

What Works and Why Lessons from Neuroscience

Cynthia Mahoney

"Hi Cynthia, our organisation is experiencing rapid and transformational change as we transition to a new funding and business model. Staff are feeling very anxious and morale is low. I'd like you to quote to facilitate a workshop for our senior managers on dealing with change – they're all really busy so the workshop can only be three hours long."

This was something that a client in a health organisation said to me a few weeks ago. The brief was to bring together a group of managers who don't work together regularly to talk about the complexities of change and to build their capability in, and assist them to develop strategies for, how to engage and lead their staff through this change. As a leadership development facilitator who strives to achieve meaningful practice change in their work, the client's expectations seemed rather high for a three-hour workshop where the participants don't know each other! I'm sure, as facilitators and people working with change in agriculture, rural industries and communities, other APEN members might also experience similar scenarios?

The good news is that advancements in the field of neuroscience have incredible value for people who work in extension that can be used to improve program and workshop design as well as facilitation and coaching skill development.

Neuroscience can also assist as evidence in building a case to validate extension approaches with clients and funders and as a means to demonstrate rigour in the extension profession.

I've just finished classes for a Diploma of Leadership, Coaching and Mentoring where we explored the latest learnings from neuroscience and how brain chemistry relates to our work as managers, facilitators, and coaches in improving the performance of the

people we work with. There are also useful lessons for how we can manage ourselves more effectively, no matter what role we are in, whether it be leader or team member. I also believe that these insights have a crucial and valuable role to play in the profession of extension.

Did you know that every conversation we have creates a response of trust or mistrust in the other person? The brain processes these two responses separately, in two different areas. Mistrust triggers the lower, more primitive brain (the amygdala) and activates a threat response. Trust activates higher-level intelligences (via the pre-frontal cortex) such as integrity, empathy, and good judgment.

If we are in an environment of mistrust, we are operating out of the emotional part of our brain and this may limit access to our brain's higher thinking ability – the outcome is that our performance is impeded. By creating environments of trust, which facilitators and extension agents have the skills to do, people are able to access their pre-frontal cortex, improving their own performance and their interactions with others which increases the performance of the group.

The amygdala is responsible for the actions of fight, flight, freeze or appease and once activated (when we mistrust) cortisol is released. Our brain goes into lockdown and we are unable to engage with others or access the higher thinking part of our brain. We actually can't think properly! This results in lower productivity, lower innovation and lower success.

On the other hand, when we access our pre-frontal cortex, via a feeling of trust, oxytocin is released. The pre-frontal cortex enables us to collaborate with others, have good judgement, be strategic, handle difficult conversations



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and build and sustain trust i.e. we perform more effectively.

Organisational anthropologist, Judith E. Glaser, has written a fantastic book called, "Conversational Intelligence – how great leaders build trust and get extraordinary results" (2015) which details the brain chemistry of conversations.

(Continued next page)

What Works and Why - Lessons from Neuroscience Continued

Here's a checklist, based on Judith's work of what makes a healthy, thriving organisation, that you can use to evaluate your organisational or team culture or even to reflect on your own behaviour. You can also use it as a guide when designing extension programs or workshops.

Behaviour that <u>down regulates</u> oxytocin and leads to mistrust	Behaviour that <u>up regulates</u> oxytocin and leads to trust
Excluding	Including
Judging	Appreciating
Limiting	Expanding
Withholding	Sharing
Knowing	Discovering
Dictating	Developing
Complying	Celebrating
Blaming	Accountability
Denying	Ownership
Justifying	Responsibility

How does your program, team or organisation perform against these behaviours?

Any experienced facilitator knows how important it is when working with a group to create the space for people to talk. We include techniques like "icebreakers" to enable people to feel comfortable in a new group. We ask group participants to identify and agree on their own operating guidelines about behaviours they want to see within the group to enable constructive participation from all members. We use processes to encourage active listening and to enable group members to share knowledge and experiences and provide feedback in a safe environment. We break people up into small groups to talk to cater for introverts and to allow everybody in the group to be heard. We have the skills to encourage group conversations. We use techniques to enable a group to discover new knowledge together, to expand people's thinking, to "co-create" and develop new ideas. We include activities that build relationships within the group and we understand how important it is to celebrate shared success.

As you can see, all these techniques that good facilitators use in their programs every day, are crucial to creating an environment of trust within a group. The skills we have and processes we use within a group, support the behaviours

that upregulate oxytocin (i.e. those on the right-hand side of the above table). Hence, we enable participants in our programs to access their pre-frontal cortex, activate their higher intelligence and perform at their best.

As facilitators and extension personnel, we've been using these techniques over many years because we know they work. It's exciting that what we've instinctively known is now backed up by neuroscience. We have more evidence that validates our approach.

Recently, I ran a leadership program that was structured as three, half-day workshops over six weeks for a group of managers and emerging leaders in an organisation. The feedback from the client went like this, "I'm not sure why but Day 2 seemed to work better than Day 1, I can't explain what it was, there was just a different feel in the room and people were more open". By the third day individuals in the group had made significant changes to their practice and their confidence was high. The group dynamic had also shifted enabling some tough conversations about desired leadership behaviours to occur.

When reflecting on this, I related it to Judith's work on Conversational Intelligence. The participants were from different parts of the organisation and didn't work together. Meeting more than once enabled the group to build trust - in the process, in the facilitators and in each other. Individuals in the group were able to overcome their mistrust and apprehension. By the second workshop most participants were able to operate out of their prefrontal cortex, which accessed their higher intelligence, resulting in improved performance. By the third workshop the individuals, and the group itself, were able to operate at a much higher level.

You can see that a "quick fix" approach of reducing the time of a program for reasons of efficiency gain is counterproductive if the facilitator is then forced to abandon processes that upregulate oxytocin and create trust within a group.

If you want your group, team or organisation to be operating in the Optimal Performance Zone (Figure 1) then a high level of facilitation skills are required along with the ability/time/resources to build trust within the group. Even with a high level of facilitation skills, if short cuts need to be taken that result in a skilled facilitator being unable to include the necessary processes to build trust between participants, keeping their brains in lockdown, you'll be operating in the Frustration Zone – frustration for you as the facilitator, for the investor or client and also for the group. If you have a group

that knows each other so trust is already established but the facilitator does not have a high level of skills then you'll be operating in the Unrealised Potential Zone – the facilitator is incapable of unlocking the existing power of the group. The Disaster Zone is something that no-one wants to experience, facilitators, clients/ investors or participants, so make sure your programs avoid a lack of facilitation experience combined with the inability or lack of time/resources to establish group trust.

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So, next time you have 'that' phone call for the quick fix workshop, I encourage you to remember this article and the insights into why incorporating techniques into your programs that allow conversations and build trust within a group are necessary to optimise performance. Perhaps you won't convince your client or an investor the first time, but you will sow the seeds of what it takes to optimise individual, group and organisational performance and create meaningful practice change and that this is a worthwhile return on investment. After all what's the alternative?



Across the President's Desk

Jeanette Long, President APEN



Having conversations....

APEN has great people. Every day, I have robust conversations from some powerful minds – minds that share their clever strategies as we collaborate on mutual projects.

APEN is about extending our networks, meeting at events, or over the phone, delivering workshops and supporting each other whatever ways we can.

Now is the time to engage with the APEN Management Committee, through your regional coordinator, to share your thoughts as we continue the process of changing to a Company limited by guarantee. We have gathered the personal stories, the data and have researched what needs to be done. We have a unique community to treasure and to keep going at the highest level possible. Such is the change we continue to see. Austin McLennan is pulling together the constitutional changes needed. Anthony Kachenko is ensuring members are not disadvantaged in any way. The Management group is defining the skills and experiences needed by the incoming Directors. And, we are listening to the voices of our members who are thinking outside of the square. Such a team effort. Another stage of APEN's growth.

On top of this activity we are jointly hosting the 2017 International Conference in partnership with the Global Forum for Rural Advisory Services (GFRAS) 12 to 15 September in Townsville. Research has shown us that most people attend a conference to learn, to network, to meet people, to be inspired, to solicit business - all in an enticing location. The APEN Conference Convenor, Lawrence Di Bella, assisted by a formidable team is tackling the theme of 'Facilitating balanced change for rural and urban communities'. Presenters will be delivering local and international

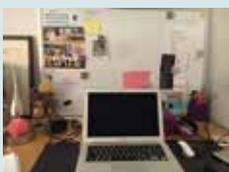
extension theory and practice around production agriculture, natural resource management, community development and the health sector. It promises to be great occasion for having those conversations in such a beautiful setting. I am looking forward to meeting you.

Hence, having conversations is important – they lead us into the future.

Warm regards

Jeanette Long

ENET



I like the way you think ...“Awakening the sleeping partners”

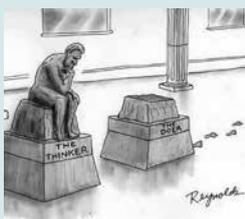
There are some great thinkers in our network whose research and extension practices encourage us to think outside the square (or the round hole whichever you prefer). This issue of ExtensionNet has captured the thoughts and the practices of such people. Their stories are a great read.

‘Did you know that every conversation we have creates a response of trust or mistrust in the other person? Cynthia Mahoney’s article What Works and Why - Lessons from Neuroscience gives us some ‘tips’ to improve program and workshop design through the field of neuroscience.

Neuroscience is validating all the ‘tips’ we have been using in our programs everyday.

Emma Egan, as an emerging leader in the field of extension, shares with us her growth. Her ‘tip’ - ‘do what you enjoy, and if that means taking a less conventional path, so be it’ - is something that can resonate with all of us.

Cathy McGowan AO MP has shared with us her personal story when she was presented with APEN’s 2001 Award for Excellence in Extension. We need to remember the impact that recognition and acknowledgement can have on our future – Cathy’s article reminds us!



FROM THE EDITOR

Anthony Kachenko, CEO Horticulture Innovation Australia, (and APEN NSW Regional Coordinator), identifies why research and receiving credible and reliable data are so essential when we advocate for change in the Australian vegetable sector where people were not embracing the adoption of Integrated Pest Management (IPM). The new approach is proving to be both practical and effective.

As the agricultural sector adopts new technologies, Gavin Beever, the National Project Manager for GRDC’s eXtensionAUS project, which is based on the principles, practices and platforms of eXtension from the USA, explores the wide range of new media options that can be used in the practice of extension. Gavin encourages us to look at implementing the Community of Practice approach.

For those of you who missed the April webinar, Tegan Kukulies, Senior Development Officer in Queensland’s banana industry with the Department of Agriculture and Fisheries, highlights a most informative and engaging webinar. We asked Tegan to summarise her presentation for ‘those who missed out’.

Check out the 2017 conference details, meet some new members and share the regional roundup activities being experienced across the nation and beyond.

I encourage each of you to share your skills, experiences and knowledge by contributing information, brief articles, letters, upcoming events and lots and lots of stories and photos. Until next time, remember John Lennon’s words: Life is what happens when you are making other plans.

Dr Pat Hamilton



APEN Constitutional Changes Update for Members

Austin McLennan



At our recent Special General Meeting of APEN members, the resolution was passed to transition APEN away from its present Incorporated Association status into a Company Limited by Guarantee. As part of these structural changes, it was also recognised that the APEN Constitution would need to be modified to suit the new company structure.

Past President Austin McLennan and NSW Regional Coordinator Anthony Kachenko are leading the effort to update the APEN constitution in time for ratification at our Annual General Meeting to be held at the APEN International Conference in Townsville later this year.

Once the re-drafting is completed it will be made available to members for comment and feedback. However, at this stage we felt it important to share with members the design principles that are being used to shape the new Constitution in relation to the future oversight and management of APEN.

These principles are that:

1. The overall management structure of APEN shall consist of the following bodies and offices:

- A skills-based board of 5-9 Directors responsible for overall management of the Company, from which the following officers will be drawn:
 - President
 - Vice-President
 - Secretary
 - Treasurer
- A Committee of elected Regional Coordinators (1 per region) who assist the Board in implementing strategy and regional activities and events, as well as advising the Board on regional issues and interests
- Two other Board-appointed officers with no Director responsibilities
 - Editor in Chief, Rural Extension and Innovation Systems Journal
 - Editor, ExtensionNet

- Any other staff, contractors, subcommittees and/or member volunteers such as are deemed essential to the effective management of APEN.

2. The majority of the APEN Directors will be elected directly by the membership, though the Board will have some capacity to recruit other members to the position of Director dependent upon the needs of the Board.

3. The Board of Directors will be responsible for the APEN's Strategic Direction, Corporate Governance, and the appointment of any staff or contractors including the Company Secretary and/or a Chief Executive Officer.

4. The Regional Coordinators will be responsible for driving the on-ground activities of APEN within their regions

5. A Secondary purpose of the Regional Coordinators is to provide regional representation to the APEN Board via a representative, and more generally to keep the Board and Membership informed of regional issues.

So, how does that sound to you?

If you as a member have any comment, concerns or questions about these proposed changes, please contact Roe at info@apen.org.au or Austin at ajmprofessionalservices@gmail.com.

Also, any members who would like to be more directly involved in the Constitutional update process are welcome to join the subcommittee working on this task in time for our AGM.

Stay tuned for more updates!

As this is progressing we are working to update the APEN website and eBulletins and plan to have them ready to launch at the 2017 APEN International Conference in Townsville in September!

Austin McLennan
APEN Past President



Putting Extension into Practice

Meet Emma Egan an Agricultural Consultant | Project Officer with RMCG and based at Penguin in North West Tasmania



At the young age of 23, Emma has already packed in a wealth of experiences enabling her to grow through different ways of seeing and doing things in the world of the agriculture sector - all with the intent of making positive change.

Having graduated with an Advanced Diploma of Agriculture and a Diploma of Agronomy at Longerenong Agricultural College in Victoria, and commencing a Bachelor of Agricultural Business Management with Charles Sturt University, Emma worked in Alberta, Canada on a beef property – a much different experience from growing up in a vegetable production area where she sorted potatoes in her early life. Then came the chance to apply for an internship with Future Livestock Consultants (FLC), a structured program designed to support livestock consulting businesses taking on entry-level employees.

I interviewed Emma in her new role at RMCG where she is making a great impression and is experiencing the satisfaction of following her passions.

The interview

Let's capture what you do and how you got there

Emma: Following the last two years as an intern under the Future Livestock Consultants program with RMCG, I am fortunate to now be working as the Tasmanian Industry Development Officer for the National Vegetable Extension Network. This involves extending R&D findings to growers, through one-on-one discussions, discussion groups, social media, as well as running events including farm visits,

field days, farm business benchmarking, workshops and webinars. On top of these activities, I also have a significant interest in data management in the red meat industry, especially on a producer level, helping them to utilise existing technologies to take the next step and get the most out of their businesses.

How I got there...

I started at a young age – caring for the chickens and feeding the poddy calves. Growing up on a small beef property in West Gippsland, Victoria gave me the opportunity to be involved in the industry whenever possible. Secondary college gave me the opportunity to expand my knowledge of the industry as I completed Certificates II and III in Agriculture. Working on local properties, as well as in QLD and the NT on beef operations, triggered my decision to continue my education, which took me from Longerenong Agricultural College to Canada to where I am today with RMCG under the FLC program. I am a life-long learner and so I am continuing my university studies in agricultural consultancy and business management.

Why Emma enjoys what she does and has the passion to chase it

Overall, I enjoy the flexibility, variety and freedom that my current position provides. I meet and work with some amazing people who challenge my extension practices and me, and are willing to share their experiences. This interaction brings me many rewards. I am in a supportive place where I can get the most out of my career. I never stop learning.

What is the smartest (career-related) decision Emma's made (so far)...

To allow myself to be exposed to wide range of work, from residential loss assessments, wastewater management, to livestock management. The variety [not sticking to one industry] has brought with it a great set of skills and experience that I can use across my day-to-day work, which I really enjoy. I can also utilise technology as I am always on the look out for exciting new apps and technology to share with producers.

Learning is a continuous process – what is one thing Emma has learned...

There are small steps towards adoption. Although I'd read a lot about practice change, it wasn't until I started to work with producers on changing their management that I understood the 'small steps towards change' saying. It was easy to go in with a big idea, but even with a clear value message it wasn't readily taken on board. Although it has been a challenge, I've enjoyed learning about producer motivations and tailoring the appropriate approaches. Processes need to be broken down and it is important to 'think outside the square'.

What is Emma's best advice - A tip for other change agents...

Do what you enjoy, and if that means taking a less conventional path, so be it. You do not always have to follow existing conventions.

It was such a pleasure meeting Emma – the future of primary production is in good hands.

Dr Pat Hamilton



Producer driven extension:

Discussion between producers at a field in the Tamar Valley



A Rewarding APEN Excellence Award ...

Cathy McGowan AO MP for Indi

Women in Dairy – WinD for short - was an amazing opportunity that totally changed my life. This and being elected the MP for Indi are standout events.

That's not a comment easily made, but this project changed the way I saw the world, and may I be bold enough to say, changed the way extension was practised in Australia, Ireland, Papua New Guinea, and potentially in India. It was one of the most satisfying projects of my professional career!

What I most remember about the APEN Award for Excellence in Extension was the actual award event. It took place in the ornate surroundings of the Toowoomba Town Hall, the glamour event of the APEN Queensland conference. It was such a proud moment: the recognition of our project, acknowledgement of the work of women in agriculture, honouring the role of families and their contribution to Agriculture; and a very personal moment having my father, a man who had taught me so much about extension, who had been a dairy farmer and also made a professional career working with farmers, in the audience.

Cheryl Phillips, an experienced community consultant from Mooroopna, near Shepparton in Northern Victoria, developed with me the Women in Dairy Project in the mid 1990's. Our motivation was mixed: We knew the dairy industry was facing massive change. We knew women were under-represented in agriculture extension and dairy projects. We were looking for work and both of us were daughters of dairy farmers. We saw the business opportunity, we knew there was a gap in the market, and the need was acute. We bound all our courage into one carefully worded bid and arranged to meet with Paul Donnelly, then the newly appointed CEO of The Dairy Research and Development Corporation (DRDC). Sarah Crook provided back ground advice as did Tim Reeves, Regional manager of The Victorian Department of Agriculture.

Paul's visionary and brave agreement to fund a pilot women's program in partnership with the NSW Dairy Farmers Association, targeted women actively involved in the dairy industry. At that time, a specific women focused program was unheard of. He later told us how much flack he received from his colleagues and some board members.

The pilot in Sydney was a great success. The three day, live-in program focused on leadership and personal development, exploring industry profit drivers, change management systems and practical



Cathy in action in Parliament House

hand-on learning. The women loved the opportunity to learn about their industry, research opportunities and managing finances, after all, they had half the debt. They enjoyed the experiential learning style, and opportunity to meet other like-minded farmers.

The industry networking dinners were always extraordinary events. The participants, all glammed up, meeting industry "VIPs", took the opportunity to engage in serious discussion, putting into practice all the tips on 'managing a conversation' moving beyond small talk, working the room, playing team. The women shone, and emerged confident, proud, articulate and great ambassadors for the dairy industry.

With the successful pilot, we were on our way. An extensive evaluation process documented many achievements: workshops in each state, Women in Dairy conferences, a national network of Women in Dairy, establishment of "Women in Dairy" in Ireland and deputations to parliament, to the USA and Europe.

The WinD groups played a significant role in helping the industry manage the transition to a deregulated market. They encouraged and supported innovation in product development, in uptake of technology and research and importantly opened up an industry wide discussion on the topic of dairy farm family succession.

Other industries soon adopted the model with Women in Horticulture (WinHort), Partners in Grains (PinG), Women in Cotton (WinCott), Women Industry Network Seafood Community (WINSEC) and like-minded groups being supported by most of the Rural Research and Development Corporations.

When I look back I find I have a better appreciation of the significance of the APEN Award. It's seems hard to believe that women were once classified by the farm insurance industry as "Sleeping Partner non – productive" and denied income protection. It was a time when it was hard to count on one hand the numbers of women agricultural leaders – compared to today where the National President of the NFF is a woman.

As in most good processes, this outcome was a team effort. I'd like to acknowledge the role of Australian Women in Agriculture (AWiA) and the Foundation for Australian Agricultural Women (FAAW) for their national organisational leadership. To the Departments of Agriculture in most states, and the wonderful support of the Rural Women's Networks, and The Commonwealth Department of Primary Industries and Energy, funding women's programs, helping with coordination and logistics. And a special call out to RIRDC for support of the annual Rural Women's awards and the ground breaking research "Missed Opportunities Report" which calculated that farm women contributed over \$14b to the agricultural economy. And that figure was in 1996!

The APEN award was the beginning. Through this award came recognition. Through recognition came legitimacy, validation and empowerment. And for me personally, pride in being a farmer's daughter, a woman in agriculture and a member of APEN.





The eXtensionAUS Approach

Gavin Beaver

Gavin has 28 years' experience in the field of extension. Since 2013, one of his roles has been as the National Project Manager for the Grains Research and Development Corporation's (GRDC), eXtensionAUS project. This project has established and piloted the first two Communities of Practice in Australia that have used the principles, practices and platforms of eXtension from the USA (www.extension.org). This project has involved engaging with 135 experts from around Australia in two subject areas; crop nutrition and field crop diseases. Gavin has managed all the professional development activities for these communities, with the support of eXtension.org. Gavin enjoys facilitation and seeing people use their interpersonal skills to develop high functioning teams, who achieve their goals and enjoy doing so. He likes to be outcome focused, whilst ensuring people keep a balance with their goals, have fun, build better relationships and enjoy the journey.

There is a wide range of new media options that can be used to assist in the practice of extension. The GRDC's eXtensionAUS project has found that a Community of Practice (CoP) using a suite approach, rather than using online tools in isolation, has proved to be both innovative and effective in reaching end users.

With an increasingly connected agricultural community that is embracing new technologies as infrastructure and bandwidth improve, prospects for harnessing online systems improve daily. In that context the opportunity for real time information exchange between advisors, farmers, researchers and the industry is extremely important.

The Grain Research & Development Corporation's (GRDC) 2013 Information Products and Services Needs Survey, found that 93% of growers and 100% of advisers are gathering research information to aid farm and crop management using electronic devices such as computers, smartphones or tablet devices; 81% of growers and 98% of advisers use websites for gathering farm and crop management information and 81% of growers and 84% of advisers use mobile (phone or tablet) technologies.

In the same survey, 41% of growers and 70% of advisers said they would be interested in participating in an online forum, where farm or crop management questions could be put to researchers and other experts. Numbers were highest among younger growers and those in an expansion phase.

"Though Social Media applications can be

effectively used by extension and advisory services, lack of awareness and skill about its use currently constrain its widespread use. Moreover, the organisational culture within extension organisations also restricts exploitation of its full potential by extension professionals." (Saravanan Raj and Suchiradiptha Bhattacharjee 2015)

A Community of Practice (CoP) is a broad range of subject matter experts/content providers (from a range of agencies) who are willing to formally network and collaborate together to share knowledge and information with users.

There are approximately 120 experts involved across the two GRDC CoP - Field Crop Diseases CoP and Crop Nutrition CoP). The members' organisations and themselves as individuals have signed contributor agreements; which grants them the licence to operate together and use a peer review process as a community; without the need to seek publishing approval through their individual organisations. This allows them to be agile, flexible and responsive in their extension approaches.

Each CoP meets monthly online to discuss issues and identify a scope of collaborative work for the coming month. Importantly, they also meet face-to-face annually, which helps build relationships and expand and maintain their personal networks and the CoP network as a whole.

On inception of the CoP, the members participate in a two-day induction and training workshop that includes some introduction and training in the use of online tools. Since that time the members have been supported by a project management and leadership team that have led a continuous improvement process in the application of online tools. The experience has led to changes in how the members use online tools.

When surveyed, the key benefits agricultural professionals have found from being a CoP member are:

1. Expanding their professional networks
2. Learning how to work in new ways in online environments
3. Learning new technical information
4. Increasing their reach to their "clients"

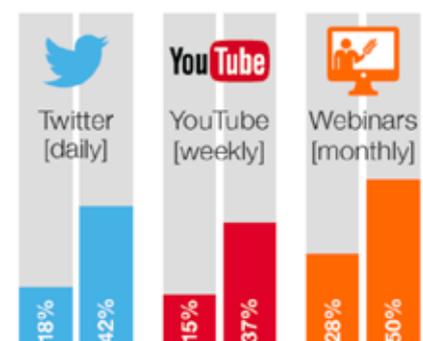
For the website component of eXtensionAUS (www.extensionaus.com.au) the focus has been on it being an evolving, virtual, customer-centered on-line learning environment that provides the most current, objective, research-based information for anyone, at any time, on any device and in any location in respect to the chosen topics. There have been 18,050 users of the site from July 1st 2014 to April 30th 2017.

Users and How They Access the Website

Access	% of Total Sessions	% of New Users
Direct (Type in the URL or use a bookmark)	25.29%	27.05%
Organic Search (via a search on a search engine)	25.77%	24.41%
Social (from a social network)*	25.14%	16.72%
Referral (via another website by clicking link)	23.08%	31.46%
Email (by clicking a link in an email)	0.63%	0.9%
Other	0.09%	0.08%

The response BEFORE and AFTER being involved with eXtensionAUS on participant use of online tools in their work

GRDC Grains Research & Development Corporation
Your GRDC working with you



***Social Media**

- Each Community of Practice established a Twitter account in January 2014. @AusCropDiseases that has of April 30th 2017 2,168 followers and @AuCropNutrition with 2,663 followers.
- 81.33% of Social Network referrals to the website are from Twitter.
- 20.44% of all sessions on the website originate from users clicking a link in a tweet.
- 14.6% of new users to the site come via clicking a link in a tweet.
- Cross promotion/cross linking is a key strategy. A typical example being; Twitter was used to promote a webinar. This resulted in 247 pages views on the website post that contained the webinar details and then 53 people attended the webinar.
- Each CoP established a YouTube channel in January 2014. They have trained a number of CoP members in how to make short videos using their smart phones.
- As of March 2017 the Field Crop Diseases Community of Practice has published 30 videos and the Crop Nutrition CoP has published 43. Field Crop Diseases have had a total of 1,980 views of the videos, with a range of 7 views to 247 views per video and an average view of 66. Crop Nutrition has had a total of 5,422 views, with a range of 27 views (only posted for one day) and 424 views per video, with an average of 126 views per video.
- The use of Facebook is relatively new; the Field Crop Diseases Facebook page was created in July 2015 and has 509 page likes. Crop Nutrition established one on March 29th 2017 and as of 30th of April 2017 has 84 page likes.

The Suite Approach

The Suite approach has evolved overtime with this project.



Using this approach, all the online tools are used in a coordinated fashion. For example, to engage people in eXtensionAUS a direct email, text or personal engagement via an event is important. This then gets them involved with the different media channels.

To keep people aware, the suite approach is particularly useful; with key posts being placed across all media channels.

For explaining more technical or complex information, YouTube clips are an important tool. Links to them are then imbedded in the other communication channels.

It is also very important the CoP imbed links to their stakeholder's information. For example, if a state organisation publishes some information on their website, rather than republish it is important that eXtensionAUS directs its members and end users to that source. Vice versa, having other organisations link to eXtensionAUS is an important source of traffic to the channels.

End users can engage with the experts in the CoP through Ask an Expert, which is a tool on the website where questions can be posted. They can also engage via Twitter, Facebook and commenting on posts.

Key Features of eXtensionAUS

1. It provides access to a wide pool of expertise and research.
2. It has contributor agreements that enables quick internal peer review for any information or advice that is provided.
3. It is provided nationally and is convenient, fast, free and independent.
4. It is not content specific, but is driven by current issues and end user requirements.
5. Information can be customised to suit individuals and they can engage to and fro with the CoP members.

The project was enabled by the formation of a partnership between GRDC, Agriculture Victoria and eXtension from the United States (www.extension.org). Each CoP used the principles, practices and platforms of eXtension from the USA (www.extension.org) to test the concept in Australia.

The project achieved a "proof of concept" with its key stakeholders in March 2015 and each CoP has continued as a three year GRDC project.

The CoP are now hosted on an Australian developed and managed platform provided by the Rural Research and Development Corporation (RIRDC). RIRDC are offering a CoP hosting service to any interested organisations.

The RIRDC initiative is a key opportunity to address "the increasing pluralism in extension funding and delivery that demands new relationships, knowledge flows and partnerships among the wide range of Extension and Advisory service providers and other actors in the Agricultural Innovations Systems" as identified by Davis and Heemskerk in 2012.

Through the RIRDC project providing the platform and associated IT and training; organisations can look to implement this Community of Practice approach efficiently for themselves.

For further information

www.extensionaus.com.au

Gavin Beever, eXtensionAUS Project Manager, gavin@cumbre.com.au

For information on the use of the platform please contact Belinda Allitt, General Manager, Communications and Capacity Building at RIRDC, Belinda. allitt@rirdc.gov.au

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Insights into Australia's Banana Development and Extension Programs

Tegan Kukulies, The Department of Agriculture and Fisheries' senior development officer in Queensland's banana industry



A summary of the APEN webinar presented by Tegan in April 2017

National Banana Development and Extension Project

The National Banana Development and Extension is a co-ordinated information development and dissemination project which ensured that a focused and systematic approach is taken to deliver information and results from both industry funded projects and projects funded from other sources to banana growers around Australia. To reach this target audience, strong linkages and networks were built and maintained not only with growers directly but also other key information providers such as consultants, agricultural retailers, banana agents and catchment management groups. The flagship activity of this project was the biennial series of technical information updates commonly referred to as the 'Roadshows' which were hosted in 6 locations around Australia in 2014 and 2016. These day long events consist of blocks of 3-4 short, sharp 10 minute themed presentations followed by panel style discussion. Real-time evaluation of these events, using TurningPoint®, showed that at the beginning of the events only 15% of attendees had a good or very good understanding of the R & D funded project in the industry and by the end of the events 60% indicated they had a good or very good understanding. 97% of those that attended indicated they would attend a similar event again and 50% would recommend the event to others. The feedback from attendees at the sessions in 2016 reflected this data.

Tegan organised the 2016 National Banana Road show series which aims to deliver the latest R & D information to growers.

Panama disease Tropical Race 4 on-farm biosecurity project

Tegan played a crucial role in the 2015 Panama TR4 outbreak, using her knowledge of the banana industry and extensive networks to provide critical training and communication material to growers through the joint ABGC-DAF Panama extension program.

Panama disease Tropical Race 4 poses a grave threat to the Australian Banana industry. On March 3rd 2015, Panama disease Tropical Race 4 was confirmed on a commercial banana property in Tully which is located in the main Australian growing region in north Queensland. Since there are currently no known, economically viable options for effectively controlling the disease, on-farm biosecurity practices are essential to minimise the risk of spread. A co-ordinated extension program was developed and rolled out to all banana growers in north Queensland to encourage the planning and adoption of on-farm biosecurity practices. At the heart of the program were interactive workshops which were broken into four modules with the aim of: 1) increasing grower's knowledge of the disease 2) educating growers on how to identify suspect plants and the early disease symptoms 3) guiding growers to identify the risks to their properties and 4) encouraging growers to implement effective on-farm biosecurity practices. The workshops which were delivered to small groups (10-20 people) were attended by 77% of all banana growers in north Queensland covering 82% of the total production area. Results from the evaluation undertaken at each of the workshops showed that 85% of participants had markedly improved their knowledge of the disease and on-farm biosecurity. The program also delivered one-on-one farm visits to support implementation and a Panama disease field day to ensure growers were equipped with the latest advances and research in on-farm biosecurity. Overall this extension program reached 89% of growers in north Queensland about the disease and on-farm biosecurity practices which are essential to safeguard the future of the Australian banana industry.

Moving forward Tegan would like to help drive the integration of digital technology into banana production systems.



Tegan Kukulies

Regional Roundup

NT

**Regional Co-ordinator Dr Warren Hunt
NT**

Managing magpie geese in the north

Researchers are looking into the biology of magpie geese to identify sustainable management techniques.

(ABC Rural: Daniel Fitzgerald)

Researchers have begun uncovering techniques to deter magpie geese from mango orchards, as part of a three-year project. The project is led by Charles Darwin University in collaboration with the Northern Territory Department of Primary Industry and Fisheries (DPIF), the Department of Land and Resource Management (DLRM), the Parks and Wildlife Commission (PWC) and the NT Farmers' Association (NTFA). An advisory committee, whose members are comprised of mango growers, key researchers from the above institutes and Horticulture Innovation Australia, guides the project. The mango industry is worth more than \$88 million in the territory. In 2016, there were reported losses of up to 50 per cent from magpie geese.

A most informative workshop was delivered to mango growers to look at sustainable, workable management methods to help farmers.



Wildlife biologist, Dr Hamish Campbell from Charles Darwin University who is one of the researchers conducting the project said the goal of the research was to develop sustainable management actions to reduce the numbers of magpie geese and their impact upon the mango industry here in the NT.

"The research is really two prong — we have an ecology side where we try and understand the biology of the bird, its habitat, its social behaviour and then we use these understandings to develop management actions that are practical and can be applied on farm to deter the birds."

More information can be found at:

<http://www.abc.net.au/news/rural/2017-05-26/nt-magpie-geese-mango-industry-research/8555182>



Queensland

**Regional Co-ordinator
Graham Harris**



Reflections from the sunshine state...

Well, it has been a busy couple of months since I last wrote the Regional Roundup. I've been writing final project reports and negotiating/preparing funding submissions for possible new R, D&E activities. I'm sure many of you can relate to that as well.

I travelled north to Georgetown and Laura (on the Cape) to inspect current cropping research and development work, as well as commercial cropping operations in this part of Queensland. It was a great experience to meet with landholders looking to develop cropping operations in this challenging environment. At Laura I got the opportunity to see first hand the private sector and government working together in the second year of a trial assessing the performance of a broad range of field crops in this region.

In the following week, I attended the annual "Stimulating private sector extension" forum in Melbourne - part of the "Stimulating private sector extension in Australian agriculture to increase returns from R&D" project funded by the Australian Government's Rural Research and Development for Profit programme. Over one hundred agricultural professionals attended the forum. The project team led by Dairy Australia and Ruth Nettle, University of Melbourne are to be congratulated on such a thought provoking set of speakers. I'm looking forward to the report from this meeting which captures the discussion from the participant tables but also the input provided by participants using their Smartphones. The importance of private sector extension continues to increase within Australia. And at the same time, we need to be thinking how public and private sectors can collaborate to achieve the best possible outcomes for agriculture and rural communities.

I've been approached by a small group of Queensland members keen to facilitate greater engagement across the profession. If you have any ideas on how this might be done in your area give me a call to discuss further. My contact details are on the APEN website (on the Management Committee page under the Contact Us link).

I hope that many of you are seriously considering attending the GFRAS/APEN Conference in Townsville in September 2017. The program is coming together well (thanks to everyone on the Conference Committee) and there has been an excellent number of papers (126 in all at last count) submitted from Australia, New Zealand and internationally. I'm really looking forward to catching up with you all in Townsville.



Tasmania

Tony Butler

Why surveys are important ...

An important tool for extension professionals is the use of surveys. But, how many of us truly understand the process and science behind their use? To address this, APEN Tasmania recently hosted a two-hour training event at Campbell Town, located in the centre of the state. Dr Peat Leith, from the University of Tasmania, discussed the power and processes of surveys with attendees who were a mix of extension professionals from across the state's rural industries.

Peat's rapid intro to survey design focused on how to gain the best responses from your target audience, data collection techniques, question design and the importance of piloting drafts before data collection. A significant amount of engagement occurred between Peat and the audience, with the sharing of experience and examples on key points. The event concluded with a brief overview of the South Indian agriculture through the perspectives of Tony Butler's recent professional development exchange.

[Dr Peat Leith is a social and institutional researcher whose work is mostly focused on the interactions between science and decision-making, particularly in natural resource management (NRM) and governance. Peat is currently leading an action research project assisting regional NRM organisations across south-eastern Australia to update their strategic plans for climate change. This project links the knowledge base from the biophysical and social sciences with NRM planning and implementation, with a strong focus on capacity building and decision-making under uncertainty.]



Regional Roundup

Victoria
Regional Co-ordinator
Mike Weise



Private sector's role in extension

In Melbourne, on Wednesday, 17 May 2017, a forum was held called: Stimulating private sector extension in Australian agriculture.

Over 100 specialists including private agricultural advisers, agribusiness, farmers, R&D and government personnel attended the workshop and discussed the current and emerging roles of the private sector in agricultural extension.

The forum aimed to stimulate private sector extension in Australian agriculture to increase returns from R&D. It is part of a three-year project to develop and test models to build the capacity of the commercial and private sector in delivering extension services to Australian farmers. This project is supported by funding from the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit programme.

The project, led by Dairy Australia, is a collaboration involving nine partner organisations – six RDCs (Dairy Australia, Meat & Livestock Australia, Cotton Research & Development Corporation, Sugar Research Australia, Australian Pork Limited, Horticulture Innovation Australia), the Victorian and NSW governments, and the University of Melbourne. It promises to have a profound impact on the delivery of extension in the future.

New Zealand
Regional Co-ordinator
Chrissy Stokes



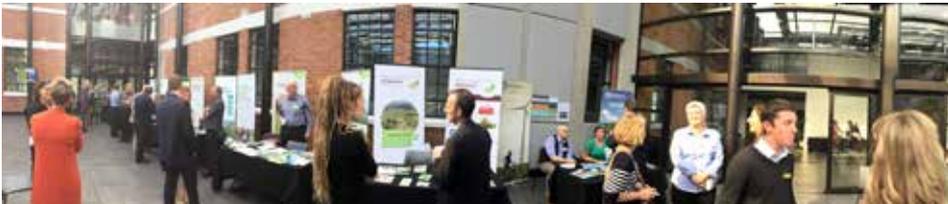
Planning & celebrating in New Zealand

With winter approaching, it's a great time to review and plan, and to celebrate!

The Ministry for Primary Industries held two sessions (at either end of the country) to celebrate funding 1000 projects through the Sustainable Farming Fund (SFF). Tony Rhodes and Marie Casey facilitated a session on designing extension programmes, based around the fantastic resource "Over the Fence" (download this for a great read). After a panel discussion focused on building capability, the day finished with a networking session and an opportunity to showcase some of the fantastic projects that the SFF has supported.

Some of our New Zealand members also attended the first Alumni Summit of the Kellogg Rural Leadership Programme. Hosted by Lincoln University, this programme started in 1979, and its graduates are some of the most influential leaders in the primary industries in New Zealand. It was a great opportunity to renew friendships, make new ones, and celebrate many successes.

Finally, just this week, the Zespri Orchard Productivity Centre team hosted Denise Bewsell and Richard Fitzgerald from the Red Meat Profit Partnership for a day. We dropped in on a field day, and visited a grower and one of NZ's largest Kiwifruit pack houses, before an afternoon talking about how we're each tackling similar challenges in very different industries.



Networking and project showcase at the Hamilton NZ SFF celebration



Scott Champion facilitating a panel discussion with John Palmer, Jock Webster and John Lupton at the Kellogg Alumni Summit.

Facilitating adoption of Integrated Pest Management (IPM) through a participatory approach delivers impact for growers

Anthony Kachenko

Agricultural extension has experienced much change with retreating public sector investment and the void filled by the private sector and industry funded programs. Indeed, this is the topic of a current three-year research project to develop and test models to build the capacity of the commercial and private sector in delivering extension services to Australian growers. This project led by Rural Industries Research Development Corporation (RIRDC), has identified the changes in the demand for information, advice and support growers require. The research had acknowledged the need for independent advisers, R&D Corporations and government to work together to coordinate and align their offerings to meet expectations of growers. The need for a wider range of sources for information and advice has been recognised with the main source varying from sector to sector. In horticulture, for instance, the research has shown that product resellers are a key source of trusted information.

The Australian vegetable industry is not immune to the changing extension landscape. Millions of dollars of investments and countless projects have aided the transfer of information from research and development programs, and more importantly changed practices over the years. This has been enabled by a maze of different providers, access points and information channels including the Internet, conferences, demonstrations, workshops and publications. Although one would expect minimal market failure, it is evident that there still remain challenges with the adoption of outputs.

An area of focus for the Australian vegetable sector relates to the lack of adoption of Integrated Pest Management (IPM). Whilst the field of IPM has received considerable investments and focus for the past three decades, uptake of IPM strategies across the vegetable sector has been low. Poor rates of adoption have been attributed to reliance on current methods, namely pesticides that are effective, legal and familiar. Indeed, only when a pesticide fails, whether through pest resistance to a given pesticide or a withdrawal from the market, is IPM considered. There is



also much trepidation in terms of how to start an IPM program, what it entails and how to achieve a financial, social or environmental reward through quality produce and minimal input costs.

Horticulture Innovation Australia has invested in a fresh approach to IPM adoption through a three-year targeted extension program¹ run in collaboration with IPM expert 'IPM Technologies', AUSVEG SA and monitoring and extension professionals 'Clear Horizon'. The project aims to increase uptake of IPM practices among vegetable growers in South Australia by training advisers who work directly with growers to make them both knowledgeable about the IPM decision making process and comfortable in providing IPM advice to growers. The ultimate goal of the project is to increase the quality of vegetable crops and ensure sustainable vegetable production by facilitating the adoption of integrated pest management as the mainstream method for controlling pests in the vegetable industry.

A solid foundation was established for the project through a participatory planning workshop - led by Clear Horizon with project collaborators IPM Technologies and AUSVEG SA - during March 2016 to develop a Monitoring and Evaluation (M&E) Plan. A program logic was developed as part of the M&E Plan. It included a number of foundational activities focussing on the areas of planning (e.g. three-year training program developed), development (e.g. IPM fact sheets developed) and reflection (e.g. training course participants provide feedback). A number of influence activities were identified including IPM



training events and broad communications and information provision. Short term, intermediate and end of project outcomes were developed which feed into the broader project goals.

The project has been underway for 12 months with IPM Technologies having delivered five IPM workshops for vegetable industry advisors, including reseller agronomists, consultants, and vegetable growers with an interest in trialling IPM. The project has established five on-farm demonstration sites where IPM is being trialled in 10 different commercial vegetable crops with involvement from 10 key reseller agronomists and bio control consultants, each with a partner grower. There has been regular (typically weekly) contact maintained with collaborating growers and their advisors to provide expert advice and decision-making support regarding all aspects of pest management in IPM. A further 12 in-field training sessions were held at demonstration sites with advisors and collaborating growers, to demonstrate monitoring techniques and IPM decision-making. AUSVEG has been instrumental in promoting the project, engaging industry and contributing to the M&E process.

Although only one year in, the project has been highly successful and demonstrated to both growers and advisors that an IPM approach is both practical and effective. All growers and advisors involved in this project are extremely happy with their initial experience of IPM and intend to continue from trial to full implementation of IPM on their farms or to further IPM trials with other interested clients. This has been supported by monitoring data gained from a mixture of training event feedback forms, observations and grower case studies. In May 2017, a reflections workshop was held where project collaborators took stock of the first 12 months and planned for the subsequent two-years activities. Further updates of this exciting project will be provided in future editions of this publication.



¹ Project VG15033 (Facilitating adoption of IPM through a participatory approach with local advisors and industry), involving project VG15034 (this project: Training of advisors growers –IPM Technologies), project VG15035 (access to growers, management of communications and collection of evaluation data - AUSVEG SA) and VG15036 (oversight of the development, implementation and analysis of the M&E - Clear Horizon) are funded by Horticulture Innovation Australia Limited using the vegetable research and development levy and funds from the Australian Government.

2017 GFRAS/APEN

Lawrence Di Bella, Conference Convenor



The 2017 International APEN Conference at the 'The Ville' Hotel in Townsville 12 to 15 September will overlap with the annual meeting of the Global Forum for Rural Advisory Services (GFRAS) being held in Ingham from 10 to 13 September. There will be field tours on Tuesday 12 September where participants at both events can meet and the discussion from the GFRAS meeting will continue and form part of the Wednesday 13 September program at the APEN Conference.



The theme of the APEN conference is '**Facilitating balanced change for rural and urban communities**' and will showcase the local and international extension theory and practice around production agriculture, natural resource management, community development and the health sector.

The program is developing and our Keynote presentations will be:



Professor Dr Regina Birner, University of Hohenheim, Stuttgart, Germany

"Governance challenges and gender issues in agricultural innovation systems in the developing world."

TBC, Bonsucro, London UK and Matt Kealley, Environmental and Natural Resources Manager, Canegrowers, Brisbane, Queensland

"Meeting consumer demands through Best Management Practice and extension activities."



Dr James Turner, AgResearch Ltd, Hamilton, New Zealand

"Mis-adventures in Co-innovation: The what, why and how of co-innovation."

And



Chris Sounness, CEO, Birchip Cropping Group, Birchip, Victoria

"Agricultural extension beyond 2020."

There will be 6 concurrent sessions where participants can give presentations, as well as posters and soap box or share fair sessions. Abstracts will be accepted until the end of July (see details below).

We are running 2 sessions of concurrent workshops with themes that will excite you and make the choice of which to attend difficult!

On Wednesday 13th September the afternoon workshops will be

1. Extension policy and direction, Ballroom 1
Greg Shannon, COFCO Sugar
Peter Hanrahan, Hanrahan Consulting
Malcolm Letts, QDAF

2. Running effective extension programs.
Room 3
Evan Shannon, Farmacist
Daryl Parker, MossmanAg
Ruth Nettle, UniMelb
Warrick Waters, CRDC

3. Using social media to engage and captivate your target audience, Room 4
Cynthia Mahoney, Cynthia Mahoney & Assoc.

4. Rural Health, Room 2
Liz Little, Rural Alive and Well Inc., Tasmania
Richard Murray and Donna Rudd, JCU

On Thursday 14th September the afternoon workshops will be:

1. Extension associated with the Great Barrier Reef, Ballroom 1
Jeff Coutts, Coutts J&R
Carole Sweatman, Terrain NRM

2. Managing data for extension outcomes, Room 3
ESRI- GIS – Peter Wilmot
SST- Agricultural data systems – Mark Pawsey
HCPSL- PA technologies and extension – Lawrence Di Bella
GP1- Custom apps for extension purposes – Gareck Packer

3. Governance challenges in agricultural innovation systems & gender issues, Room 4
Regina Birner, University of Hohenheim

4. Effective webinars – Using technology to save time and money, Room 2
John James, QDAF

See speaker photos and bios at:
www.apen.org.au/IC-2017-guest-speakers

The conference website (<http://www.gfrasapenint2017.com/home.html>) has information about the conference, the location and accommodation options, abstract submission, the conference program and the link to Registration. Also see the APEN Website Conference Page (<http://www.apen.org.au/IC-2017>)

Final due date for abstracts

31 July 2017

Author informed 15 August 2017

Note: Early bird registration pricing finishes on 14 August 2017! Register online!

The APEN Awards for Excellence in Extension will be announced at the Conference Dinner where our Dinner speaker will be Di Parsons, CEO, Central West Farming Systems, NSW. The Award winners will give a short presentation the next day.

The best concurrent session presentation and best poster will be announced in the conference closing plenary!

None of this could go ahead without the support of our sponsors and we acknowledge them with thanks. Their logos are below.

I look forward to welcoming you to tropical north Queensland and your participation in 2017 GFRAS/APEN.

Lawrence Di Bella
Conference Convenor



New APEN members

APEN continues to grow as we welcome recently joined members from around the country and overseas. It is a great opportunity for other member to connect and share experiences with them.



Jeanette Gellard

Jeanette is Owner and Principal Consultant of Innovative Influences which provides services in three key areas – Coaching & Leadership Development, Stakeholder Engagement and Strategy Development. She was the SA RIRDC Rural Women's Award winner in 2001 and a recipient of the Centenary Medal in 2003. She is a member of the International Coach Federation (ICF) and International Association for Public Participation (IAP2).

Jeanette is passionate about working with established and emerging leaders to help them become more influential in their own lives and have a positive impact on themselves, their communities, and organisations. A key part of her approach is to help others develop a foundation of self-awareness and a future vision that encourages personal growth and development.

Welcome to these new members who have joined since last edition. We're glad to have you all on board.

Carl Larsen	<i>VIC</i>
Ghanshyam Kandel	<i>NEPAL</i>
Chris Radcliffe	<i>VANAUATU</i>
Margaret Ayre	<i>VIC</i>
Jeanette Gellard	<i>SA</i>
Carlee Monaghan	<i>New Zealand</i>
Katrina Hewitt	<i>SA</i>
Nicole Reichelt	<i>VIC</i>
Nicole Dimos	<i>VIC</i>
Naomi Hobson	<i>NSW</i>
Jordan Villaruz	<i>QLD</i>
Liz Todd	<i>QLD</i>
Howard Smith	<i>QLD</i>
Lamin Kamara	<i>UNITED KINGDOM</i>
Siti Amanah	<i>INDONESIA</i>
Epsi Euriga	<i>INDONESIA</i>
Ravi Shankar	<i>INDIA</i>



Ghanshyam Kandel

Ghanshyam is a technical officer at Nepal Agricultural Research Council and has been conducting research related to climate change adaptation and agricultural insurance. He has also worked as an Adjunct Assistant Professor at Himalayan College of Agricultural Science and Technology. He also worked as an Agricultural instructor for six months and involved in teaching Economics, Extension, and Horticulture for secondary level agricultural students.

Ghanshyam completed his bachelor's degree in agriculture from Tribhuvan University Nepal in 2014. Then he enrolled to Agricultural and Forestry University and successfully completed his master degree in Agricultural Extension from Agricultural and Forestry University, Rampur Chitwan in 2016. As a part of his degree requirement he undertook a small research entitled as "Determinants of Livestock insurance in Nawalparasi District, Nepal". While pursuing his degree he participated in several trainings, seminar and workshop as well. He has research interest on Community development, Climate change adaptation, Agricultural insurance and Sustainable agriculture.



Chris Radcliffe

Chris has lived and worked in remote indigenous communities, both in Australia and internationally, for over eight years. Chris' passion for agricultural extension came from watching government and NGO projects continually fail due to lack of community engagement, undervaluing of indigenous knowledge and culture and the persistent application of Eurocentric solutions to local problems.

Chris is currently employed by the Ministry of Agriculture as a Training and Curriculum consultant at the Vanuatu Agriculture College. Chris is a doctorate candidate with Charles Sturt University, the focus of his thesis is 'enhancing sustainable agriculture through the inclusion of indigenous knowledge in extension'.

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Guidelines and Deadlines

Submissions should be made in MS Word 6.0 with minimal formatting. A portrait photograph of the author is required. All photographs, figures and/or tables ought to be provided as separate files (preferably TIF or JPEG; photos scanned at 300 dpi). Feature articles should be around 1000 words and minor articles 500 words. The editor reserves the right to edit submitted material to meet space restrictions. Letters to the editor or general items of news of interest to the network are welcome. Articles should be submitted at least four weeks prior to publication.

Preference is given to articles that are grounded in some form of project or event.

Editing: Pat Hamilton

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Production management: Rosemary Currie, APEN Secretariat, Wodonga, Victoria.

Opinions expressed in ExtensionNet are not necessarily those of the Australasia-Pacific Extension Network (Inc.) unless otherwise stated.

Stories and photos (next edition) due to Editor 7th August 2017