

FINAL REPORT

HG12717

**"APEN ICNZ13 -
Strengthening Extension Services in Horticulture"**

Study Tour Project

Austin McLennan et al.

Australasia-Pacific Extension Network Inc.

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Project Leader - Austin McLennan, APEN President

c/- Department of Primary Industry and Fisheries, Katherine NT 0851
Ph 08 8973 9762 | Mob 0488 764 592 | Email austin.mclennan@nt.gov.au

Project Administrator - Rosemary Currie, APEN Secretariat

APEN SECRETARIAT
PO Box 1239, Wodonga VIC 3689
Ph 08 6024 5349 | Mob 0402 380 332 | Email info@apen.org.au

Statement of Purpose: In 2013 APEN, the Australasia-Pacific Extension Network, held its 6th International Conference at Lincoln University, New Zealand (APEN ICNZ13). To facilitate the attendance of key industry advisors and extension personnel from the Australian horticultural industry at APEN ICNZ13, HAL funded APEN to deliver a programme of conference scholarships. The purpose of this report is to demonstrate the value of HAL's investment in APEN ICNZ13 through the provision of this scholarship programme. This report complies with HAL's reporting requirements for travel/study tour projects.

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30 May 2014

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Table of Contents

1. Media Summary	2
2. Introduction and objectives	4
2.1. About APEN	4
2.2. Background to APEN ICNZ13	4
2.3. Rationale for HAL investment in the APEN ICNZ13 Scholarship Programme	5
3. Project overview and implementation	7
3.1. Scholarship promotion and selection	7
3.2. Details of scholarship awardees	7
3.3. Horticulture in the APEN ICNZ13 programme	9
3.4. Post-conference initiatives to strengthen extension services in horticulture	9
3.5. Evaluation methodology	11
4. Outcomes of the HAL APEN ICNZ13 Scholarship Programme	12
4.1. Delegate survey: a successful conference	12
4.2. Scholar Reports: Key Themes	12
4.2.1. Delegates valued the opportunity to learn from other sectors and had an intent to follow-up on their new networks and learnings	13
4.2.2. Delegates valued the opportunity to reflect on their extension practice	14
4.2.3. Hot topics - Agricultural innovation systems and communicating risk	15
4.2.4. Discovering APEN as a valued network for horticulture professionals	16
5. Implications for Australian horticulture	17
5.1. The value of cross-industry forums for fostering innovation and strengthening horticultural advisor networks	17
5.2. The generation of new insights for APEN ICNZ13 Scholarship holders that will enhance their capacity to drive innovation in Australian horticulture:	17
6. Dissemination of Findings	18
7. Itinerary	19
8. Recommendations	19
9. Acknowledgments	20
10. Contact List	21
11. Appendix A: Individual APEN ICNZ13 Scholarship Reports	22
12. Appendix B: APEN ICNZ13 delegate list	50

1. Media Summary

In 2013 HAL provided a series of scholarships that allowed thirteen horticultural industry leaders from Australia to attend the Australasia-Pacific Extension Network's 6th International Conference in New Zealand (APEN ICNZ13). The theme for APEN ICNZ13 was 'Transformative Change – Chosen or Unchosen: Pathways to innovation, resilience and prosperity' and it attracted a total of 151 delegates to Lincoln University, near Christchurch from August 26-28, 2013.

The thirteen successful applicants for the HAL APEN ICNZ13 Scholarship Programme were drawn from all Australian states and a wide range of commodity groups, including pome fruits, macadamias, vegetables, citrus, the nursery sector and more. All reported that attendance at APEN ICNZ13 was a valuable experience, enabling them to connect with and learn from a wide range of extension and industry development professionals.

Among the key findings were that delegates valued the opportunity to learn from other industry sectors as well as the opportunity to reflect on their own extension practice. All expressed a clear intent to follow-up on their new networks and learnings, and could identify opportunities for applying the extension approaches heard about in their own industries.

The opportunity to learn about extension processes working well in other industries, such as those implemented by Dairy NZ and Zespri (NZ kiwifruit industry) were a commonly cited highlight of APEN ICNZ13, reinforcing the value of exposing the Australian horticultural industry to innovations and developments occurring outside its usual networks.

In addition to the HAL APEN ICNZ13 Scholarship Programme, the project also provided support for APEN to deliver a range of post-conference professional development activities and resources. To date, these have included a training roadshow, webinars, several articles in APEN's ExtensionNet newsletter and a special APEN ICNZ13 edition of the Extension Farming Systems Journal, available online at the APEN website (www.apen.org.au).

Given the success of the project, a key recommendation is that HAL consider a similar arrangement for supporting horticultural industry involvement at the next APEN Conference in South Australia in 2015.



The thirteen HAL APEN ICNZ13 Scholars together at Lincoln University, New Zealand, August 2013, with APEN President Austin McLennan and HAL representative Jo McCloskey.

Standing L-R: Gabriella Kerz, Julie Petty, Trevor Ranford, Stuart Smith, Helena Whitman, Jennifer Rowling, Virginie Gregoire, Nathan Hancock and Bronwyn Walsh

Sitting L-R: David Reid, Jesse Reader, Jo McCloskey, Austin McLennan, Robbie Commens and John McPhee

2. Introduction and objectives

In 2013 APEN, the Australasia-Pacific Extension Network, held its 6th International Conference at Lincoln University, New Zealand (APEN ICNZ13). To facilitate the attendance of key industry advisors and extension personnel from the Australian horticultural industry, HAL funded APEN to deliver a programme of conference scholarships.

The HAL APEN ICNZ13 Scholarships was a successful initiative that enabled thirteen horticultural industry personnel from Australia to attend the 2013 APEN International Conference and greatly expand their cross-industry networks.

This opening section of the report will briefly introduce APEN, the background to APEN ICNZ13 and the objectives of HAL and APEN in providing the scholarship programme.

2.1. About APEN

APEN (the Australasia-Pacific Extension Network) is the leading organisation for extension and advisory professionals working in the primary industry, natural resource management (NRM) and community development sectors in Australia and New Zealand. The majority of APEN's members work in agricultural or natural resource management as either public or private/non-government advisors to landholders and primary producers.

APEN is an international organisation with over 400 members in Australia, New Zealand and the broader Australasia-Pacific region. Through a range of initiatives, APEN aims to provide networking and professional development opportunities for its members that enable the sharing of information, experiences and knowledge among the broader extension and advisor community. As a result, APEN members are intended to be better-equipped to support change and innovation in the industries and communities that they work with.

At an organisational level, APEN has strong links to the Australian horticultural industry through the professional networks and careers of members of its governing body, the APEN Management Committee (APEN MC). The current APEN President Austin McLennan and APEN's Regional Coordinators for Tasmania and the Northern Territory, Sophie Folder and Warren Hunt, all work on projects and activities related to Australian horticulture. Many of APEN's members also work in horticulture sector, or on issues related to the profitability and sustainability of horticultural industries in Australia and overseas.

2.2. Background to APEN ICNZ13

APEN holds major conference events held every two years. These events are one of the flagship activities that APEN uses to support the professional development and cross-industry networking of its members. In 2013, for the first time in its 20 year history, APEN's International Conference was held outside Australia, venturing to Lincoln University, near Christchurch, New Zealand. The theme of the 2013 APEN International Conference (APEN ICNZ13) was:

***Transformative Change – Chosen or Unchosen:
Pathways to Innovation, Resilience and Prosperity.***

Extension and advisory professionals working in primary industries, natural resource management and community development have been the primary target audience for past APEN conferences, and this remained the case with APEN ICNZ13. A key objective of APEN conferences is to increase the skills, knowledge and networks of delegates through exposure

to the latest trends in extension and development across a range of industry and community sectors. To achieve this exposure, APEN ICNZ13 featured four invited keynote speakers on the topic of agricultural innovation, over 50 presentations from conference delegates focused on agricultural and NRM issues, a poster session, a field trip and networking functions, including the APEN ICNZ13 Conference Dinner featuring the 2013 APEN Awards for Excellence in Extension.

Because of their cross-sectoral nature, APEN conferences are at their most successful when they attract a high diversity of delegates. In planning for APEN ICNZ13, the organising committee was aware of some industry sectors in Australia that would gain from sending delegates to APEN ICNZ13 but might be reluctant or unable to meet the costs of registration and overseas travel to New Zealand.

For this reason, APEN approached several Research and Development Corporations (RDCs) in Australia for grants to support delegate travel to APEN ICNZ13. Meat and Livestock Australia (MLA), the Grains Research and Development Corporation (GRDC) and Horticultural Australia Limited (HAL) each provided funding to APEN to provide APEN ICNZ13 Scholarships, with the HAL grant being the most significant.

2.3. Rationale for HAL investment in the APEN ICNZ13 Scholarship Programme

Horticultural industry advisors and extension personnel play a significant role in driving innovation and practice change in Australia's horticultural sector, which is worth over A\$9 billion per annum to the Australian economy* (*gross value of production – figures from HAL). For this reason, a study tour designed to build the knowledge and networks of key horticultural advisors, including HAL-funded industry development officers (IDOs) was seen by HAL as a valuable investment. New Zealand is known for having a strong horticultural sector, and so potential for the exchange of trans-Tasman experiences in driving horticultural innovation was also seen to be an important rationale for HAL investing in this study tour. This project therefore aimed to strengthen extension, advisory and industry development services across the Australian horticultural sector by providing travel support to horticultural industry personnel to attend APEN ICNZ13, as well as supporting a range of post-conference professional development activities delivered by APEN.

The HAL APEN ICNZ13 scholarships were to be provided on a competitive basis to horticultural industry development and extension staff who could demonstrate the benefits of attending the conference for their own professional development, the development of their industries and the means by which their learnings would be shared with their peers.

As well as travel support to attend APEN ICNZ13, the scholarships were to include one-year of complimentary APEN membership. This was designed to link the recipients into post-conference professional development activities to ensure that key learnings from APEN ICNZ13 would continue to be reinforced, disseminated and applied for the benefit of Australia's horticultural industries.

Specifically, the study tour project HG12017 ("Strengthening Extension Service in Horticulture") was funded to support the following outputs:

- APEN ICNZ13 - a vibrant multi-industry event providing the opportunity for horticultural advisors to interact with and learn from leading extension professionals from a range of industry and community contexts.
- Scholarships awarded to up to 30 horticultural industry personnel to attend APEN ICNZ13

- Post-conference activities to support the dissemination and application of learnings from APEN ICNZ13 for the benefit of Australia's horticultural industries
- Post-conference promotion of the HAL-supported scholarship programme and key industry outcomes from APEN ICNZ13.
- A final report on the HAL APEN ICNZ13 Scholarship Programme

The key desirable outcomes from HAL supporting the horticultural IDOs/extension officers and advisors to attend APEN ICNZ13 were seen to be:

- A better networked, better informed and better skilled network of horticultural industry development officers, extension officers and advisors servicing the Australian horticultural industries, able to draw on the latest research and developments on how to effect practice change and industry development for the benefit of industry.
- Other non-horticultural industries better informed by approaches to practice change utilised within the Australian and New Zealand horticultural sectors
- Adoption of new, more effective approaches to extension/practice change by horticultural advisors as a result of their participation in APEN ICNZ13 and supporting post-conference events.

APEN is pleased to report that HG12717 was successful in meeting all these objectives.

Through the project, APEN was able to fully-fund thirteen (13) horticultural personnel from Australia to attend APEN ICNZ13, with each reporting significant professional development outcomes and learnings as a result. Their individual scholar reports are included later in this project report as Appendix A. The following sections will give a brief overview of the process APEN used to deliver the HAL APEN ICNZ13 Scholarship Programme, before summarising the key findings and conclusions.

3. Project overview and implementation

The aim of this section is to give an overview of how APEN implemented the HAL APEN ICNZ13 Scholarship Programme and related activities required under HAL Project HG12717 ("APEN ICNZ13 - Strengthening Extension Services in Horticulture").

3.1. Scholarship promotion and selection

Once contracts were signed with HAL in mid-June 2013, both APEN and HAL began promoting the HAL APEN ICNZ13 Scholarship Programme. HAL actively promoted the opportunity through its Industry Development Officer (IDO) network to encourage their attendance, while APEN focussed on its members and other contact lists.

APEN set up a dedicated page on its website (at www.apen.org.au) to provide information about the HAL scholarship programme and to accept online applications. Once this website was in place, the link and related information was widely distributed by APEN via its monthly eBulletins to members, other promotional emails related to the marketing of APEN ICNZ13, and its Twitter and LinkedIn social media accounts.

With limited time between the establishment of the scholarship programme and APEN ICNZ13 in late August, just over a month was available to promote the programme and receive applications before they had to be assessed. In total, seventeen eligible applications were received from Australia (plus one ineligible application from Mongolia).

The online form required the applicants to:

- Describe their current extension, industry development or advisory roles within the Australian horticultural industry
- Describe their qualification and experience to date
- Explain the importance of receiving a HAL APEN ICNZ13 Scholarship to support their attendance
- Outline what personal benefits they expected to gain by attending APEN ICNZ13
- Outline the benefits for the horticultural industry through their participation at APEN ICNZ13.

The applicants were also asked to indicate the length of time they had been working in horticulture, whether they were an APEN member and if they had ever attended an APEN conference before, and to provide the names of two referees.

Following an assessment of their applications, all seventeen candidates were approved by HAL and notified by APEN of their success. Between then and APEN ICNZ13, four of these applicants reluctantly withdrew due to other work commitments. However, the smaller number of delegates was used to advantage and enabled the project to meet 100 per cent of the registration, travel and accommodation costs for all thirteen HAL APEN ICNZ13 scholars. Had the number been closer to the original maximum of thirty (30) scholarships, financial support would have been capped at around \$1000 per delegate.

3.2. Details of scholarship awardees

The final thirteen HAL APEN ICNZ13 Scholars who travelled to New Zealand in August 2013 are shown in Table 1 and those who were successful but unable to attend in Table 2. With 151 delegates at the conference, the thirteen HAL APEN ICNZ13 Scholars comprised just less than ten percent of the total attendance.

Table 1: HAL APEN ICNZ13 Applicants Scholars

First name:	Last name:	Position title:	Organisation:	State	Time in horticulture industry (years):	APEN member	Previously attended an APEN Conference
Robbie	Commens	Productivity Development Manager	Australian Macadamia Society (AMS)	NSW	13	Yes	Yes
Nathan	Hancock	Manager of Market Information and Quality	Citrus Australia	Vic	14		
Virginie	Gregoire	Industry Development Officer	Fruit Growers Victoria Ltd	Vic	3		
Gabriella	Kerz	Communications Officer	Australian Blueberry Growers' Association	NSW	-		
John	McPhee	Agricultural engineer	Tasmanian Institute of Agriculture	Tas	22	Yes	
Julie	Petty	Program Manager	Avocados Australia	Qld	6.5		
Trevor	Ranford	Executive Officer/Communications Project Officer	Pistachio Growers' Assocn Hazelnut Growers of Aust	SA	35		
Jesse	Reader	Technical Manager	Apple and Pear Australia Ltd	Vic	11		
David	Reid	Nursery Industry Development Officer	Nursery & Garden Industry Victoria	Vic	<1	Yes	
Jennifer	Rowling	Industry Development Officer	Queensland Strawberries	Qld	2		
Stuart	Smith	Senior Research Officer	Department of Primary Industry and Fisheries NT	NT	20	Yes	Yes
Bronwyn	Walsh	Value Chain Coordinator - Citrus	Dept Food and Agriculture WA	WA	20	Yes	Yes
Helena	Whitman	Executive Manager	Vegetable Growers Assoc of Victoria	Vic	25		

Table 2: Eligible HAL APEN ICNZ13 Applicants – Unable to attend

First name:	Last name:	Position title:	Organisation:	State	Time in horticulture industry (years):	APEN member	Previously attended an APEN Conference
Lana	Baskerville	Pineapple IDO	Growcom	Qld	<1		
Denyse	Corner	Industry Development Officer	Flower Association of Queensland Inc	Qld	5		
Michael	Crisera	Industry Development Officer	Fruit Growers Victoria Ltd	Vic	19		
Eva	Ricci	Industry Development Officer	WA Turf Industry	WA	7		

3.3. Horticulture in the APEN ICNZ13 programme

The establishment of the HAL APEN ICNZ13 Scholarship Programme ensured that the conference organisers in New Zealand were aware of the need to include horticultural content in the conference programme. Apart from a number of horticulture-based presentations by New Zealand delegates who were already attending, special efforts were made to:

- Attract additional horticulture delegates from New Zealand. This resulted in a significant presence at the conference from Zespri, the company responsible for New Zealand's world-renowned kiwifruit industry.
- Include a horticulture component in the conference field trip options. This was achieved via a visit to a developing walnut farm on the Canterbury Plains area.
- Ensure networking between the horticultural delegates, via a special 'break-out' workshop session during the conference program.

APEN ensured HAL's sponsorship and contribution towards the success of the conference was made obvious pre-, post- and during APEN ICNZ13 through a variety of means, such as:

- HAL logos displayed on pre-conference promotional material, emails and website.
- HAL logos displayed prominently during the conference on conference programmes, proceedings, printed satchel material and on PowerPoint displays during breaks, introductory/plenary sessions and the conference dinner, along with the logos of other sponsors.
- Mentions of HAL sponsorship on APEN social media platforms, the APEN eBulletin and APEN website.
- Reporting of the conference and HAL sponsorship in subsequent editions of APEN's ExtensionNet newsletter, including a group photo of all thirteen scholars at APEN ICNZ13, together with APEN President and horticultural researcher Austin McLennan and HAL representative Jo McCloskey.

3.4. Post-conference initiatives to strengthen extension services in horticulture

The intent of project HG12717 ("APEN ICNZ13 – Strengthening Extension Services in Horticulture") was not just to bring delegates on a study tour to an event, but to link the scholarship recipients into post-conference professional development activities that would ensure the key learnings from APEN ICNZ13 continued to be reinforced, disseminated and applied for the benefit of Australia's horticultural industries. Central to this intent was the provision of one-year's complimentary APEN membership to scholarship holders, to give them an opportunity to test the benefit of belonging to a larger cross-industry extension and advisor network, as well as make it easier for them to be kept informed of other APEN events, news and initiatives.

As a result, since August 2013 APEN has been able to provide the following post-conference development resources and opportunities to HAL APEN ICNZ13 Scholars, over half of whom were not previously APEN members:

- **APEN ExtensionNet Newsletter – December 2013** – Featuring photos, reports and articles from APEN ICNZ13, including a lead article by influential APEN ICNZ13 keynote speaker Laurens Klerkx on Agricultural Innovation Systems.

- **APEN ExtensionNet Newsletter – May 2014** – Featuring more articles based on presentations at APEN ICNZ13, including one on payment incentives for horticultural labourers in the US, and another by the winner of the *2013 APEN Amabel Fulton Award for Excellence in Extension by a Young Professional* on the process used to run a successful series of small group workshops in the NZ dairy industry. Also includes an article on HAL APEN ICNZ13 Scholar Robbie Commens and his achievement in winning the HAL 2013 Young Leader Award.
- **Extension Farming Systems Journal – Vol 9 2013** – APEN’s own extension journal containing refereed and edited papers from APEN ICNZ13. A hardcopy was recently sent to all delegates and is available online at www.apen.org.au/efs-vol-9.
- **APEN-supported “Enabling Change and Innovation” webinar series** – a series of free webinars that APEN helped to found and actively promotes to its members. Recordings are available at www.enablingchangeandinnovation.com.au.

Six of these webinars have been held since APEN ICNZ13, with recent webinars covering some of the following topics.

- **Navigating the App Development Minefield – March 2014.**
Presenter: Tom McCue, GRDC. APEN Member
 - **AACREA.... a highly effective Argentine approach to enabling change - November 2013.**
Presenters: Richard Wakelin, Beef+Lamb NZ, APEN member & Ian Plowman, Plowman Consulting, APEN member
 - **Using an innovation systems approach to achieve remarkable change – September 2013.**
Presenter: Laurens Klerkx, Wageningen University, APEN ICNZ13 keynote speaker
- **APEN 2014 Roadshow – “Designing Effective Events – Using Adult Learning Principles” – May-August 2014.** Eleven workshops are being held at locations in all Australian states and New Zealand. They are designed to help build the skills of advisors, consultants, industry development officers and others when running extension events. As a follow on from the HAL APEN ICNZ13 Scholarship Programme, APEN has made a discount rate available to ALL Australian horticultural industry personnel.
 - **APEN eBulletins** - APEN’s monthly eBulletins are sent by email to APEN members to advise them of news and events around the APEN network, including details of professional development activities, conferences, resources for extension and member achievements. As a result of the HAL APEN ICNZ13 Scholarship Programme, the Australian horticulture industry is now more aware of the opportunities for networking and development promoted by APEN.
 - **APEN Social Media platforms – LinkedIn and Twitter.** APEN continues to use its social media presence on these two platforms to inform and engage with extension professionals and others interested in extension. The APEN LinkedIn group is available for all for horticultural-based members to post discussions of both a general and horticulture-specific nature. APEN also uses these groups to seek feedback from its followers on certain issues.
 - **APEN contribution to HAL workshop on Training and Leadership – May 2014.** APEN was recently invited to contribute to a strategic HAL workshop to help

focus its investments in this training, education and leadership area. As a direct result of the APEN ICNZ13 Scholarship Programme, APEN was able to use its expanded network in horticulture to seek comment from its members working in this area on what they felt APEN should be bringing to the discussion. Three replies were received from this group that directly contributed to the quality of the information brought by APEN to that meeting.

As is clear from the above, APEN had a strategy to ensure that a wide range of resources and initiatives would be available to assist the continued reinforcement, dissemination and adoption of key learnings experienced by all delegates at APEN ICNZ13. APEN expects that such initiatives will continue, and that APEN will continue to ensure the HAL APEN ICNZ13 Scholars are challenged, inspired and developed by the experiences of other extension and advisory professionals within the APEN network, from both horticulture and beyond.

3.5. Evaluation methodology

APEN's evaluation of study tour project HG12717 ("Strengthening Extension Services in Horticulture") focussed on three main areas:

- Did the project deliver the intended outputs?
- Was the main event – APEN ICNZ13 – of sufficient quality to justify HAL sponsorship/support through the provision of a scholarship scheme for Australian delegates?
- What was the value of attending APEN ICNZ13 for the HAL-sponsored delegates?

Regarding output evaluation, HG12717 ("Strengthening Extension Service in Horticulture") was specifically funded-to deliver the following outputs:

- APEN ICNZ13 - a vibrant multi-industry event providing the opportunity for horticultural advisors to interact with and learn from leading extension professionals from a range of industry and community contexts.
- Scholarships awarded to up to 30 horticultural industry personnel to attend APEN ICNZ13
- Post-conference activities to support the dissemination and application of learnings from APEN ICNZ13 for the benefit of Australia's horticultural industries
- Post-conference promotion of the HAL-supported scholarship programme and key industry outcomes from APEN ICNZ13.
- A final report on the HAL APEN ICNZ13 Scholarship Programme

This report has already made it clear the required conference, scholarship programme and range of post-conference activities have all been delivered by APEN under this project.

Regarding the quality of APEN ICNZ13, a paper-based end-of-event survey was conducted by the conference organising committee to obtain general feedback.

For evaluating the specific experiences of the HAL-funded scholars, individual 1-2 page post-conference reports were required from and submitted by each of the thirteen delegates.

The findings from both evaluations that APEN ICNZ13 was a highly successful event and a valued experience by all HAL-supported delegates are detailed in the following section.

4. Outcomes of the HAL APEN ICNZ13 Scholarship Programme

4.1. Delegate survey: a successful conference

The paper-based post-conference survey of all delegates attracted 74 responses from a total of 150 delegates.

In terms of overall organisation, over 52 delegates - one third of all delegates and over two-thirds (70%) of all respondents - rated the conference as 'well-organised' (highest ranking on a 1-5 scale), with 96% of respondents giving it the highest or second-highest ranking. The programme and topics also received favourable ratings. For example, in terms of relevance, all 74 respondents rated the topics as being of average relevance or better (minimum score 3 out of 5), with 26 respondents (35%) giving the highest ranking.

The potential impact of the conference on the learnings, professional practice and networks of all delegates was tested in a section on the evaluation form called "taking it with you". The responses to these questions are reproduced in Table 3 below.

Table 3. Responses from the APEN ICNZ13 delegate survey – 74 Responses total

	Number of responses per ranking				
	No 1	2	OK 3	4	Yes 5
Did you gain new insights from attending the conference?	-	-	4	31	39
Will you use what you have learnt from attending the conference in your work?	-	2	8	23	41
Did you network with others whom you expect to hear from in the future?	-	3	9	19	43
Overall, was the conference worthwhile?	-	-	6	23	45

4.2. Scholar Reports: Key Themes

Reports were received from all thirteen HAL-funded scholars, and these are reproduced in full in Appendix A. From the outset, the key outcomes expected from supporting horticultural IDOs/extension officers and advisors to attend APEN ICNZ13 were seen to be:

- A better networked, better informed and better skilled network of horticultural industry development officers, extension officers and advisors servicing the Australian horticultural industries, able to draw on the latest research and developments on how to effect practice change and industry development for the benefit of industry.
- Other non-horticultural industries better informed by approaches to practice change utilised within the Australian and New Zealand horticultural sectors
- Adoption of new, more effective approaches to extension/practice change by horticultural advisors as a result of their participation in APEN ICNZ13 and supporting post-conference events.

The reports indicate that all these outcomes were achieved, though post-conference adoption of learnings by the scholars was not specifically-evaluated. What the reports did show were a number of key themes that emerged and will be briefly discussed here, demonstrated with selected quotes from the scholars' reports.

4.2.1. Delegates valued the opportunity to learn from other sectors and had an intent to follow-up on their new networks and learnings

Virtually all of the scholars highlighted the valuable insights that came from hearing presentations and ideas from outside their own industry sector. Not only that, but many scholars had actively made plans to more closely connect with the presenters and industries that impressed them the most at APEN ICNZ13. While the presentations by Zespri (NZ kiwifruit industry) were frequently cited as of interest, the presentations by DairyNZ also had a big impact on many delegates, showing the value of building cross-industry networks outside the horticultural sector.

"I found the presentation by Shane Max from Zespri to be very useful. The Australian citrus industry faces a similar potentially industry ending threat in the form of Huanglongbing disease and the vector the Asian Citrus Psyllid... I think the industry would benefit from the experience of the Zespri growers and will recommend that a dialogue is commenced with Shane and his team....

Another presentation by a Zespri representative, this time a grower - John Cook - was equally interesting as he described the effects of adopting smart phone and tablet technology and the impacts resisting technology had on some of his peers. We often hear about smart technology adoption from the practitioner's side - but this was a grower explaining what advancements had been made and why they were useful to him in his business."

Nathan Hancock, HAL APEN ICNZ13 Scholar

"Since the conference I have arranged follow up meetings with contacts within Zespri and DairyNZ to further discuss the extension programs those organisations run. I gained great value from these meetings in exchanging ideas and looking at how other industries deal with chosen and unchosen change. Both have given me insights into how we might improve our own extension programs and how we might overcome the challenges ahead."

Julie Petty, HAL APEN ICNZ13 Scholar

"Of particular interest to myself and the macadamia industry were the NZ dairy and the NZ kiwifruit industries' extension programs. The level of investment into resources (both human and technological) for their respective extension programs and the returns gained (in the form of adoption) were very impressive. I was so impressed... that I believe that I and some macadamia industry representatives will be travelling back to New Zealand to undertake a study tour of these two industries extension programs.... Initial discussions are underway for this study tour with NZ Dairy and Zespri (NZ *Kiwifruit*) and I have support from the Australian Macadamia Society's CEO. It is expected that I (AMS Productivity Development Officer) and some R&D committee representatives will travel back to New Zealand in either late 2013 or early 2014 to undertake this study tour.

Without the HAL scholarship to attend the APEN conference, we would not have even been aware of these opportunities.

Robbie Commens, HAL APEN ICNZ13 Scholar

4.2.2. Delegates valued the opportunity to reflect on their extension practice

Another key theme that emerged was the opportunity that APEN ICNZ13 conference gave for delegates to be challenged on their own (and their industry's) approach to extension and industry development, and the potential to consider alternative ways of doing things. Even if the way forward wasn't always clear, delegates had clearly been challenged to consider whether they might be able to achieve even better results for their industries and clients with some adjustments to their thinking and extension practice.

"The first night in Christchurch a delegate introduced himself and asked, 'What do you see as your industry's biggest challenge and what are you doing to counter it?' I had never been asked this before. It is a question that goes across all industries, so all those in extension can appreciate it, but it almost felt overwhelming to me. This was the first of many light bulb moments...

Stepping into the conference as an extension novice, I step out as an extension novice, but with a greater knowledge base with which to draw from and an appreciation of the difficulties I may face in my future... The conference has also shown me that maintaining and strengthening my existing networks is an activity I should not neglect and that I should step back and look at what I am trying to achieve, rather than doing activities because this is the way they have always been done."

David Reid, HAL APEN ICNZ13 Scholar

"One of the most interesting and enlightening presentations for me came from Dr Geoff Kaine, "Predicting the rate of adoption of agricultural innovations". Listening to Geoff's presentation, and subsequent discussion with him, has led me to download and read a number of papers he and others have written over the past decade on the issues of what motivates people to change, how changes can be categorised from simple to complex, and the different approaches to extension that may be required depending on the motivation of the individual and the complexity of the change required. Although I have some way to go to absorb the detail and nuances of the literature, this issue is of particular interest with regard to complex changes to production systems, which is very much the case in relation to controlled traffic adoption."

John McPhee, HAL APEN ICNZ13 Scholar

"There were many speakers who mentioned the changing model of extension from the diffusion / adoption model to a more participatory approach used in agricultural innovation systems (AIS). Using the AIS approach, innovation is considered the result of a process of networking and interactive learning among a heterogeneous set of actors, such as farmers, input industries, processors, traders, researchers, extensionists, government officials and civil society organisations (Klerkx et al, 2010). On reflection, most of the projects that I have been involved with or observe currently in Australia do not follow this model. The challenge that I saw from the presentation of this model by several speakers was how to apply this to real horticultural research and/or extension projects, especially small ones which haven't got the resources to engage the large number of actors spoken of. The opportunity from this in the NT is to add more actors into the next major horticultural project so that it becomes a participatory AIS system in itself."

Stuart Smith, HAL APEN ICNZ13 Scholar

4.2.3. Hot topics - Agricultural innovation systems and communicating risk

One of the features of the scholar reports is the degree to which some presentations or topics were singled out for special mention.

For example, Mr Cam Nicholson's presentation from the grains industry on the incorporation of risk into extension messages clearly resonated. The comments suggest that there may be value in some targeted training and investment by HAL into how these approaches for discussing and analysing risk could be used by more advisors working in horticulture.

Another presentation that clearly had impact was that by keynote speaker Associate Professor Laurens Klerkx from Wageningen University in the Netherlands, and a related cluster of presentations around the topic of 'Agricultural Innovation Systems' and implications for how research, development and extension is arranged and managed.

Some other topics that were picked up by several delegates as having potential application to horticulture were the value of coaching and mentoring approaches in extension, and lessons about biosecurity response and crisis management from the NZ kiwifruit industry.

"The presentation I enjoyed most at the conference was given by Cam Nicholson of Nicon Rural Services. It focused on clear and uncomplicated ways of analysing and discussing risk with the rural sector. Mr Nicholson stated that the challenge for extension practitioners is: *To engage in meaningful discussion about risk with a client you need to know what level of risk they are comfortable with and constantly check this to know if it remains aligned with their circumstances and goals...*

"Mr Nicholson's presentation was a light bulb moment for me and I will certainly be changing how I talk to people about risk and how I present information. Since the conference I have spoken to several other extension contacts who were unable to attend the conference and they too were very interested in how we can improve how we talk about risk."

Julie Petty, HAL APEN ICNZ13 Scholar

"Another very good session that I sat in on was titled "Analysing and discussing risk in farming businesses" presented by Cam Nicholson. The information presented gave me a far more positive view of risk. Risk implies opportunity and choice and is a necessary part of making returns. He also suggested that when looking at an opportunity (risk), we look at the whole range of data (highs and lows included), not just averages, and that it is so important to support farmers to enhance their decision making."

Jennifer Rowling, HAL APEN ICNZ13 Scholar

"Starting with discipline interactions and system approach, it was great to have so many speakers mentioning the importance for R,D&E people to communicate amongst each other to assure innovations are built in a system that can be delivered to the industry rather than a single "unit" that may be impossible to incorporate in practices currently in place. These two ideas, which to me are very closely related, are probably one of the biggest challenges for extension officers in the future. If there is one sentence pronounced by Laurens Klerkx that can sum up that idea is "Complex issues requires networks of advisors working in a coordinated fashion", and this is probably true for most of the major decisions growers have to take."

Virginie Grégoire, HAL APEN ICNZ13 Scholar

“(The point that R&D and extension are co-dependent on one another) was made loud and clear by Warren Hunt from the NT government, and is a really great take home message. Too often we see R&D being performed in silos and extension being an after-thought as a result of poorly planned projects, insufficient communication and fractured industry segments.

The success and adoption of any findings or outcomes is directly linked to the delivery of those messages and equally, performing extension without an acute understanding of the message or approach to be rolled out is also critical. Projects need to be built from the ground up with both parties involved.”

Jesse Reader, HAL APEN ICNZ13 Scholar

4.2.4. Discovering APEN as a valued network for horticulture professionals

A final theme to highlight was the discovery by delegates of the APEN network itself. All reports indicated their enjoyment of the conference, and communicated the benefits of how engaging with APEN had enhanced their own knowledge, skills and value to the Australian horticulture industry. For most HAL scholars, this was the first time they had heard of APEN or been to one of its events, so the finding that they had enjoyed their APEN ICNZ13 experience was positive news for APEN itself, and confirmation of APEN’s role in strengthening extension and advisory services across Australia, New Zealand and the broader region.

“The Extension Network was something that I was not aware of even though I have been involved in the horticulture industry for over 35 years... it has introduced me to a new group of individuals and resources involved in agricultural/horticultural extension within Australia - a network that is involved in the Extension part of Research, Development and Extension...”

“I really did appreciate the opportunity to attend the Australasia-Pacific Extension Network (conference) and look forward to taking my learnings into the South Australian and Australian Horticultural Industries. Thanks to Horticulture Australia Limited for making available the scholarships and allowing me the opportunity of broadening my knowledge and networks.”

Trevor Ranford, HAL APEN INCNZ13 Scholar

“The greatest opportunity for my professional development by attending the APEN NZ conference was in the form of networking. A consolidated time of three days was an efficient way of meeting international and Australian professionals working in the field of practice change that I would not normally interact with as part of my day-to-day role. In particular, on-going contact will be with Julie Petty on quality management systems, a group of colleagues from other WA agricultural industries and an international group of researchers in innovation systems and horticulture”

Bronwyn Walsh, HAL APEN ICNZ13 Scholar

“What impressed me most was the warmth of the gathering and the positive attitude reflected the fact that we all work with growers in some capacity be it extension or facilitation. The messages fostered cooperation, networking and communication. No-one was left alone with APEN members making new comers, like me, feel very welcome. I look forward to the next Conference...”

“Again, I would like to thank HAL and APEN for providing me with the opportunity to attend this very informative Conference. I would like to also thank my Executive who encouraged me to apply for the scholarship and attend the Conference.”

Helena Whitman, HAL APEN ICNZ13 Scholar

5. Implications for Australian horticulture

Two key implications that have emerged from the HAL APEN ICNZ13 Scholarship Programme are:

1. The value of cross-industry forums for fostering innovation and strengthening horticultural advisor networks
2. The generation of new insights for APEN ICNZ13 Scholarship holders that will enhance their capacity to drive innovation in Australian horticulture

5.1. The value of cross-industry forums for fostering innovation and strengthening horticultural advisor networks

Attendance at an event like APEN ICNZ13 was a new experience for most of the thirteen scholars. Some of the features that set APEN ICNZ13 apart from the forums they usually attend were the focus on the process of extension, adoption and innovation (rather than the particular technologies themselves) and the wide diversity of industries and issues represented. The inclusion of a number of presentations on research into extension, innovation systems theory and RD&E policy was another distinctive feature of APEN ICNZ13.

Despite the fact that for most HAL APEN ICNZ13 scholars there were no technical presentations directly related to their industry sector (e.g. strawberries, citrus and macadamias), the scholars all reported a high level of learning, and could identify extension principles or approaches working in other industries the they would aim to implement in their own roles working with Australian horticulture.

Scholarship recipient Jennifer Rowling articulated this well when she wrote:

"But perhaps the most significant piece of knowledge that I took away from the conference is that, despite the fact that most of the information being shared was based around other industries such as beef, dairy, cotton, fisheries etc., the concepts, ideas and experiences can still be applied and are relevant to horticulture in Australia. I spoke to a number of very interesting and experienced people who work in extension and believe that the way that they communicate with their farmers and stakeholders to support positive change can be used to communicate with our strawberry growers in Queensland, particularly with regard to the potential impact and positive benefits from the outcomes of R&D work being carried out for the industry. It has also given me the incentive to work more closely with growers to find out what it is they want in terms of future R&D projects, which I believe will empower them by being actively involved in the future of the industry, and subsequently more open to change as a result."

The ability to gain knowledge of extension processes working well in other locations and industries, such as the programs implemented by Dairy NZ and Zespri (NZ kiwifruit industry) also reinforced the benefit of exposing Australian horticultural personnel to happenings in other, quite distinct agricultural industries outside their usual networks.

5.2. The generation of new insights for APEN ICNZ13 Scholarship holders that will enhance their capacity to drive innovation in Australian horticulture:

All of the HAL APEN ICNZ13 Scholars could report specific insights that they had obtained as a result of attending the conference, and that they thought would benefit industry. For example, APEN ICNZ13 had inspired some delegates to take learnings about specific technologies and practices back to their industry development role in Australia.

"...many delegates spoke of the advances in the areas of IT in their industries, for example remote irrigation control, remote environmental monitoring and spray diaries all using tablets or smart phones. Drone cameras were also being used for mapping. I saw an opportunity for our organisation to start demonstrating this technology for industry, and to start developing smart phone applications for growers, for example, converting our existing heat sum calculator for mangoes and the mango maturity colour charts into "apps" for growers."

Stuart Smith, HAL APEN ICNZ13 Scholar

However, the more common ideas from APEN ICNZ13 that scholars were interested in pursuing were not new production technologies or practices themselves, but better ways of organising the process of innovation and extension in their own industries and organisations.

What this implies for horticulture in Australia is that, while research and development (R&D) into new technologies and practices is critical, so too are industry-wide investments into the people-to-people aspects of the innovation process, such as extension (E). Effective extension systems, not just effective individuals, are critical if the full benefits of an industry's R&D investments are to be unlocked, and well-directed from the outset.

"I found the presentations about how other industries are rolling out extension services particularly useful. The stand-out programs for me were Grain & Graze and those projects lead by DairyNZ. Both are highly successful programs which have been running for a number of years for a large group of growers over reasonably large distances."

Julie Petty, APEN HAL ICNZ13 Scholar

Thus, one of the key implications for Australian horticulture and HAL is the opportunity to investigate - and potentially implement – some of the innovative approaches to extension and industry development uncovered by the horticultural delegates to APEN ICNZ13. Their individual insights are reported in full in Appendix A to this report, and are commended as a source of ideas to assist the Australian horticulture industry in improving the effectiveness of its investments and efforts into industry development and extension.

Just as importantly, however, is the finding from the scholars' reports of how attending APEN ICNZ13 had expanded their personal effectiveness as horticultural advisors and industry development officers. This was achieved by exposing them to new ideas, tools, networks and inspiration that they would otherwise not have had access to, and that they are now better equipped to access as a result of being plugged into a much larger community of extension professionals via APEN.

"I would attend this sort of conference again and I'm glad I've joined APEN... I think it will be a good reference point to come back to and I think I have met a few people who I can call on to bounce ideas off."

Nathan Hancock, APEN HAL ICNZ13 Scholar

6. Dissemination of Findings

Under this project, APEN has used a range of communication vehicles to ensure the ongoing availability and dissemination of information presented at APEN ICNZ13. These

dissemination activities have primarily occurred via APEN's ExtensionNet publication, the publication of a special conference edition of the Extension Farming Systems Journal, articles on the APEN website and a number of post-conference webinars featuring presenters or topics that were prominent at APEN ICNZ13.

However the most important findings of a study tour to a conference like APEN ICNZ13 are the individual insights that delegates bring home with them. Thus, while APEN has a role in the dissemination of findings, it is also the delegates' responsibility to distil what they learnt, incorporate it into their own industry's or organisation's extension programmes, and further disseminate their learnings to their peers. Pleasingly, the evidence from the individual scholar reports is that most-all of the HAL-sponsored delegates are doing this, with the clearest evidence coming from those who have already initiated actions to follow-up on networks and leads generated at APEN ICNZ13.

7. Itinerary

As this study tour involved multiple delegates travelling to a single conference (APEN ICNZ13), an itinerary of places visited is not included in this report.

A copy of the full APEN ICNZ13 programme, including abstracts of presentations, can be found on the APEN website (www.apen.org.au) or requested from the APEN Secretariat via info@apen.org.au.

8. Recommendations

APEN has identified several main recommendations arising out of study tour project HG12717 ("APEN ICNZ13 - Strengthening extension services in horticulture"), consistent with the individual delegate reports contained in Appendix A.

1. **That HAL and Australian horticulture industries invest in further study tours to New Zealand**, especially those that may arise out of contacts made at APEN ICNZ13 and are identified in the scholar reports.
2. **That HAL and industry continue to investigate the potential for an "agricultural innovation systems" perspective to transform and improve existing RD&E arrangements and practices for the benefit of Australian horticulture.** This may require targeted investments in study tours or the importation of suitably qualified expertise in this area, and a preparedness to embrace change and reform to existing structures.
3. **That HAL and industry consider investing in specific training to ensure that high-priority topics identified by HAL APEN ICNZ13 scholars are effectively disseminated to horticultural industry advisors.** Such topics could be identified and further refined through follow-up consultation with HAL scholars. APEN recommends that it be considered as a possible partner to facilitate all or some of this delivery.
4. **That HAL consider funding a similar programme for the next APEN Conference to be held in South Australia, November 2015**, given the success of the HAL APEN ICNZ13 Scholarship Programme reported here.

9. Acknowledgments

APEN would first like to thank HAL for supporting this important initiative, and especially for the encouragement of HAL staff Alison Anderson, Jo McCloskey and David Moore to develop the idea of horticultural involvement at APEN ICNZ13 into a formal project. Extra acknowledgement must also go to Alison Anderson and Jo McCloskey for their role in actively promoting the scholarship programme to HAL's network of industry development officers, and ensuring that many of them did apply. Jo McCloskey also attended APEN ICNZ13 as the official HAL representative.

To those delegates who applied for the HAL APEN ICNZ13 Scholarships and attended APEN ICNZ13, APEN thanks you for being part of this programme, and congratulates you on desiring to grow your capacity for bringing about change and innovation. APEN is pleased to have been able to play a role in developing your networks, skills and knowledge – and career - through this project, and we hope to see you continue as APEN members beyond 2013/14.

The success of HAL Project HG12717 depended entirely on APEN ICNZ13 itself being a successful, well-organised and inspirational conference, so APEN cannot thank enough the small team of people who made sure that that is what happened. To the outstanding APEN ICNZ13 organising committee, led by Conference Convenor Denise Bewsell with support from Victoria Westbrooke, Ian Tarbotton, Toni White and Carole Hollier, APEN awards its highest thanks and praise.

APEN also acknowledges everyone else who contributed to the success that was APEN ICNZ13, especially our sponsors and, of course, the 151 delegates without whom there would have been no conference and no outcomes to report.

Finally, thanks must go to the APEN Secretariat, Roe Currie, for her particular efforts in administering this project, and to those members of the APEN Management Committee who provided assistance as required.

10. Contact List

Contact details for all thirteen HAL APEN ICNZ13 scholars are provided below.

First name	Last name	Position	Organisation	State	Ph	Mob	Email
Robbie	Commens	Productivity Development Manager	Australian Macadamia Society (AMS)	NSW	02 6622 4933	0488 432 226	robbie.commens@macadamias.org
Virginie	Gregoire	Industry Development Officer	Fruit Growers Victoria Ltd	VIC	03 9210 9355	0400 795 539	ido@fgv.com.au
Nathan	Hancock	Manager of Market Information and Quality	Citrus Australia	VIC	03 5023 6333	0429 772 181	nathan.hancock@citrusaustralia.com.au
Gabriella	Kerz	Communications Officer	Australian Blueberry Growers' Assoc	NSW	02 6624 8258		gabe@mountainblue.com.au
Julie	Petty	Program Manager	Avocados Australia	Qld	07 3846 6566	0458 004 198	supplychain@avocado.org.au
John	McPhee	Agricultural engineer	Tasmanian Institute of Agriculture	TAS	03 6430 4910	0407 845 612	john.mcphee@utas.edu.au
Trevor	Ranford	Executive Officer/Communications Project Officer	Pistachio Growers' Assoc/Hazelnut Growers of Aust	SA	08 8339 4826	0417 809 172	sahort@bigpond.com
Jesse	Reader	Technical Manager	Apple and Pear Australia Ltd	VIC	-	0419 107 245	jreader@apal.org.au
David	Reid	Nursery Industry Development Officer	Nursery & Garden Industry Victoria	VIC	-	0422 565 860	david@ngiv.com.au
Jennifer	Rowling	Industry Development Officer	Queensland Strawberries	QLD	-	0438 752 177	office@qldstrawberries.com.au
Stuart	Smith	Senior Research Officer	Department of Primary Industry and Fisheries NT	NT	08 8999 2222	0428 966 528	stuart.smith@nt.gov.au
Bronwyn	Walsh	Value Chain Coordinator – Citrus	Dept Food and Agriculture WA	WA	08 9368 3786	0400 873 875	bronwyn.walsh@agric.wa.gov.au
Helena	Whitman	Executive Manager	Vegetable Growers Assoc of Victoria (VGAVic)	VIC	-	0407 772299	helena.w@vgavic.org.au

A full list of all delegates to APEN ICNZ13 is provided in Appendix B.

11. Appendix A: Individual APEN ICNZ13 Scholarship Reports

HAL APEN ICNZ13 Scholar Profile:

Name: Robbie Commens

Job title: Productivity Development Officer

Organisation: Australian Macadamia Society

Based at: Lismore, NSW



Special Note: Since attending APEN ICNZ, Robbie was awarded the HAL 2013 Young Leader Award for his services to the Macadamia Industry.

Scholar Report:

I was fortunate enough to be awarded a scholarship from HAL to attend the 2013 APEN conference in Christchurch New Zealand. The APEN conference was very professionally organised and delivered, with the social events just as beneficial as the structured presentations. The conference was an excellent platform that delivered 3 key opportunities for myself and the Australian Macadamia Industry –

1. To learn from the successes that other industries have had to assist the macadamia industry with greater extension success.
2. To network with other professional agricultural extension people.
3. To discuss ideas and opportunities with like-minded and experienced people.

The macadamia industry is in the planning stage of a new extension program for the industry. It was great value to be able to see what the other agricultural and horticultural industries are undertaking, this allowed us (*Macadamia industry*) to reflect on our initial direction and assess potential opportunities to implement programs other industries have been using. Of particular interest to myself and the macadamia industry were the NZ dairy and the NZ kiwifruit industries extension programs. The level of investment into resources (*both human and technological*) for their respective extension programs and the returns gained (*in the form of adoption*) were very impressive. I watched with great interest the presentations delivered by both of the industries, viewed the posters on display and followed up key speakers and industry representatives to develop a relationship. As we are still in the initial planning stages the macadamia industry will be able to investigate these opportunities further and incorporate suitable opportunities into the industry's new extension program.

I was so impressed with the NZ Dairy and NZ Kiwifruit industries extension programs that I believe that I and some macadamia industry representatives will be travelling back to New Zealand to undertake a study tour of these two industries extension programs. Of particular interest was how they structured their extension platforms to encourage on-farm action and how they resourced their extension programs. It became evident from the conference and the presentations delivered by these two industries that the macadamia industry may be under investing in extension and may be too focused on developing platforms for extension, rather than developing grower's capacity to adopt new and improved practices.

Initial discussions are underway for this study tour with NZ Dairy and Zespri (*NZ Kiwifruit*) and I have support from the Australian Macadamia Society's CEO Jolyon Burnett. It is expected that I (AMS Productivity Development Officer) and some R&D committee representatives will travel back to New Zealand in either late 2013 or early 2014 to undertake this study tour. Without the HAL scholarship to attend the APEN conference, we would not have even been aware of these opportunities.

Separate to the two industries I have mentioned, the opportunity to network with other professional extension people and to discuss ideas and opportunities with these people was of incredible value. I left the conference on a real high, motivated and encouraged to continue to work on improving both my individual professional skills and the macadamia industries extension program. I have made some excellent contacts from the conference and look forward to utilising this wealth of knowledge in the future to assist in solving challenges that I will face in the future.

I would like to thank HAL for offering this scholarship and awarding it to me and congratulate APEN on an excellent conference. I believe that the return on the investment into the scholarship will deliver excellent dividends to both myself and the Australian Macadamia Industry. Not only was I able to gain individual professional development, I believe that the Australian Macadamia industry will gain professional development within our industry's extension program.

Thank you,

Robbie Commens | Productivity Development Officer

Australian Macadamia Society

T: +61 2 6622 4933 | M: 0488 432 226 | F: +61 2 6622 4932

Suite 1, 113 Dawson Street LISMORE NSW 2480

E: robbie.commens@macadamias.org W: www.macadamias.org

HAL APEN ICNZ13 Scholar Profile:

Name: **Virginie Grégoire**

Job title: **Industry Development Officer**

Organisation: **Fruit Growers Victoria Ltd**

Based at: **Mooroopna, Vic**



Scholar Report:

First of all, the APEN conference in Christchurch was a great opportunity for networking and becoming aware of other industries' and commodities' projects and approaches.

Networking is what I saw as the most valuable aspect I could benefit from prior to the conference itself and it clearly was a success in that sense. Sharing experiences with other extension officers from similar and very different industries is usually good food for thoughts that I will be digesting for a while and that will serve in the long run.

Highlights of this conference include the focus on inter discipline interactions for better extension services in opposition to a silo mentality and the emphasis on the importance of a system approach when attempting to transfer technology to the industry.

Other key elements that I am likely to look further into comprise decision support systems, mentoring programs for young farmers and acknowledging feedbacks from markets and adapt produces when necessary. A final and not least highlight of the conference is about the potential future of extension being in industry ownership of their R,D&E staff and institutions in opposition to the common model based on government funded projects.

Starting with discipline interactions and system approach, it was great to have so many speakers mentioning the importance for R,D&E people to communicate amongst each other to assure innovations are built in a system that can be delivered to the industry rather than a single "unit" that may be impossible to incorporate in practices currently in place. These two ideas, which to me are very closely related, are probably one of the biggest challenges for extension officers in the future. If there is one sentence pronounced by Laurens Klerkx that can sum up that idea is "Complex issues requires networks of advisors working in a coordinated fashion", and this is probably true for most of the major decisions growers have to take.

Something that was completely new to me until the APEN conference in Christchurch is the availability of decision support systems. While advisors and producers don't necessarily rely on these tools to take a decision, Bill Long, presenting on the topics, still considers they can be great learning tools for advisors with all kind of experiences.

The presentation on various mentoring projects around the world and its place in Australia's farming industry was very interesting. While these projects are mostly for dairy and pasture farmers, this presentation made me realize that this concept could also be used for extension officers to ensure continuity in the quality of the services delivered to producers and farmers.

My last highlight, inspiring and frightening at the same time remains a very interesting talk on the future avenues for RD&E systems. A concise run down of the history of extension services in Australia since the Second World War really helped understanding the context of our industry and the opportunities for its future. Rather it is through more government-funded projects or if its future lies in industry ownership of its RD&E staff and institutions as it was suggested by the speaker. These thoughts that may be inspiring for some and frightening for others but must be discussed and an International Extension Conference is the right place to do so.

Interactions between disciplines being one of the focuses of the event and perceived today as a major trend for the future of extension services, APEN conferences promoting inter industry networking amongst professionals with various agricultural backgrounds is a good way to start.

HAL APEN ICNZ13 Scholar Profile:

Name: Nathan Hancock

Job title: Manager Market Information & Quality

Organisation: Citrus Australia

Based at: Mildura, Vic



Scholar Report:

In August 2013 I attended the APEN International Conference near Christchurch, New Zealand, titled Transformative Change: Chosen or Unchosen. I received a scholarship to attend through HAL and APEN which I am grateful for as I would not have been able to attend without this assistance.

I found the conference to be inspiring and came away with a renewed sense of my place in the citrus industry and the size of the change I am trying to implement in the industry - a change in culture and practice. Above all I made new contacts and renewed some old ones which will be very useful for me individually and will also be of value to the industry in terms of speakers at future events.

In a presentation by Cam Nicholson I picked up the concept that 'averages don't convey risks' - a great way to define an issue I am working through in applying quality standards. Not the context that Cam was delivering his presentation in, but an idea that helped frame a further conversation with researchers of the BrimA standard and will be a theme in my presentation at the Citrus Australia National Issues Forum in October.

I found the presentation by Shane Max from Zespri to be very useful. The Australian citrus industry faces a similar potentially industry ending threat in the form of Huanglongbing disease and the vector the Asian Citrus Psyllid. Citrus Australia has recently begun a biosecurity project with Plant Health Australia in which a scenario planning exercise will be run. I think the industry would benefit from the experience of the Zespri growers and will recommend that a dialogue is commenced with Shane and his team. Some of the issues that he addressed in his talk I have also witnessed in the Florida citrus industry where growers remained in denial instead of being prepared for the effects of the disease and fell unwittingly for 'fly by night' quick fix solutions to a terminal disease in their orchards.

Another presentation by a Zespri representative, this time a grower - John Cook - was equally interesting as he described the effects of adopting smart phone and tablet technology and the impacts resisting technology had on some of his peers. We often hear about smart technology adoption from the practitioner's side - but this was a grower

explaining what advancements had been made and why they were useful to him in his business. The data behind Zespri's survey was also very interesting - the adoption rate of smart technology in the kiwi fruit industry would far outstrip that of the Australian citrus industry - I factor of internet speeds and coverage as much as it is the average age of our growers on suspects. My own observations are that the closer a grower is to the marketing of their product he more hooked in to technology and the more interested in information they seem to be.

I found the presentation by Professor Lauren Klerkx inspiring and it opened my eyes to identifying and encouraging innovation in the field of citrus quality. I have come back to Australia with innovation on my radar and am looking for ways to encourage it and foster it within the growing, packing marketing and research sectors - basically across the value chain. This was an aha moment for me as I realised where I was on the curve in terms of the forced change in culture we are seeing in the citrus industry. Now that the change has been bedded in there are people along the value chain looking to innovate and adapt and finding new ways to work with the new reality and it's exciting.

In reality none of the topics or sessions were actually tailored for me or for the industry I work in - but nearly all of them I attended got me thinking about either where I was on the journey or where the industry was in comparison to what I was hearing about other industries and farming enterprises.

I would attend this sort of conference again and I'm glad I've joined APEN, although I am time poor and will probably not participate in many activities offered I think it will be a good reference point to come back to and I think I have met a few people who I can call on to bounce ideas off of.

Thank you once again to Horticulture Australia, APEN and Citrus Australia for enabling me to attend.

HAL APEN ICNZ13 Scholar Profile:

Name: Gabriella Kerz

Job title: Communications Officer

Organisation: Australian Blueberry Growers' Assoc.

Based at: South Lismore, NSW



Scholar Report:

The theme of the 2013 conference (held in Lincoln, Christchurch, New Zealand) was 'Transformative Change: Chosen or Unchosen'. Change is not always chosen. An example of this is the 2011 earthquake in Christchurch; 185 people lost their lives and the widespread damage was estimated to reach \$40 billion while it has been suggested that it could take between 50-100 years for the economy to recover.

Below are two positive examples of outcomes from this unchosen change:

- 1) The 2011 earthquake is currently being used as a case study for military forces from China, the United States and Australia. These countries are teaming up with New Zealand military officials in order to learn from New Zealand's experiences and to prepare for such an event.
- 2) A cathedral made from cardboard tubing was built to temporarily replace a 19th Century cathedral that had been damaged beyond repair by the 2011 earthquake. This innovative architecture represents the dedication, resilience and skills of those involved and is a perfect example of how change can bring out the best in people.

Penny Shaw gave a personal viewpoint on handling unchosen change in the case of the dairy industry dealing with a major drought. The presentation focused on how to plan for a crisis, including the use of facts, figures, triggers and probabilities to identify a state of unchosen change. Penny discussed the importance of knowing the capabilities within your team and training to meet any gaps. Industry networks, leaders, collaborators are vital for providing support.

This presentation pushed me to look into a crisis management plan for the blueberry industry. The idea is one that has been suggested in the past yet knocked back due to limited resources. The ABGA hires marketing company, Costa Group, to handle certain promotional aspects of the industry. Upon the idea of a fellow conference attendee, I will propose that we utilise this resource and see if they can create a crisis management plan for the industry. The aspects of a plan include public relations and marketing, which falls under their role within the ABGA. This is a resource that I had not considered using for the plan until the conference.

Carole Hollier's presentation focused on understanding farmers' needs. In order to do this, she suggested the following three steps:

- 1) Understand the big picture – this could be done through a demographic survey
- 2) Segment the industry based on size and capabilities
- 3) Create profiles and panels

These groups could be classified as 'corporate', 'productive', 'aspirational', 'static' and 'amenity'. Each has their own objectives and needs and requires information on different levels. By understanding the industry breakdown in this way, an association such as the ABGA, can gather and distribute information representative of their growers. The ABGA has identified that meeting the diverse needs of the small growers versus the large, more developed growers is an issue. A demography survey is a current project that the ABGA is undertaking of which we could use the information presented by Carole to efficiently work through the results.

Matthew Pickering's presentation on coaching is an interesting concept for the ABGA. With a high number of small growers in a developing industry, pairing the bigger, commercial growers in a coaching program would have great benefits. This would also help to unite the industry and connect blueberry growers who often feel quite isolated.

Thank you to APEN for providing me such a great, informative conference and to Horticulture Australia Limited for investing in my learning through the scholarship program.

HAL APEN ICNZ13 Scholar Profile:

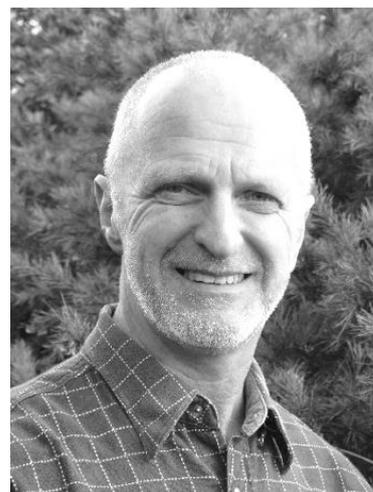
Name: John McPhee

Job title: Engineer

Organisation: Farming Systems RD&E Vegetable Centre

Tasmanian Institute of Agriculture

Based at: Burnie, TAS



Scholar Report:

This was the first APEN conference I have attended, so I was somewhat uncertain as to what would be on offer. I was attracted by the conference theme “Transformative Change – chosen or unchosen”, which is highly relevant to my specific area of working with growers to develop and introduce new farming systems (e.g. controlled traffic) to the vegetable industry. Further, the theme was particularly relevant to the changes currently being experienced in the Tasmanian vegetable industry, with the relentless and increasing pressure on the processing sector.

I have been involved in various mixes of research, development and extension over the past 30+ years of my career. In many cases, the extension effort has been focused on quite specific technological issues. In more recent times, with a significant focus on controlled traffic farming systems, the view has expanded to include not only specific technical issues, but also the integration of technology and change across the farm and across the industry, which in effect, means across several industry sectors. Many of the issues and experiences profiled at APEN ICNZ13 reflected this wider view and impact of extension in various industries.

A key benefit of attending conferences is the opportunity to meet others involved in both similar and different industry sectors, which helps build the professional network. Beyond just the contacts, is the opportunity to meet people who can offer alternative perspectives on your own work, without them even knowing anything about it.

One of the most interesting and enlightening presentations for me came from Dr Geoff Kaine, “Predicting the rate of adoption of agricultural innovations”. Listening to Geoff’s presentation, and subsequent discussion with him, has led me to download and read a number of papers he and others have written over the past decade on the issues of what motivates people to change, how changes can be categorised from simple to complex, and the different approaches to extension that may be required depending on the motivation of the individual and the complexity of the change required.

Although I have some way to go to absorb the detail and nuances of the literature, this issue is of particular interest with regard to complex changes to production systems, which is very much the case in relation to controlled traffic adoption. It is also relevant to a number of other changes that are coming to the fore in the vegetable industry, such as the adoption of precision agriculture technologies and changes to cropping mixes in response to declining returns from the long-standing traditional vegetable crops. It is going to take some time to develop a more complete understanding of how the information that has been developed around this issue of adoption motivation will impact on approaches to extension for complex systems issues, but I believe it will highlight opportunities to engage in more effective discussions with individual growers and industry representatives as the industry seeks to transition to more sustainable and profitable farming systems.

From a professional development perspective, this information will help inform approaches to extension activities to be used in future projects. At a local industry level, being able to more effectively target extension activities based on a better understanding of what motivates growers, and how they view their involvement with complex system changes, should lead to better outcomes from extension activities. In the context of the national horticultural industry, I believe it would be very useful to investigate the work of Dr Geoff Kaine more closely in an effort to determine what is required to design and develop more effective extension programs for specific issues in the industry.

HAL APEN ICNZ13 Scholar Profile:

Name: Julie Petty

Job title: Program Manager

Organisation: Avocados Australia

Based at: Brisbane, QLD



Scholar Report:

In August 2013 I won a Horticulture Australia Ltd scholarship to attend the Australasia-Pacific Extension Network International Conference. The focus of the conference was on Transformative Change: chosen or unchosen, pathways to innovation, resilience and prosperity.

The following is a brief summary of the main benefits and/or take home messages I got from the conference.

How we talk about risk

The presentation I enjoyed most at the conference was given by Cam Nicholson of Nicon Rural Services. It focused on clear and uncomplicated ways of analysing and discussing risk with the rural sector. Mr Nicholson stated that the challenge for extension practitioners is: *To engage in meaningful discussion about risk with a client you need to know what level of risk they are comfortable with and constantly check this to know if it remains aligned with their circumstances and goals.*

One of his key points was that averages do not convey risk. What people need to know to make well informed decisions is not what the averages are or what's expected, but what are the extremes, how often are they likely to occur and what does this mean for profitability and sustainability?

Mr Nicholson's presentation was a light bulb moment for me and I will certainly be changing how I talk to people about risk and how I present information. Since the conference I have spoken to several other extension contacts who were unable to attend the conference and they too were very interested in how we can improve how we talk about risk. It is a fantastic opportunity for extension officers to provide tangible, extremely useful information to industry for the benefit of all of industry.

Understanding what other industries are doing

I found the presentations about how other industries are rolling out extension services particularly useful. The stand-out programs for me were Grain & Graze and those projects lead by DairyNZ. Both are highly successful programs which have been running for a number of years for a large group of growers over reasonably large distances.

Mr David McCall of DairyNZ spoke about the 20/60/20 rule. Within their industry they have identified that 20% of farmers are quite progressive and are able and willing to sort out their own on farm systems to meet or exceed best practice. These are low maintenance businesses for the extension staff. 60% of farmers need one-on-one assistance to improve their systems and 20% can be quite difficult to engage sufficiently to take action.

This was another light bulb moment for me. It highlighted for me that if we are going to get long lasting and significant change in our industry we need to provide one on one support. Again this has been a key presentation which has made me re-think how we might approach the roll out of our quality improvement strategies.

Contacts

It was fantastic to meet so many likeminded people who are passionate about extension. Attending the conference allowed me to make contact with people from a wide variety of different industries and organisations.

Since the conference I have arranged follow up meetings with contacts within Zespri and DairyNZ to further discuss the extension programs those organisations run. I gained great value from these meetings in exchanging ideas and looking at how other industries deal with chosen and unchosen change. Both have given me insights into how we might improve our own extension programs and how we might overcome the challenges ahead.

I would like to sincerely thank Horticulture Australia Ltd, the Australasia-Pacific Extension Network and Avocados Australia for giving me the opportunity to attend the conference.

Regards

Julie Petty
Program Manager, Avocados Australia

M: 0458 004 198 P: 07 3846 6566 F: 07 3846 6577
PO Box 8005, Woolloongabba 4102 Australia
E: supplychain@avocado.org.au

HAL APEN ICNZ13 Scholar Profile:

Name: Trevor Ranford

Job title: Executive Officer

Organisation: Pistachio Growers' Association Inc.

Based at: Algate, SA



Special Note: Since APEN ICNZ13 Trevor has become more involved with APEN, joining the organising committee for the next APEN conference to be held in South Australia in late 2015.

Scholar Report:

One might ask, 'what is the Australasia-Pacific Extension Network (APEN)'?

Well I asked that question recently when a scholarship program was made available by Horticulture Australia Limited for industry development officers to attend the APEN Conference that was held in Christchurch, NZ during the period 26th to 28th August 2013. I was fortunate enough to receive a scholarship and attend the conference.

Over the period of three days there were five keynote presentations and 53 interactive sessions. Unfortunately due to the nature of the program delegates had to select sessions and of the 53 I was able to attend 14 of the sessions.

The title of the conference was **Transformative Change: Chosen or Unchosen. Pathways to innovation, resilience and prosperity.**

The Extension Network was something that I was not aware of even though I have been involved in the horticulture industry for over 35 years. Not sure what this means but most importantly it has introduced me to a new group of individuals and resources involved in agricultural/horticultural extension within Australia - a network that is involved in the **Extension** part of **R**esearch, **D**evelopment and **E**xtension.

It is very difficult to put into a short article what I learnt over the three days of the conference but hopefully I can use the learnings to assist in improving horticultural extension in Australia.

The following are a few abstracts from some of the many papers that I believe are of value to the industry:-

"Mentoring in Agriculture: growing the next generation of farmers"

"Mentoring or one-on-one coaching offers an alternative or complementary learning option that is not new in agriculture, but has not been particularly well embraced by the industry."

Research shows that mentoring has a number of benefits for mentees (protégés), mentors and organizations. Mentoring in agriculture should be investigated as one of the several options to achieve an increase in farm productivity and profitability.

Agriculture is an increasingly complex industry with a need for knowledge far beyond the technical aspects of producing milk, meat and fibre. Farmers need advanced business skills and leadership ability to manage labour and skills shortages, financial planning, risk, people and environmental management, strategic thinking, negotiation and decision-making, as strategies for coping with legal and policy issues. Knowledge is gained in many ways. Each individual has their own preferred method of learning which is influenced by their career pathway. Most farmers learn their skills on the farm, supplemented by formal on-the-job training and through informal learning such as peer learning and discussion groups.

Mentoring is an informal way of passing on industry knowledge from the experienced to the inexperienced.

The three main points of learning are that:-

- *Mentoring offers another method of supporting young farmers to become better farm business managers,*
- *Successful mentoring requires a strong commitment to the process by mentors and mentees and a good match between the two, and*
- *'best practice suggests that suitable training is required, along with a support coordinator who can act on regular feedback.'*

This area of mentoring is of great interest to me and I would like to see this concept adopted both by specific industry sectors as well as across the broad horticultural industry. The program should be not only for young growers but also for new and even established growers.

"Transformational change engages hearts as well as minds."

"NZ Horticulture Industry Strategy clearly indicates that in order for the industry to grow to meet its vision of growing from a \$6 billion industry to a \$10 billion industry by 2020 it needs to make significant change and fundamental to this is a transformation of both attitude and behaviour by individuals and organizations."

Some of the key insights from this session included the following:-

1. *"Much of leadership within horticulture enterprise is still transactional where people are motivated by reward and punishment and the importance of the chain of command is high. However we have found emerging leaders are far more receptive to a more transformational leadership approach of setting vision, showing passion, injecting enthusiasm, walking the talk and supporting individuals to find their way forward.*
2. *Self-awareness and emotional intelligence are major ingredients to successful and resilient leadership in today's business yet the primary industry tends to lag behind in this field.*

3. *The development 'event' is just one part of the full equation. To fully leverage leadership programmes organisations of the participants and the wider community need to buy into the goals, the essence and the approach of the programme. Transformational change relies on collaboration before, during and after the event."*

I found this session most pertinent given the current South Australian Government policy/program of '*Premium food and wine from a clean environment*'.

There is a strong desire by past and current government to grow the South Australian food industry but the programs have failed because of the lack of collaboration by government with industry before, during and after the event. The current program is built on a government policy without the '**before**' collaboration with industry.

"Planning for Profit: the effectiveness of profit planning as the basis for building resilient farm businesses."

"Managing risk induced by change in climate, environment and markets requires farm business managers to build greater resilience into their farm management approaches to remain viable in the long term.

Planning for Profit is based on a very simple, innovative approach to farming as a business focusing on farm net profits as the reason and future for their farming operation. It provides our growers with an effective understanding of the profit drivers of their business – price, production, operating costs and business costs – and the motivation to proactively manage their farms based on driving initiatives to increase their net profit margins using a simple profit plan. Planning for Profit is a continuous, ongoing process of improvement and innovation where the business manager actively revisits and adjusts their production, financial and marketing plans as information becomes more certain."

Profit and profitability is for me the biggest singular issue of concern for South Australian and Australian Horticulture (in fact business in general). Government's at all levels have sucked the profitability out of South Australian and Australian businesses over the past decade to the point where if there is not a major turn-around we will never ever again be a world leader in the production of fresh fruit, vegetables, nuts and greenlife.

I really did appreciate the opportunity to attend the Australasia-Pacific Extension Network Conference and look forward to taking my learnings into the South Australian and Australian Horticultural Industries. Thanks to Horticulture Australia Limited for making available the scholarships and allowing me the opportunity of broadening my knowledge and networks.

Trevor M Ranford B.Sc., Dip MP (AIMSA), CPMgr
Executive Officer
Pistachio Growers' Association Inc

HAL APEN ICNZ13 Scholar Profile:

Name: Jesse Reader

Job title: Technical Manager

Organisation: Apple and Pear Australia

Based at: North Melbourne, Vic



Special Note: After APEN ICNZ13 Jesse was to return from his seconded role with Apple and Pear Australia to his previous employer, agribusiness firm EE Muir and Sons.

Scholar Report:

Key Learnings from APENICNZ13

1. Farmers farm systems not components

This point became clearer to me as the conference evolved. As extension agents or technical advisors we can find ourselves spending a lot of time dealing with individual issues, components or messages and fail to link their relevance to the system in which farming enterprises operate.

We witnessed first-hand from several of the key note speakers many examples of how extension was tackling big issues in regional Australia but only once or twice did I hear someone emphasise that if we truly want to be influential and as extension agents facilitate practice change, then it is critical that we takes a systems approach to project and extension management.

This point will be critical in the ongoing management and further project design of the several projects that I run and will hopefully have a positive flow on effect for the growers.

2. R&D and extension are co-dependent on one another

This point was made loud and clear by Warren Hunt, from the NT government, and is a really great take home message. Too often we see R&D being performed in silos and extension being an afterthought as a result of poorly planned projects, insufficient communication and fractured industry segments.

The success and adoption of any findings or outcomes is directly linked to the delivery of those messages and equally, performing extension without an acute understanding of the message or approach to be rolled out is also critical. Projects need to be built from the ground up with both parties involved.

I have seen this failing in my own industry and it is comforting in some respects to hear the same messages coming through at the APEN conference.

3. Business as usual is no longer good enough

I guess this point sticks with me because it is so relevant in the current landscape. Change is not only inevitable - but extension agents and their respective organisations need to see change as pivotal to their success. The market continues to change so therefore the rules need to continually be rewritten and we need to be at the forefront of that.

With Australian Government departments all but pulling out of extension the need for private extension to evolve to deal with this change is critical. Necessity will drive a lot of the change in the space we operate in.

Thank you.

HAL APEN ICNZ13 Scholar Profile:

Name: David Reid
Job title: Nursery Industry Development Officer
Organisation: Nursery and Garden Industry Victoria
Based at: Malvern East, Vic



Scholar Report:

'Sometimes we can choose our challenges and sometimes these are created for us.'

Having just recently transferred from working many years of regulatory positions within government to now embarking on an extension path, my first challenge was to develop a greater understanding my role within industry and one of the vehicles for this was conferences and networking. If I were to highlight one thing of value that I took away from my attendance at the 2013 APEN conference it would have to be the importance to step back and look at my position and where I sit within my industry.

An issue I've encountered working within amenity horticulture, is that attendance at conferences and agricultural extension meetings often finds myself listening to topics that I previously thought had little relevance to me and minimal impact on how I go about supporting my industry; optimum number of cattle on an allotment, best times to milk an animal, post-harvest management and marketing of summer fruit. Prior to making my decision on attending the APEN conference, this was a concern I had about the impending 3 days of presentations. There was no consideration that the networks I would develop and the knowledge that a few chosen conversations would impart would be just as valuable. The first night in Christchurch a delegate introduced himself and asked, 'What do you see as your industry's biggest challenge and what are you doing to counter it?' I had never been asked this before. It is a question all goes across industries, so all those in extension can appreciate it, but it almost felt overwhelming to me. This was the first of many light bulb moments.

Another occurred during one of the presentations on the first day; Analysing and discussing risk in farming businesses, presented by Cam Nicholson. Risk management may not be something that is explicitly acknowledged in the Nursery & Garden Industry, but all businesses are doing it on a daily basis. Growers are making decisions daily in order to mitigate the numerous threats they are exposed to. Quantifying this risk and interpreting the subsequent data has to my knowledge not been done in the past in our industry. This presentation highlighted the lack of understanding surrounding risk and the importance of benchmarking data in order to put some industry-wide values on particular variables. It also emphasised the need for me to understand why growers make particular decisions; is it just business as usual or are their other factors that influence them. Cam also stressed the importance of case studies for the audience to engage with the material being presented. The Nursery and Garden Industry of Victoria are currently engaging a consultant to benchmark our industry and risk profiling will be a topic that I will explore in the near future.

With such diversity in businesses and their products, finding similarities between them will most likely increase the difficulty of this endeavour, but it will be a worthwhile action.

Many other leitmotifs ran through the presentations that upon reflection I gather were knowledge acquisition, dissemination methods and the importance of growers speaking to growers. Jeremy Neild and Terry Parminter's presentation of 'Just knowing: tacit knowledge', emphasized the differences between both tacit and explicit knowledge play in professional development and industry innovation in agriculture and the role they play in communicating change. A common theme in all agricultural industries I am sure of is the importance that tacit knowledge plays in decision-making. Knowledge sharing is vital for the nursery industry to both maintain quality and support innovation, so this presentation underlined the importance of making the tacit declarative so that others may learn from their experiences. The formalisation of procedures and processes is an initiative I am always harping on about when I visit businesses and I will now also work at drawing out growers explicit knowledge in a number of workshops I have currently in planning, in order to foster reflection on participants own experiences by listening to others. Critical reflection and grower's capacity to learn and awareness of their capabilities was another facet of this presentation that I held onto.

Daniel Healy, Kate Roberts and Danielle England's presentation 'Understanding and developing farmers' adaptive capacity to effectively extend research results and achieve practice change' further supported the presentations I previously mentioned and reinforced what I am currently doing with my industry. Their national benchmarking survey conducted on farmers' practices as well as their perceived vulnerability, resilience, and sources of influence in making decisions I will look at incorporating into my courses and benchmarking. This emphasised the need to improve my current engagement vehicles to acknowledge grower's capacity to change and learn and the role their attitude has.

Finally, a significant argument for me to reassess my position within the industry was articulated in the both Penny Shaw and Philip Shannon's 'Coping with unchosen change – an extension practitioners perspective and 'Learning from global orchardists responses to the Psa epidemic' presented by Shane Max, Dr Sonia Whiteman, Severine Brun, Callum Kay. These two presentations underlined the difficulties a development officer will face when trying to manage unchosen change. The 10 years of drought and the PSA epidemic made me step back and consider the implications of the decisions I make when dealing with the aftermath of unchosen change. As a result I am stepping up my industry preparedness in a number of areas including increasing the skills in the industry that I feel will especially come in useful during an EPP response.

Stepping into the conference as an extension novice, I step out as an extension novice, but with a greater knowledge base with which to draw from and an appreciation of the difficulties I may face in my future. I also am grateful to the previous extension officers in my industry for building such a strong and engaged network of growers, making the work that I now do so much easier. The conference has also shown me that maintaining and strengthening my existing networks is an activity I should not neglect and that I should step back and look at what I am trying to achieve, rather than doing activities because this is the way they have always been done.

Thank you to APEN and to HAL for the opportunity to be a part of the 2013 Conference.

HAL APEN ICNZ13 Scholar Profile:

Name: Jennifer Rowling

Job title: Industry Development Officer

Organisation: Queensland Strawberries

Based at: Cooroy, Qld



Scholar Report:

With the financial assistance of Horticulture Australia in the form of a scholarship, I was given the opportunity to attend the APEN International Conference 2013 in August this year. The conference was held in Christchurch, NZ and was a fantastic opportunity to meet, network with and hear from extension professionals from across Australia, New Zealand and beyond.

The overall coordination and format of the conference was fantastic, and delegates were offered a wide range of short but highly informative sessions to choose from. There was also plenty of opportunity to network with other delegates and I found this particularly beneficial and very interesting. A lot can be learnt from others in industries within agriculture but outside the realms of horticulture.

As an Industry Development Officer, I was keen to hear from extension professionals regarding communication. I wanted to hear how they are able to encourage and support growers through good communication to either accept change, both chosen and unchosen, and grow with it, and/or be empowered to gain the knowledge and confidence required to make informed decisions and implement change for the benefit of their business.

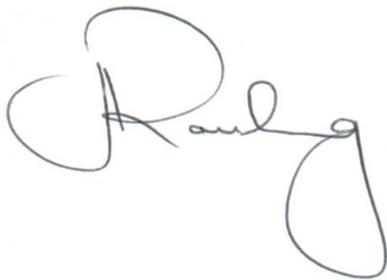
Fortunately, there were a number of very good sessions relating specifically to communication and I attended as many as possible. This included a very interesting session on tacit knowledge (intuitive understanding). A key learning from this session was that by raising the self-awareness of a grower's learning capabilities, tacit knowledge can be used very effectively to build their professional capability.

Another very good session that I sat in on was titled "Analysing and discussing risk in farming businesses" presented by Cam Nicholson. The information presented gave me a far more positive view of risk. Risk implies opportunity and choice and is a necessary part of making returns. He also suggested that when looking at an opportunity (risk), we look at the whole range of data (highs and lows included), not just averages, and that it is so important to support farmers to enhance their decision making.

A presentation by Penny Shaw titled "Coping with unchosen change – an extension practitioners perspective" looked at how extension practitioners can play a vital role in guiding farmers through unchosen change. This session was based on the 10 years of drought in northern Victoria and the learnings of the extension officers during that time. A message that I took away from this presentation is that communication with all stakeholders (internal and external) is of the upmost importance during times of unchosen change, as is knowing exactly what and who you are dealing with i.e. know the industry, know yourself and know your clients and collaborators.

But perhaps the most significant piece of knowledge that I took away from the conference is that despite the fact that most of the information being shared was based around other industries such as beef, dairy, cotton, fisheries etc., the concepts, ideas and experiences can still be applied and are relevant to horticulture in Australia. I spoke to a number of very interesting and experienced people who work in extension and believe that the way that they communicate with their farmers and stakeholders to support positive change can be used to communicate with our strawberry growers in Queensland, particularly with regard to the potential impact and positive benefits from the outcomes of R&D work being carried out for the industry. It has also given me the incentive to work more closely with growers to find out what it is they want in terms of future R&D projects, which I believe will empower them by being actively involved in the future of the industry, and subsequently more open to change as a result.

A very big thank you to HAL for generously funding the scholarship for me to attend this conference. I look forward to implementing many of the things I have learnt for the benefit of my industry and that of horticulture in Queensland and Australia.

A handwritten signature in blue ink, appearing to read "Jennifer Rowling". The signature is stylized with large loops and a long tail.

Jennifer Rowling

Industry Development Officer

HAL APEN ICNZ13 Scholar Profile:

Name: **Stuart Smith**

Job title: **Senior Research Officer - Sustainable Production**

Organisation: **Department of Primary Industry and Fisheries**

Based at: **Darwin, NT**



Scholar Report:

Background

The 6th International Conference of the Australasia-Pacific Extension Network was held in Lincoln, New Zealand, on the 26th – 28th August 2013. The theme of the conference was “transformative change, chosen or unchosen”. I (Stuart Smith) was fortunate enough to receive a scholarship from Horticulture Australia Limited to attend the conference. At the moment I am working as a research / extension officer for the Department of Primary Industry and Fisheries, Northern Territory Government, based in Darwin. My work is primarily with vegetable and melon growers in the Darwin Rural area, but I also do some work in the Katherine region. Many of the growers I deal with are from non-English speaking backgrounds.

General impressions of the conference

As for most extension conferences, the atmosphere was very friendly and collegiate. As expected, there were many delegates from New Zealand, but also good representation from all sectors of Australian agriculture and horticulture, and some delegates from further afield such as Vietnam, USA and the Netherlands. In the next section, I would like to reflect on some of the themes that emerged from the conference and what it means for my practices in the NT

Key themes and their application

1. The movement to participatory models of agricultural innovation systems

There were many speakers who mentioned the changing model of extension from the diffusion / adoption model to a more participatory approach used in agricultural innovation systems (AIS). Using the AIS approach, innovation is considered the result of a process of

networking and interactive learning among a heterogeneous set of actors, such as farmers, input industries, processors, traders, researchers, extensionists, government officials and civil society organisations (Klerkx et al, 2010). On reflection, most of the projects that I have been involved with or observe currently in Australia do not follow this model. The challenge that I saw from the presentation of this model by several speakers was how to apply this to real horticultural research and/or extension projects, especially small ones which haven't got the resources to engage the large number of actors spoken of. The opportunity from this in the NT is to add more actors into the next major horticultural project so that it becomes a participatory AIS system in itself.

2. *The rapid expansion of information technologies in horticulture*

Many delegates spoke of the advances in the areas of IT in their industries, for example remote irrigation control, remote environmental monitoring and spray diaries all using tablets or smart phones. Drone cameras were also being used for mapping. I saw an opportunity for our organisation to start demonstrating this technology for industry, and to start developing smart phone applications for growers, for example, converting our existing heat sum calculator for mangoes and the mango maturity colour charts into "apps" for growers.

3. *Helping farmers make decisions through independent local evaluation of technology*

Some delegates presented research on farmer decision making processes. It was interesting to see research that suggested farmers will sometimes not make any decision at all because of confusion from too many choices. For example, dairy farmers in NZ were not changing to more productive pastures because of an abundance of ryegrass varieties on the market (about 30), that all claimed to be the best. Without local testing to confirm which varieties actually were the best, most growers were just sticking with what they currently had. There is, therefore, an opportunity to help farmers run their own local objective and valid tests, or for an independent organisation to do that for them, with their financial assistance. For the NT vegetable industry, crop cultivars rarely change from what growers are currently using, probably for the same reason. My role will be to canvass growers to see if they want to evaluate new materials or innovations for local testing, and what role they can play, and we can play as an independent government organisation.

4. *Nitrogen modelling systems*

The dairy industry in NZ has become very conscious of its nitrogen monitoring, and several projects are looking at the dynamics of nitrogen in high input dairy pasture systems where as much as 400 kg/ha/yr N is applied. Local communities are finding nitrates in water supplies, both surface and underground. In the NT, even higher rates are applied to horticultural crops, in particular the vegetable industry where some growers use up to 1000 kg/ha/yr. At the moment nitrates are not being detected in waterways because crops are mainly grown in the arid dry season, and cropping areas are very small in relation to the overall landscape. It was interesting to find out that the nitrogen budgeting modelling program Overseertm is being used extensively and successfully in NZ dairy and cropping farms, and may be able to be applied to vegetable farms in the NT. My challenge is to gain

access to this modelling program and see if it can be adapted to my work with vegetable farmers.

5. *Collegiate attitude of participants at the conference*

One of my fellow delegates described the conference as “one of the friendliest they had been to”. This general attitude made me feel confident that collaboration with others across Australia and NZ on common projects was possible. It was good to catch up with the other horticultural scholars, and the other horticultural delegates, for example, those from Zespri, who market kiwifruit. This network development, I found, was one of the most important parts of attending the conference.

Acknowledgements

I would like to thank HAL for this scholarship and Rosemary Currie from APEN for administering it.

Reference

Klerkx, L.; Aarts, N and Leeuwis, C. (2010). Adaptive management in agricultural innovation systems: The interactions between innovation networks and their environment. *Agricultural Systems* 103: 390-400

HAL APEN ICNZ13 Scholar Profile:

Name: Bronwyn Walsh

Job title: Citrus Value Chain Coordinator

Organisation: Department of Agriculture and Food Western Australia (DAFWA)

Based at: Perth, WA



Special Note: As a 'cluster coordinator' for APEN in Western Australia, Bronwyn helps support local networking between WA APEN members.

Scholar Report:

General

A mix of social and policy research in the agricultural landscape and case studies of current practice change activities were the focus of presentations at the APEN International conference held in Christchurch New Zealand this year. The AGM and presentation of the Excellence in Extension Award for a Young Professional and Open category were also part of the program, demonstrating the level of expertise in the sector and role of the association in representing its members in national conversations. Conference Field trips incorporated visits to an NRM regional site and to an orchard or livestock enterprise, providing not only a stimulating change in venue but insightful discussion of frost management and wind breaks as well as motivation and information sources of producers.

Participants at the conference were from universities, consultancies, industry associations, government and commercial producers. The total of 149 participants included 70 Australians, 74 New Zealanders and individuals from Canada, Mongolia, The Netherlands, USA/Chile and Vietnam.

Benefit to Horticulture

The ongoing profitability of horticulture industries relies on the capacity of industry to respond to changes in the external and internal environments.

In my role as a citrus value chain coordinator my capacity to support the citrus industry to change was enhanced by attending the APEN conference. All of my key activities require the effective and appropriate choice of tools and techniques to reach a diverse group of stakeholders.

At the conference I learnt about the use of Web 2 technologies in the agricultural sector as well as the application of more traditional activities. This means I have a greater capacity to

use these tools in my role to provide timely, targeted information and activities to industry segments, which will mean an improved performance of the citrus supply chain. In addition, sharing these learnings with colleagues will mean a benefit for the wider vegetable and fruit industries in Australia.

Secondly increasing my awareness of trends in policy on extension and therefore its implications to industry was an outcome of my attendance at the conference. The role of private and public sector organisations in disease incursions and grower associations in practice change activities demonstrated the changing face of extension in the wider industry and its potential implications to the diverse horticulture industry.

Benefit to Professional Development

The greatest opportunity for my professional development by attending the APEN NZ conference was in the form of networking. A consolidated time of three days was an efficient way of meeting international and Australian professionals working in the field of practice change that I would not normally interact with as part of my day-to-day role. In particular, on-going contact will be with Julie Petty on quality management systems, a group of colleagues from other WA agricultural industries and an international group of researchers in innovation systems and horticulture.

Identifying fellow researchers in the field of innovation systems was invaluable for my postgraduate studies on the Australian horticulture innovation system. Similarly, speaking with the NZ horticulture association and industry members on the changes in policy and its impact provided insight to its application in Australia as well as the foundation for further discussion.

As a relatively new resident and cluster coordinator for APEN in Western Australia attending the conference provided the opportunity to meet national and WA members and build that relationship.

Highlights

1. Hearing about the role that industry played with response to PSA epidemic in NZ kiwi orchards. (Shane Max, Zespri presentation and informal discussion with John Cook, Kiwi fruit grower). **Action:** Investigate the potential of bringing John Cook, kiwi fruit grower, to speak to WA industry stakeholders about experiences with the epidemic, formation of Zespri and technology use.

2. Hearing about Innovation system research in non-horticultural industries in Australia and NZ. **Action:** Read suggested material provided by conference presenters); Investigate value in forming Community of Practice for innovation systems Aus/NZ; Incorporate learnings into my research of the Australian horticultural innovation system.

3. Meeting other extension professionals from other industries, regions and interstate. **Action:** Investigate forming LinkedIn group for WA attendees to discuss and support each other in extension practice.

I'm a great believer that any tool that enhances communication has profound effects in terms of how people can learn from each other, and how they can achieve the kind of freedoms that they're interested in -
Bill Gates

HAL APEN ICNZ13 Scholar Profile:

Name: Helena Whitman

Job title: Executive Manager

Organisation: Vegetable Growers Association of Australia

Based at: Romsey, Vic



Scholar Report:

I was fortunate enough to obtain an HAL scholarship to attend the Australasia Pacific Extension Network (APEN) Conference held at the Lincoln University, in New Zealand, during August. I thank both HAL and APEN for the opportunity of attending such a great conference.

The Australasia-Pacific Extension Network (APEN) is a professional organisation for extension workers and those interested in extension. APEN members are involved in community and rural development, adult education, communication, industry collaboration, industry development, industry services and other related fields.

Conference delegates and topics represented all sectors of Agriculture with attendees from as far away as Canada and South Africa and several international key speakers.

Although most of the presentations were either dairy or grains oriented, the examples given and the lessons to be learned applied equally to all industries and people involved in extension.

What impressed me most was the warmth of the gathering and the positive attitude reflected the fact that we all work with growers in some capacity be it extension or facilitation. The messages fostered cooperation, networking and communication. No-one was left alone with APEN members making new comers, like me, feel very welcome. I look forward to the next Conference.

The highlight for me was the final presentation by Prof Gregorio Billikopf from the University of California. Prof Billikopf's presentation dealt with staff selection and conflict resolution and although last on the program he had us all wanting more. His methods could be easily applied across all sectors by all managers or owners of businesses. I will be looking up his website to summarise and promote his technique and information across the industry where applicable.

The presentation on the NZ Leadership program and Young Grower of the Year program within horticulture was also very enlightening. The fact that the Young Grower of the Year competed for the title and was drawn for the Leadership program seemed to give the title much more credence. It would be interesting to compare this technique with that used in the Australian Vegetable Industry.

Grower networks driven by growers and their influence on research in the dairy, grains and sheep meat industries was envious however, whilst we have a fragmented vegetable industry with so many commodities and individuals competing against each other, I don't think such a network will be easy to create. These industries have the advantage of either single desk marketing or processing behind them so they are not competitive in nature. However, again the lessons learned can be applied to small groups of vegetable growers to foster this type of cooperation.

My only criticism of the Conference would be that there were too many good concurrent topics which made selection very difficult. On the other hand, the Agenda ran so smoothly, the venue and food were excellent and organisers need to be congratulated.

Again, I would like to thank HAL and APEN for providing me with the opportunity to attend this very informative Conference. I would like to also thank my Executive who encouraged me to apply for the scholarship and attend the Conference.

Helena Whitman

12. Appendix B: APEN ICNZ13 delegate list

First name	Last name	Company/Organisation	Country
Le Thi Hang	Nga	NOMAFSI/UQ	Vietnam
Ross	Abercrombie	Waikato Regional Council	New Zealand
Denise	Bewsell	AgResearch Ltd	New Zealand
Gregorio	Billikopf	UC Davis	New Zealand
Mark	Blackwell	DairyNZ	New Zealand
Neels	Botha	AgResearch	New Zealand
Severine	Brun	Zespri	New Zealand
Brigid	Buckley	DairyNZ	New Zealand
Marie	Casey	NZ Grassland Association	New Zealand
Jayne	Chamberlain	Zespri	New Zealand
Lynda	Clark	Dairy Womens Network	New Zealand
Russell	Clearwater	Spectrum Management Services	New Zealand
Heather	Collins	student	New Zealand
John	Cook	Endeavour Kiwi	New Zealand
Sarah	Dirks	DairyNZ	New Zealand
Ryan	Donovan	Zespri	New Zealand
Andrew	Dunningham	Scion	New Zealand
Tony	Finch	DairyNZ	New Zealand
Angie	Fisher	DairyNZ	New Zealand
Tom	Fraser	AgResearch	New Zealand
Jill	Greenhalgh	Lincoln University	New Zealand
John	Greer	DairyNZ	New Zealand
Glen	Greer	AERU, Lincoln University	New Zealand
Nita	Harding	DairyNZ	New Zealand
Lynley	Hayes	Landcare Research	New Zealand
Leo	Hendrikse	DairyNZ	New Zealand
Sam	Howard	DairyNZ	New Zealand
Wade	Hunkin	Zespri	New Zealand
Lesley	Hunt	Lincoln University	New Zealand
Phil	Irvine	DairyNZ	New Zealand
Jenny	Jago	DairyNZ	New Zealand
Amy	Johnson	DairyNZ	New Zealand
Electra	Kalaugher	Waikato Regional Council	New Zealand
Micheal	Keaney	Ballance	New Zealand
Steve	Lee	DairyNZ	New Zealand
Richard	Lynch	MPI	New Zealand
Shane	Max	Zespri	New Zealand
William	Max	Zespri	New Zealand
Craig	McBeth	DairyNZ	New Zealand
David	McCall	DairyNZ	New Zealand
Paul	McCauley	Beef + Lamb New Zealand	New Zealand
Marie	McEntee	The University of Auckland	New Zealand
Kevin	Mckinely	DairyNZ	New Zealand
Abbey	McMonagle	Zespri	New Zealand
Aaron	Meikle	Beef + Lamb New Zealand	New Zealand
Claire	Mulcock	Mulgor Consulting Ltd	New Zealand
Liz	Muller	Ballance Agri-Nutrients	New Zealand
Amanda	Murray	Beef + Lamb New Zealand	New Zealand
Matthew	Newman	DairyNZ	New Zealand
Sarah	O'Connell	Beef + Lamb New Zealand	New Zealand
Mark	Paine	DairyNZ	New Zealand

First name	Last name	Company/Organisation	Country
Terry	Parminter	PACT Consulting	New Zealand
Richard	Pentreath	Zespri	New Zealand
Annie	Perkins	Ground Work	New Zealand
Tom	Phillips	OneFarm, Massey University	New Zealand
Sue	Pickering	Horticulture NZ	New Zealand
Matthew	Pickering	Coach Approach Ltd	New Zealand
Ina	Pinxterhuis	DairyNZ	New Zealand
Mel	Poulton	Beef + Lamb New Zealand	New Zealand
Jack	Radford	Lincoln University	New Zealand
Philippa	Rawlinson	Lincoln University	New Zealand
Janet	Reid	Massey University	New Zealand
Kelly	Rijswijk	AgResearch	New Zealand
Simon	Sankey	DairyNZ	New Zealand
Caroline	Saunders	Lincoln University	New Zealand
Virignia	Serra	DairyNZ	New Zealand
Erin	Sinclair	DairyNZ	New Zealand
Bruce	Small	AgResearch Ltd	New Zealand
David	Stevens	AgResearch	New Zealand
Chrissy	Stokes	Zespri	New Zealand
Ian	Tarbotton	DairyNZ	New Zealand
Rupert	Tipples	Lincoln University	New Zealand
James	Turner	AgResearch	New Zealand
John	Vosper	DairyNZ	New Zealand
Richard	Wakelin	Beef + Lamb NZ	New Zealand
Jill	Walcroft	AgResearch	New Zealand
Victoria	Westbrooke	Lincoln University	New Zealand
Toni	White	AgResearch	New Zealand
Laurens	Klerkx	Wageningen University Social Sciences	Netherlands
Erdenebolor	Baast	Mongolian State University of Agriculture	Mongolia
Ji	Yu	China Executive Leadership Academy. Pudong	China
Leona	Reynolds-Zayak	Alberta Agriculture and Rural Development	Canada
Liz	Alexander	Blue Dog Agribusiness	Australia
Kathleen	Allan	GRDC	Australia
Joel	Andrew	Precision SoilTech	Australia
Mike	Austin	Harcourt Cotton Pty Ltd	Australia
Debbie	Austin	Harcourt Cotton Pty Ltd	Australia
Maryse	Bourgault	DAFF	Australia
Pauline	Brightling	Harris Park Group	Australia
Jan	Clawson	ASHEEP	Australia
Neil	Cliffe	University of Southern Queensland	Australia
Robbie	Commens	Australian Macadamia Society	Australia
Roe	Currie	APEN	Australia
Danielle	England	Planfarm Pty Ltd	Australia
Jonathan	England	DAFWA	Australia
Laura	Garland	Victorian Department of Environment and Primary Industries	Australia
Virginie	Gregoire	Fruit Growers Victoria Ltd	Australia

First name	Last name	Company/Organisation	Country
Alison	Hall	Tasmanian Institute of Agriculture	Australia
Nathan	Hancock	Citrus Australia Ltd	Australia
Megan	Hill	Department of Environment and Primary Industries	Australia
Tim	Hollier	Department Environment and Primary Industries	Australia
Carole	Hollier	Department of Environment and Primary Industries	Australia
Peter	Howden	Roberts Evaluation	Australia
Bruce	Howie	C-Qual Agritelligence Pty Ltd	Australia
Warren	Hunt	Northern Territory Government	Australia
Verity	Ingham	Dairy South Australia	Australia
John	James	DAFF	Australia
Geoff	Kaine	Geoff Kaine Research	Australia
Gabe	Kerz	Australian Blueberry Growers Association	Australia
Barbara	King	University of Melbourne	Australia
Jeanette	Long	Ag Consulting Co	Australia
Bill	Long	Ag Consulting Co	Australia
Rabi	Maskey	Department of Environment & Primary Industries	Australia
Jo	McCloskey	Horticulture Australia	Australia
Austin	McLennan	NT DPIF	Australia
John	McPhee	Tasmanian Institute of Agriculture	Australia
Greg	Mills	GoAhead Business Solution	Australia
Alexandra	Murray	GRDC	Australia
Roy	Murray-Prior	AgribizRD&E Services	Australia
Ruth	Nettle	The University of Melbourne	Australia
Oleg	Nicetic	University of Queensland	Australia
Cam	Nicholson	Nicon Rural Services	Australia
Julie	Petty	Avocados Australia	Australia
Rebecca	Pike	Department of Environment & Primary Industries	Australia
Dougal	Purcell	Dept Environment & Primary Industries	Australia
Trevor	Ranford	Pistachio Growers' Association Inc	Australia
Jesse	Reader	Apple and Pear Australia Ltd	Australia
David	Reid	Nursery & Garden Industry Victoria	Australia
Kate	Roberts	Roberts Evaluation Pty Ltd	Australia
Carol	Rose	NSW DPI	Australia
Jennifer	Rowling	Queensland Strawberries	Australia
Kate	Sargeant	Department of Environment and Primary Industries Victoria	Australia
Justine	Severin	Birchip Cropping Group	Australia
Penny	Shaw	Department of Environment & Primary Industries	Australia
Stuart	Smith	DPIF NT	Australia
Glenda	Steain	NSW DPI	Australia
Felicity	Taylor	Facey Group Inc	Australia

First name	Last name	Company/Organisation	Country
Michael	Taylor	AgForce Queensland	Australia
Philip	Thomas	UNE	Australia
Christine	Thompson	Dept of Agriculture and Food WA	Australia
Elske	Van de Fliert	The University of Queensland	Australia
Rebecca	Wallis	Grower Group Alliance	Australia
Bronwyn	Walsh	DAFWA	Australia
Andrew	Ward	BSES Limited	Australia
Brad	Warren	OceanWatch Australia	Australia
Jane	Weatherley	Meat and Livestock Australia	Australia
Neil	Webster	Dairy Australia	Australia
Carla	Wegscheidl	QLD Dept of Agriculture, Fisheries and Forestry	Australia
Mike	Weise	Mike Weise (Consulting)	Australia
Helena	Whitman	Vegetable Growers Assoc of Victoria	Australia

End of APEN ICNZ13 delegate list