chief Agronomist, Research & Development Department, Netafim (ISRAEL)

Dr Gordon Wardell, Director of Pollination Operations, Wonderful Orchards (USA)

Professor Catherine Itsiopolous the Head of School of Allied Health at La Trobe University

Dr James Underwood, Senior Research Fellow,
Australian Centre for Field Robotics, the University of Sydney

The Almond Board of Australia (ABA) is a non profit, membership based organisation representing the interests of Australian almond growers, processors and marketers. As the Australian almond industry's peak industry body, the ABA facilitates further growth of the industry, seeks to maximise its profitability and ensure its sustainability, by providing a platform for industry members to collectively respond to industry-wide issues, invest in research and marketing, share knowledge and interact with government and other stakeholders.

Key almond growing areas are located in Sunraysia (Victoria), the Riverland and Adelaide (South Australia), the Riverina (New South Wales) and the Swan region (Western Australia)..

For more information visit www.australianalmonds.com.au or

email: admin@australianalmonds.com.au

Sponsors & Exhibitors

australian almonds
ALMOND BOARD OF AUSTRALIA

Haifa

Horticulture Innovation Australia

This project has been funded by Horticulture Innovation Australia Limited using the Almond Industry levy and funds from the Australian Government.

Meltwater

Analyze

Nov 1, 2016 - Nov 30, 2016

Media Exposure

Nov 1, 2016 - Nov 30, 2016 | Filters: Country

Date	Headline	URL	Opening Text	Source	Country	Subregion	Reach	AVE	Sentiment	Keywords
25-Nov-2016 02:03PM	Forget sports drinks- try some almonds	http://www.northqueenslandregister.com.a	Nuts have been given a healthy wrap by dietitians at this year's Australian Almond Conference with almonds particularly talked-up as a...	North Queensland Register	Australia	Queensland regional	0	0	Positive	Australian Almond Conference
25-Nov-2016 01:30PM	Forget sports drinks- try some almonds	http://www.queenslandcountrylife.com.au,	FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes.\n\nAttendees at the recent 17th Australian...	Queensland Country Life	Australia	Queensland regional	0	0	Positive	Australian Almond Conference
25-Nov-2016 01:00PM	Forget sports drinks- try some almonds	http://www.stockjournal.com.au/story/430	FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes.\n\nAttendees at the recent 17th Australian...	Stock Journal	Australia	South Australia regional	0	0	Positive	Australian Almond Conference
25-Nov-2016 12:30PM	Forget sports drinks- try some almonds	http://www.theland.com.au/story/430587	FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes.\n\nAttendees at the recent 17th Australian...	The Land	Australia	New South Wales regional	0	0	Positive	Australian Almond Conference
25-Nov-2016 12:30PM	Forget sports drinks- try some almonds	http://www.stockandland.com.au/story/43	News\n\nSNACK ON: Almonds are a good recovery food for active people such as cyclists who would also generally have the disposable income to...	Stock and Land	Australia	Victoria regional	0	0	Positive	Australian Almond Conference
24-Nov-2016 01:00PM	Orchardists should check beehives' health	http://www.stockjournal.com.au/story/430	BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative.\n\nPrincipal of Zadow...	Stock Journal	Australia	South Australia regional	0	0	Positive	Australian Almond Conference
25-Nov-2016 12:30PM	Forget sports drinks- try some almonds	http://www.goodfruitandvegetables.com.a	FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes.\n\nAttendees at the recent 17th Australian...	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
24-Nov-2016 01:30PM	Orchardists should check beehives' health	http://www.queenslandcountrylife.com.au,	BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative.\n\nPrincipal of Zadow...	Queensland Country Life	Australia	Queensland regional	0	0	Positive	Australian Almond Conference
23-Nov-2016 04:30AM	2016 Australian Almond Conference | Photos	http://www.goodfruitandvegetables.com.a	2016 Australian Almond Conference | Photos\n\nTweet\n\nFacebook\n\nof\n\n17th Australian Almond Conference\n\nTHE 17th Annual Australian Almond..	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference,Australian Almond Conference
24-Nov-2016 12:30PM	Orchardists should check beehives' health	http://www.theland.com.au/story/430569	BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative.\n\nPrincipal of Zadow...	The Land	Australia	New South Wales regional	0	0	Positive	Australian Almond Conference
22-Nov-2016 01:25PM	Bee supplements could assist pollination	http://www.northqueenslandregister.com.a	An American bee expert thinks hive protein supplements are the way to go in order to lift pollination levels in Australian orchards.\n\nHIVE...	North Queensland Register	Australia	Queensland regional	0	0	Positive	Australian Almond Conference
24-Nov-2016 12:30PM	Orchardists should check beehives' health	http://www.stockandland.com.au/story/43	News\n\nDOUBLE CHECK: A bee industry spokesperson says beehives should be checked within the first couple of weeks of arriving at an orchard..	Stock and Land	Australia	Victoria regional	0	0	Positive	Australian Almond Conference
24-Nov-2016 12:30PM	Orchardists should check beehives' health	http://www.goodfruitandvegetables.com.a	BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative.\n\nPrincipal of Zadow...	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
22-Nov-2016 01:30PM	Bee supplements could assist pollination	http://www.queenslandcountrylife.com.au,	HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....	Queensland Country Life	Australia	Queensland regional	0	0	Positive	Australian Almond Conference
22-Nov-2016 01:00PM	Bee supplements could assist pollination	http://www.stockjournal.com.au/story/430	HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....	Stock Journal	Australia	South Australia regional	0	0	Positive	Australian Almond Conference
22-Nov-2016 12:30PM	Bee supplements could assist pollination	http://www.theland.com.au/story/430578	HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....	The Land	Australia	New South Wales regional	0	0	Positive	Australian Almond Conference
22-Nov-2016 12:30PM	Bee supplements could assist pollination	http://www.goodfruitandvegetables.com.a	HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
22-Nov-2016 12:30PM	Bee supplements could assist pollination	http://www.stockandland.com.au/story/43	News\n\nBUSY AS: Almond orchards rely heavily on bees for pollination and an American expert says both beekeepers and growers could benefit...	Stock and Land	Australia	Victoria regional	0	0	Positive	Australian Almond Conference
22-Nov-2016 04:30AM	Beehive audits needed to maximise efficiency, control disease	http://www.goodfruitandvegetables.com.a	BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative.\n\nPrincipal of Zadow...	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
22-Nov-2016 12:25AM	Australian almond market continues to grow	http://www.freshplaza.com/article/167011	Despite ongoing commentary to the contrary, speakers at the Australian Almond Conference recently debunked the idea that Australia almond...	FreshPlaza	Netherlands		75539	698.73575	Positive	Australian Almond Conference
21-Nov-2016 05:38AM	Almond crop right on target	http://world.einnews.com/article/3547691	AUSTRALIAN almond producers have not overestimated local and global demand for their nuts. Despite ongoing commentary to the contrary,...	World News Report - EIN	United States		92012	851.111	Positive	Australian Almond Conference
20-Nov-2016 11:30PM	Australian Almond Conference: Nut crop right on target	https://app.meltwater.com/mwTransition?	AUSTRALIAN almond producers have not overestimated local and global demand for their nuts.	Weekly Times Now (Licensed by Copyright Agency)	Australia	Victoria regional	48184	445.702	Positive	Australian Almond Conference,Australian Almond Conference
10-Nov-2016 10:22AM	Australia continues to build almond trade	http://www.fruitnet.com/asiafruit/article/1	Market share set to increase over coming years as Californian volumes bounce back	Fruitnet.com	United Kingdom	South East and London regional	0	0	Positive	Australian Almond Conference
20-Nov-2016 04:30AM	Nut health benefits continue to rise	http://www.goodfruitandvegetables.com.a	FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes.\n\nAttendees at last week's 17th...	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
19-Nov-2016 04:30AM	Hive proteins could boost pollination	http://www.goodfruitandvegetables.com.a	HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
29-Oct-2016 04:30AM	Nut experts booked for almond conference	http://www.goodfruitandvegetables.com.a	CONFERENCE TIME: The 17th Australian Almond Conference will be held in Melbourne from November 8 to 10 and feature both national and...	Good Fruit & Vegetables	Australia		0	0	Positive	Australian Almond Conference
01-Nov-2016 11:55PM	Industry experts booked for almond conference	http://www.freshplaza.com/article/166016	Almond growers are heading to Melbourne this November for the 17th Australian Almond Conference. The programs line-up of speakers includes...	FreshPlaza	Netherlands		75539	698.73575	Positive	Australian Almond Conference

Meltwater

North Queensland Register • AUS • Nov 25, 2016 • 02:03 pm

Forget sports drinks- try some almonds

Nuts have been given a healthy wrap by dietitians at this year's Australian Almond Conference with almonds particularly talked-up as a...

been given a healthy wrap by dietitians at this year's *Australian Almond Conference* with almonds particularly talked-up as a sports recovery

Queensland Country Life • AUS • Nov 25, 2016 • 01:30 pm

Forget sports drinks- try some almonds

FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes. Attendees at the recent 17th...

keep on ticking health boxes. Attendees at the recent 17th *Australian Almond Conference* at Albert Park, Victoria, could have been forgiven

Stock Journal • AUS • Nov 25, 2016 • 01:00 pm

Forget sports drinks- try some almonds

FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes. Attendees at the recent 17th...

keep on ticking health boxes. Attendees at the recent 17th *Australian Almond Conference* at Albert Park, Victoria, could have been forgiven

The Land • AUS • Nov 25, 2016 • 12:30 pm

Forget sports drinks- try some almonds

FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes. Attendees at the recent 17th...

keep on ticking health boxes. Attendees at the recent 17th *Australian Almond Conference* at Albert Park, Victoria, could have been forgiven

Stock and Land • AUS • Nov 25, 2016 • 12:30 pm

Forget sports drinks- try some almonds

News SNACK ON: Almonds are a good recovery food for active people such as cyclists who would also generally have the disposable income...

been given a healthy wrap by dietitians at this year's *Australian Almond Conference* with almonds particularly talked-up as a sports recovery

Good Fruit & Vegetables • AUS • Nov 25, 2016 • 12:30 pm

Forget sports drinks- try some almonds

FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes. Attendees at the recent 17th...

keep on ticking health boxes. Attendees at the recent 17th *Australian Almond Conference* at Albert Park, Victoria, could have been forgiven

Good Fruit & Vegetables • AUS • Nov 20, 2016 • 04:30 am

Nut health benefits continue to rise

FROM athlete recovery to weight loss and even longer life- nuts just keep on ticking health boxes. Attendees at last week's 17th...

on ticking health boxes. Attendees at last week's 17th *Australian Almond Conference* at Albert Park, Victoria, could have been forgiven for

Queensland Country Life • AUS • Nov 24, 2016 • 01:30 pm

Orchardists should check beehives' health

BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative. Principal of...

Bee Industry Council chairperson Ian Zadow spoke at the 17th *Australian Almond Conference* in Victoria earlier this month where he encouraged

Stock Journal • AUS • Nov 24, 2016 • 01:00 pm

Orchardists should check beehives' health

BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative. Principal of...

Bee Industry Council chairperson Ian Zadow spoke at the 17th *Australian Almond Conference* in Victoria earlier this month where he encouraged

The Land • AUS • Nov 24, 2016 • 12:30 pm

Orchardists should check beehives' health

BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative. Principal of...

Bee Industry Council chairperson Ian Zadow spoke at the 17th *Australian Almond Conference* in Victoria earlier this month where he encouraged

Stock and Land • AUS • Nov 24, 2016 • 12:30 pm

Orchardists should check beehives' health

News DOUBLE CHECK: A bee industry spokesperson says beehives should be checked within the first couple of weeks of arriving at an...

Bee Industry Council chairperson Ian Zadow spoke at the 17th *Australian Almond Conference* in Victoria earlier this month where he encouraged

Good Fruit & Vegetables • AUS • Nov 24, 2016 • 12:30 pm

Orchardists should check beehives' health

BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative. Principal of...

Bee Industry Council chairperson Ian Zadow spoke at the 17th *Australian Almond Conference* in Victoria earlier this month where he encouraged

Good Fruit & Vegetables • AUS • Nov 22, 2016 • 04:30 am

Beehive audits needed to maximise efficiency, control disease

BEEHIVE auditing should be a routine procedure for almond growers according to one pollination industry representative. Principal of...

Bee Industry Council chairperson Ian Zadow spoke at the 17th *Australian Almond Conference* in Victoria earlier this month where he encouraged

Good Fruit & Vegetables • AUS • Nov 23, 2016 • 04:30 am

2016 Australian Almond Conference | Photos

2016 Australian Almond Conference | Photos Tweet Facebook of 17th Australian Almond Conference THE 17th Annual Australian Almond...

Australian Almond Conference | Photos Tweet Facebook of 17th *Australian Almond Conference* THE 17th Annual *Australian Almond Conference*

Queensland Country Life • AUS • Nov 22, 2016 • 01:30 pm

Bee supplements could assist pollination

HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....

Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

North Queensland Register • AUS • Nov 22, 2016 • 01:25 pm

Bee supplements could assist pollination

An American bee expert thinks hive protein supplements are the way to go in order to lift pollination levels in Australian orchards....
Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

Stock Journal • AUS • Nov 22, 2016 • 01:00 pm

Bee supplements could assist pollination

HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....
Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

The Land • AUS • Nov 22, 2016 • 12:30 pm

Bee supplements could assist pollination

HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....
Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

Good Fruit & Vegetables • AUS • Nov 22, 2016 • 12:30 pm

Bee supplements could assist pollination

HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....
Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

Stock and Land • AUS • Nov 22, 2016 • 12:30 pm

Bee supplements could assist pollination

News BUSY AS: Almond orchards rely heavily on bees for pollination and an American expert says both beekeepers and growers could benefit...
Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

Good Fruit & Vegetables • AUS • Nov 19, 2016 • 04:30 am

Hive proteins could boost pollination

HIVE protein supplements could be the secret to boosting pollination rates in Australia according to an American bee expert....
Orchards, Dr Gordon Wardell, spoke at the recent *Australian Almond Conference* at Albert Park, Victoria. Pollinating almond orchards is one

FreshPlaza • NLD • Nov 22, 2016 • 12:25 am

Australian almond market continues to grow

Despite ongoing commentary to the contrary, speakers at the Australian Almond Conference recently debunked the idea that Australia almond...

ongoing commentary to the contrary, speakers at the *Australian Almond Conference* recently debunked the idea that Australia almond producers

World News Report - EIN • USA • Nov 21, 2016 • 05:38 am

Almond crop right on target

AUSTRALIAN almond producers have not overestimated local and global demand for their nuts. Despite ongoing commentary to the contrary,...

ongoing commentary to the contrary, speakers at the *Australian Almond Conference* recently debunked the idea. Leading international US fresh

Weekly Times Now (Licensed by Copyright Agency) • AUS • Nov 20, 2016 • 11:30 pm

Australian Almond Conference: Nut crop right on target

AUSTRALIAN almond producers have not overestimated local and global demand for their nuts.

ongoing commentary to the contrary, speakers at the *Australian Almond Conference* recently debunked the idea. Leading international US fresh

Fruitnet.com • GBR • Nov 10, 2016 • 10:22 am

Australia continues to build almond trade

Market share set to increase over coming years as Californian volumes bounce back

a resurgence in volumes out of California. Speaking the *Australian Almond Conference* in Melbourne yesterday, Rabobank USA's senior vice

FreshPlaza • NLD • Nov 1, 2016 • 11:55 pm

Industry experts booked for almond conference

Almond growers are heading to Melbourne this November for the 17th Australian Almond Conference. The program's line-up of speakers...

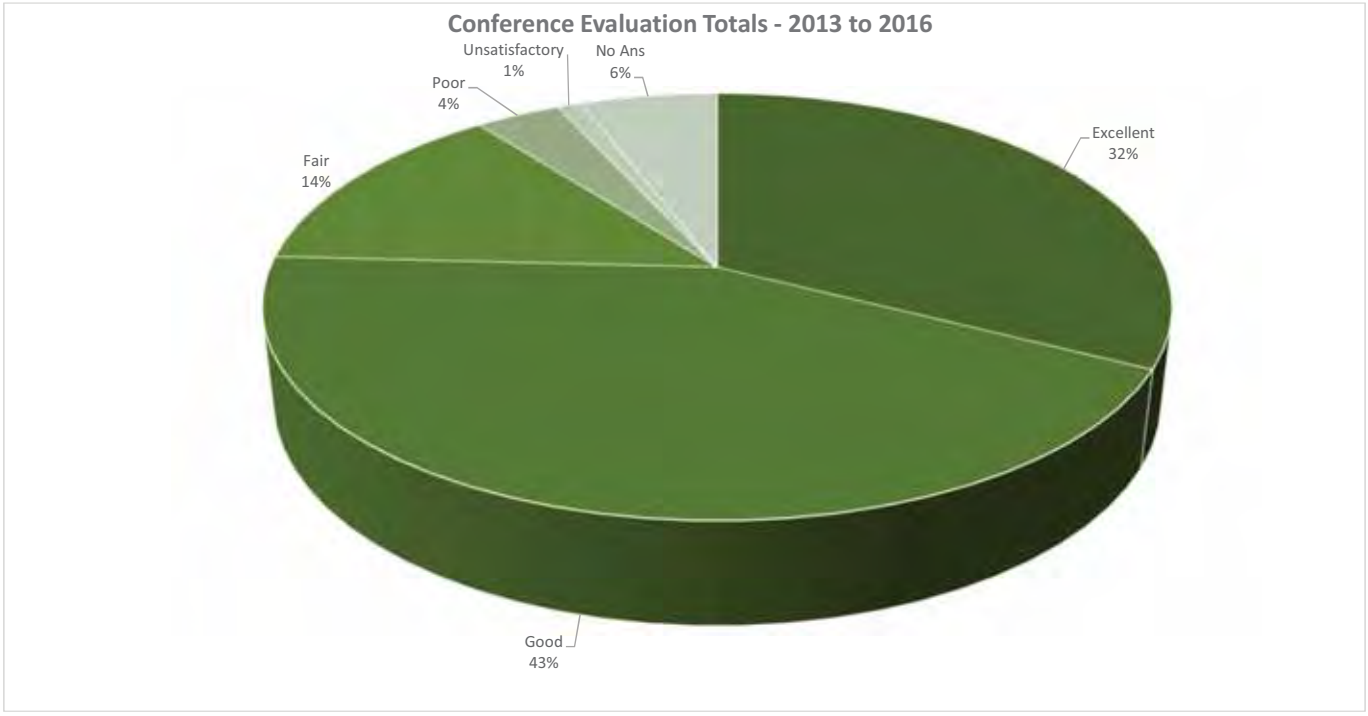
Almond growers are heading to Melbourne this November for the 17th *Australian Almond Conference*. The program's line-up of speakers includes

Good Fruit & Vegetables • AUS • Oct 29, 2016 • 04:30 am

Nut experts booked for almond conference

CONFERENCE TIME: The 17th Australian Almond Conference will be held in Melbourne from November 8 to 10 and feature both national and...

CONFERENCE TIME: The 17th *Australian Almond Conference* will be held in Melbourne from November 8 to 10 and feature both national and


Conference Evaluation Totals - 2013 to 2016
Unsatisfactory 1%
No Ans 6%
Poor 4%
Excellent 32%
Fair 14%
Good 43%