

APEN 2022 CONFERENCE

2022 Australasia-Pacific Extension Network CONFERENCE

Facilitating Change and the Opportunity from Disruption

9 – 11 February, 2022 | Virtual Conference Platform



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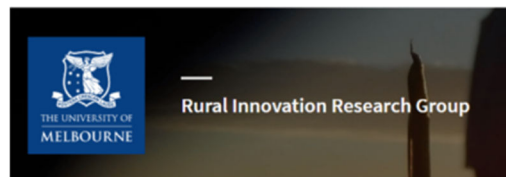
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Australasia-Pacific Extension Network Ltd

Australasia-Pacific Extension Network Ltd. (APEN) is the leading organisation for the community of extension practitioners.

Extension is about working with people to enable and facilitate change.

APEN supports networking and professional development within the global extension community.

APEN promotes research, theory and the practice of extension.

APEN provides an invaluable network and specialised professional development opportunities.

Services include:

- Regional and national events including webinars and workshops
- Biennial international conferences
- Mentoring scheme
- Extension publications and communications including monthly eBulletin, quarterly ExtensionNet magazine, Rural Extension & Innovation Systems Journal and Social Media
- Awards for Excellence and Life Membership



Visit: www.apen.org.au or contact info@apen.org.au

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President Welcome



On behalf of the Australasia-Pacific Extension Network Board of Directors, I welcome you to the 2022 APEN International Conference.

I am excited about this conference being our first virtual conference – an opportunity brought about by the COVID pandemic. Being virtual, we welcome our international conference delegates and our NZ APEN Members joining us from Tauranga, NZ.

The conference theme 'Facilitating change and the opportunity from disruption' eloquently synthesises the environment extensionists have been operating in for the past two years. This conference will provide delegates with an opportunity to hear from over 80 presenters and reflect on how extension will look like in the 'new normal'.

I'd like to sincerely thank Professor Ruth Nettle, APEN 2022 Conference Convenor, who in late 2020 signalled her interest in hosting this conference in Melbourne. From there on, Ruth orchestrated a conference committee that has worked diligently behind the scenes in making this conference happen. In addition, I want to call out the team from JT Production Management, who supported the conference committee as APENs official event managers.

We have seen record support from over 25 organisations sponsoring this conference. Without their support, this event would not be possible. We trust that our affiliation with sponsors will continue post-event as we champion the change and innovation agenda in primary industries, natural resource management and rural and regional communities.

Thank you to our key-note speakers, presenters, and everyone nominated for the APEN awards for the Experienced Extensionist and Amabel Fulton Award for Excellence in Extension by a Young Professional. We had many high calibre applications this year, which was humbling to witness, and I look forward to the grand reveal at the conference gala dinner!

Finally, I'd like to thank each of you for attending the conference in the comfort of your 'virtual office'. This conference is a great opportunity to strengthen your extension networks further, create new connections and learn new skills to grow and develop in your extension journey.

Warm regards,

Anthony Kachenko
APEN President

Convenor Welcome



Welcome to the 2022 APEN international conference.

The conference is hosted from the University of Melbourne. I wish to acknowledge the traditional owners of the lands on which our Dookie, Parkville and Werribee campuses stand: the Yorta Yorta people, the Wurundjeri Woi-wurrung people and the Bunurong and Boon Wurrung peoples, respectively. I pay my respects to their Elders, past, present and emerging. I acknowledge and respect that Aboriginal and Torres Strait Islander people have always used resources from the land and waters for nourishment, medicine and healing.

It is a privilege to be the convener for the 2022 APEN conference, notwithstanding the challenges of conference organisation in a global pandemic!

The 2022 conference brings a number of noteworthy 'firsts' for APEN conferences:

- A hybrid conference: the conference was designed from Day 1 as having a synchronous face-to face and on-line mode providing flexibility for participants and widening accessibility to the conference. This has allowed us to shift to a fully virtual conference quickly when the decision was made on January 25th to not proceed with the physical location given the COVID situation.
- A parallel regional 'hub' program: G'day (*Kia ora*) to our New Zealand Hub participants! The Hub makes the conference accessible to more people and allows for more local content.
- Wider student involvement to include undergraduate and master's level agriculture students as volunteers and in presenting their work. Student involvement in 2022 has been aided by sponsorship.

Alongside these 'firsts' are the regular conference features which have been expanded based on feedback from participants:

- Masterclasses: We have been able to 'pivot' all our Masterclasses to be delivered virtually. A big thank you to the adaptability and commitment of our deliverers Jeff, Jeanette, Danielle, Denise and Cynthia.
- Focused topics and forums: This year we feature International agricultural research (ACIAR) and the Australian government Future Drought Fund.
- Our high calibre guest speakers, including some from outside the APEN community to challenge and inspire us.
- It is exciting to see the number of papers and posters received from different topic areas and across the world within the rural advisory and extension system.

I would like to thank and acknowledge the support and involvement of all our sponsors who share APEN's vision and mission to promote networking and learning in extension. Their interest and support have ensured the viability of the conference. Their support in the conversion to a fully virtual conference is greatly appreciated.

Convenor

Welcome

As a life member of APEN and leader of the Rural Innovation Research Group (RIRG), I am pleased to be hosting the conference from the University of Melbourne Parkville campus which is located north of the city of Melbourne. The Faculty of Veterinary and Agricultural Sciences has a proud history and connection with agriculture and agricultural extension as well as community based natural resource management over many decades. RIRG has worked with farmers, extension staff, rural industries and communities over 20 years in engaged social research to underpin and support extension approaches.

Melbourne and the University of Melbourne were to be the physical location for the conference. As many people know, Melbourne had the unenviable experience of being the city with the longest recorded lock down period anywhere in the world through the COVID-19 pandemic: 6 lockdowns, totalling 262 days between March 2020 and October 2021. People and their businesses in the city and across regional Victoria are still recovering from this period. We therefore hope many of you will be able to visit Melbourne and Victoria sometime in the next few years to experience the thriving coffee and food culture with a focus on sustainability.

I would like to acknowledge the tireless work of the conference committee and the fantastic support of our conference organisers. Our conference theme ***‘Facilitating change and the opportunity from disruption’*** was established at the end of 2020 and seemed fitting for the times with a focus on sharing our learning and insights from the challenges extension has faced. While we may have all weathered the same COVID-19 storm, we have all been in different boats! The conference is therefore an opportunity to share our different experiences and learning in extension in the last 2 years and provides us with an opportunity to reset and to apply insights to strengthen and innovate our approaches, wherever we work.

On behalf of the APEN conference organizing committee, thank you for attending the conference, and we hope that you leave the conference informed and inspired to apply your learning to your work.

Warm regards,

Ruth Nettle
APEN 2022 Conference convener

New Zealand Hub

Welcome



Welcome to the New Zealand Hub!

In early 2020 when we made the decision that it was not feasible to run a conference in late 2021 here in New Zealand, we were working and making decisions in a time of huge uncertainty. Now, two years on, not much has changed with regards to that uncertainty, but both the world of conferences, and how we do extension in this environment, has.

Part of being a great extensionist is the ability to flex and change, and we've certainly seen that demonstrated recently. Working around challenges and constraints, navigating roadblocks, and having not only a plan B, but also plans C and D, are just part of the world we work in, but the addition of restrictions on travel, gatherings and events have added to the adventure. In this new world, technology has become one of our best friends, and it's exciting to think that we can now deliver a great conference experience not only across two countries, but we have participants and presenters spread right across those countries, both in groups and on their own in workplaces and homes.

While the New Zealand Hub is not going ahead in person in February, we're looking forward to all the online content from Melbourne and around the region, and to holding a regional event later in 2022 including elements of what we had planned for the conference. We appreciate the sponsors who stepped up to support the NZ hub: Beef + Lamb NZ, AGMARDT, Bay of Plenty Regional Council and Zespri.

The New Zealand committee have been a tight and awesome bunch, giving their own time and energy to make this Hub come to life, and I'd like to thank all of them: Denise Bewsell, Terry Parminter, Toni White, Christina Robinson, and especially Heather Collins.

All the best for an awesome conference, and hopefully next time in person!

Cheers,

Chrissy Stokes

APEN Committee

Anthony and Ruth wish to acknowledge the tireless efforts and commitment to the APEN 2022 conference of the following members of the conference committee:



Dr Rosemary Currie
APEN Executive Officer and Secretary



Dr Roy Murray-Prior
APEN Treasurer | REIS Journal Chief Editor



Dr Heather Collins
APEN Director



Peter Long
APEN Director



Penny Shaw
Program Manager Grain Services,
Biosecurity and Agriculture Services



Jason Hingston
Regional Extension Manager, Horticulture
Innovation Australia



Sarah Thompson
Leads – Regions, Dairy Australia



Fiona Best
CEO, Birchip Cropping Group



Tom Draffen
Senior Manager – Communications &
Extension, Birchip Cropping Group

APEN Conference 2022 – Online Masterclasses

Wednesday, 9th February 2022

EXTENSION & FACILITATION TOOLS, TECHNIQUES AND TIPS MASTERCLASS

Time: 10:00am - 3:00pm

Purpose: To build on and extend your skills to facilitate better meetings, workshops, group discussions, field days and community development activities.

What you will learn:

- A process for designing and planning extension activities that produce better outcomes
- The principles behind how adults learn and how to combine them in your designs
- Understand group stages and dynamics and their implications for group performance
- Apply and practice facilitation skills and tools
- Develop strategies to increase involvement of your participants and to manage the politics, people and processes
- Techniques and planning for participatory evaluation of the processes and outcomes of your activities.



Danielle England

Facilitator: Danielle is lead consultant with AgInnovate, a national people and culture consultancy servicing the Australian agricultural industries.

Danielle, is based in South Australia, and has worked extensively across Australia for the past 20 years. Her work has included strategic business development, industry and enterprise strategic planning, agricultural extension and communication, and project design and management. This has included working with Australia's leading grower and industry groups, research organisations and farm businesses to optimise mixed farming profitability and productivity.

Danielle has been listed in the Emerald 2014 100 Women in Australian Agribusiness, and was the 2013 Western Australian RIRDC Rural Woman of the Year. Both of these awards recognise her outstanding leadership and passion for the Australian agricultural industry.

She is based at Keilira, where she is involved in a broadacre grains and Merino wool farming business with her husband Jonathan and his family.

EXTENSION & FACILITATION TOOLS, TECHNIQUES AND TIPS MASTERCLASS



Jeanette Long

Facilitator: Jeanette is an experienced trainer, facilitator and coach with a passion to influence positive change in agriculture. She builds the capacity of those working with farmers as well as facilitating farmer groups.

Jeanette qualifications include a Bachelor of Applied Science in Agriculture, Graduate Diploma in Education, MBA – Agribusiness, AICD Diploma. She has completed professional development in facilitation, speakership, coaching, Family business directors course, facilitation of farm families, journalism and is accredited to facilitate the Myers Briggs Type Indicator.

Jeanette is also involved in the strategic management of a mixed cropping and livestock family farming business based on Eyre Peninsula and in the Mid North of SA.

Jeanette has developed and facilitated a range of communication, extension, leadership, personal development, mentoring and resilience workshops for many years for a range of organisations in regional and rural areas.



Denise Bewsell

Facilitator: Denise loves chocolate! She wishes she worked as a taste tester for Whittaker's Chocolates (Whittaker's if you are reading this, please get in touch!) but instead spends her days helping support facilitators ...with Whittaker's chocolate usually!

After completing a degree in Agricultural Science, Denise took up a role as an extension officer working on irrigation management. She worked in this area for a number of years before getting involved in extension research and understanding adoption of new practices. This led to a Masters degree focusing on how people respond to information using biosecurity as an example. Now she works with the red meat sector, supporting facilitators, and helping spread ideas on effective ways of enabling change.

Denise was the NZ APEN representative for six years and now is an associate editor for the APEN journal – the Rural Extension and Innovation Systems journal and she provides the Reading Brace for APEN's monthly eBulletin to members.

Denise wants people to have the opportunity to hear more about enabling change – in whatever role they have – so is excited to be involved with this facilitation training!

APEN Conference 2022 – Online Masterclasses

Wednesday, 9th February 2022

PLANNING, MONITORING AND EVALUATING EFFECTIVE EXTENSION PROJECTS MASTERCLASS

Time: 10:00am - 3:00pm

Purpose: To provide the theory, skills and process for you to develop, design and evaluate more effective extension strategies and projects.

What you will learn:

- The different and complementary roles that extension can play to bring about improved outcomes in an agricultural, environmental or innovation system.
- A process for working with relevant stakeholders to understand the context and plan an effective extension process to address a need or opportunity.
- Framing of objectives in the context of what extension can and can't achieve in a given situation.
- Developing an impact pathway/program logic model for planning, monitoring and evaluating extension activities and projects.
- Determining appropriate methods for monitoring and evaluating projects and implementing these.



Dr Jeff Coutts

Facilitator: Dr Jeff Coutts has a PhD in Agricultural and Environmental Science, a Masters in Extension (Agricultural Knowledge Systems) and has extensive experience in the areas of agricultural extension, social research and program and project evaluation. He is a life member of APEN and a member of the Australasian Evaluation Society. He has worked as an extension officer in the public and private sectors. He was the Director of the then Rural Extension Centre in Queensland and now works as a consultant in his company, Coutts J&R, which has focused on extension and evaluation since 2001. He has undertaken extensive reviews and evaluations across agricultural and natural resource programs and, with his team, works with large programs establishing the M&E Framework and undertaking monitoring and evaluation over the life of the program. He has undertaken extension and evaluation training across Australia and internationally.

Website: <https://www.couttsjr.com.au/>

APEN Conference 2022 – Online Masterclasses

Wednesday, 9th February 2022

MAXIMISING ONLINE PRESENTATIONS AND EXTENSION THROUGH ENGAGEMENT MASTERCLASS

Time: 10:00am - 2:00pm

Purpose: to expand your skills in undertaking online extension activities including presentations, webinars, workshops and meetings.

What you will learn:

- A process for planning and delivering online extension activities
- How to focus on the people in online sessions rather than the technology
- Activities that allow people to become physically engaged
- How to decrease content, slow down and listening more in an online context
- Exploring technology for online extension and how to use it well and at the right times
- Technologies and processes for evaluating online activities



Cynthia Mahoney

Facilitator: Director of CMA, Cynthia Mahoney, is passionate about working with people to develop their life and leadership skills and to increase diversity and participation in decision-making in industry, government and the community.

Cynthia made a successful leap from an extensive career in government to founding her own leadership practice eight years ago. Through her business, Cynthia has created a way to combine her entrepreneurial spirit with her passion for developing people to be their best and her skills and talent in facilitation.

Her journey of self-discovery, along with her empathy, authenticity, and commitment to courage, growth and self-leadership, enable her to help people, teams and organisations make positive change and achieve professional and personal success.

She has a Diploma of Leadership, Coaching and Mentoring, a Certificate IV in Business and Personal Coaching and a Graduate Diploma of Business which focused on project and people management.

She also has a Master of Agricultural Science, specialising in farm business management economics and rural sociology, and a Bachelor of Agricultural Science. She has undertaken training in e-facilitation and design and is an accredited facilitator of the Strength Deployment Inventory (SDI) communication and personal strengths tool.

She's embraced the world of social media because of its pivotal role in digital inclusion and leadership and its potential to facilitate conversations, share knowledge, generate new ideas and inspire people.

Welcome Function

Wednesday, 9th February 2022

Wednesday, 9th February 2022

5:30pm	Conference Welcome – Ruth Nettle APEN Convenor Acknowledgement of Country
5:40pm	Performance – Brunswick Rogue Choir
6:00pm	Presentation – Jack Cresswell Farms Advice Podcast
6:10pm	APEN QUIZ – Hosted by Anthony Kachenko APEN President & Sarah Thompson Dairy Australia
6:30pm	Welcome Function Concludes Networking rooms open for all to join.
7:00pm	Event Concludes

Program Day One

Thursday, 10th February 2022

Thursday, 10th February 2022

9:00am – 10:30am	Plenary: Conference Opening – Anthony Kachenko APEN President Welcome to Country Guest Speaker – Caroline Welsh Future Drought Fund and Strategic Advisory Committee for the Drought Hubs Keynote presentation – Prof. Sharon Lewin AO: <i>‘Communicating science in a global pandemic: the inside story’</i>					
10:45am – 11:15am	Morning Tea – Sponsored by Future Drought Fund Research and Adoption Program					
Abstract Presentations						
11:15am – 1:35pm	Madeleine Quirk Pest alert: Trailblazing pest and disease surveillance across the peri-urban vegetable sector	Sophie Folder Motivating users of online communication tools to on farm practice change – FutureBeef case study	Mary Johnson Livelihood improvement through facilitated extension (LIFE) model	Libby Heard Planning through change- adapting delivery of “Our Farm Our Plan” during Covid19 and beyond	Bruce Hancock Stimulating private sector extension in a redmeat supply chain	Col Freeman Enabling behaviour change: for them and us!
11:40am – 12:00pm	Gillian Paxton Applying social science theory for enhanced strategic engagement under the Queensland Reef Water Quality Program	Shakira Johnson Sentinels without borders: how a global pandemic inspired the diversification of iMapPESTS’s mobile surveillance suite	Van Touch Agricultural extension for smallholding farmers: Lessons from Northwest Cambodia	Noel Ainsworth Engaging virtual meetings	Danielle England Grower Group Staff Professional Development	Gordon Rogers Soil Wealth and Integrated Crop Protection vegetable industry extension project: A new and effective way of delivering extension
12:05pm – 12:25pm	Jeff Coutts Essential elements to build greater ‘buy in’ and extend the reach in Reef extension programs	Dave Gerner Breaking barriers to adoption in AgTech with practical grower-lead demonstration	Josephine Caffery Gender-equitable agricultural extension through women and youth engagement in Papua New Guinea	Natacha Hes “Agriculture Training” – interesting, interactive and inclusive during the COVID19 pandemic	Kelvin Montagu Coaching clinics as an effective extension tool bringing researchers and growers together	Jana-Axinja Paschen Supporting community resilience in cotton growing regions
12:30pm – 12:55pm	Zara Hall Diamondback moth management in brassicas – a whole of industry response to a major production challenge	Mark Sloan Accelerating the trial and adoption of AgTech on Victorian farms	Ngo Thi Thanh Huong and Rochelle Spencer Feminist Approaches to Agricultural Research & Extension	Cynthia Mahoney & Andrew Huffer Facilitating standout on-line experiences: Busting myths and mindsets about on-line delivery	Nicole McDonald Planning and designing a skilled pathway for talent development in Gippsland agriculture and agrifood industries	Carl Walters 30-years of creating healthy environments in the Shepparton Irrigation Region
1:00pm – 1:55pm	Lunch					

Program Day One

Thursday, 10th February 2022

Thursday, 10th February 2022

Abstract Presentations

1:55pm – 2:15pm	Catriona Millen Learnings from a nation-wide extension program operating through the COVID-19 pandemic	Clare Edwards 'iSPY with my little eye' – how to engage communities in pandemic times	Muhammad Ashraf Habib Participatory on-farm evaluations and selection on genotype-environment interaction and stability analysis of yield and yield-related traits of selected rice varieties (<i>Oryza sativa</i> L.)	Nicole Reichelt Using deliberative processes with Stakeholders in the design of extension approaches: the case of virtual herding technology	Craig Elliott More than a biosecurity sign - increasing adoption of property biosecurity plans	
2:20pm – 2:40pm	Jo Hargreaves Adopting an adoption strategy – how the wine industry is embracing complexity for a perfect blend	Carl Larsen Virtual field days – Lessons from forced transition	Alex Russell & Brad Clark Scaling of the whole-family extension approach in Pakistan: an institutional logics perspective	Md. Safiul Islam Afrad Livelihood status of floating market stakeholders at Wazirpur Upazila under Barishal District	Lizzy Lowe Understanding knowledge and attitudes relating to redlegged earth mite to improve insecticide resistance management	Brad Pfeffer Using structured messaging to assist with grower decisions in complex environments
2:45pm – 3:05pm	Alexandra Hicks Business coaching: Giving 144 farmers skills to build resilience to future droughts	Sylvia Jelinek Going with the flow when everything is a disaster'	Deepa Roy Behavioural science insights into improving the adoption of conservation agricultural technologies in the eastern Gangetic plains	Amlan Biswas Miller-farmer preference in selecting promising rice varieties in Bangladesh	Angela Dean Understanding how psychological factors influence adoption of sustainable agricultural practices	Sarah Wallis Young farmer and new entrant mentoring program

Poster Sessions

3.45pm	Robin Barker-Gilbert & Iona Condie Pivoting extension to support RubyRed Kiwifruit™ growers during COVID 19 pandemic in 2021	Zali Mahony Developing and maintaining Australia's vegetable and potato industry's biosecurity integrity through best management practice changes	Osamu Francis How do we get kiwifruit growers to trial alternative bud breakers?
4:00pm	Karen Thomas Farms2Schools- taking farms into schools during a global pandemic	Matthew Richardson Inspiring the next generation of beef producers to be productive and proactive pastoralists	Rabi Maskey Subsurface drip irrigation performance in northern Victoria from the farmers perspectives
4:15pm	Isabel Bryce Working in a pandemic- a digital solution to lockdown	Morag Anderson Influences on landholder decision-making - A visualisation	Michael Santhanam-Martin The Work Assessment Method shows potential to improve performance and social sustainability on Australian dairy farms
4:30pm	Ryan Honor Improved extension – Connecting with Queensland graziers through a pandemic		
4:55pm	Conference close		
6:00pm	APEN Awards Ceremony		

APEN Awards Ceremony

Thursday, 10th February 2022

Thursday, 10th February 2022

6:00pm	APEN Awards Ceremony Open – Master of Ceremonies: Libby Price Presenter/Producer Country Today, Ace Radio Network Acknowledgement of Country
6:15pm	Presentation of Awards <i>APEN Amabel Fulton Award for Excellence in Extension by a Young Professional (35 years of age and under)</i> <i>APEN Open Award for Excellence in Extension (open to all ages)</i>
6:35pm	Break
6:40pm	Guest Speaker – Tangaroa Walker Dairy Farmer 4 Life <i>‘Struggle gives you meaning’</i>
7:20pm	Closing remarks
7:45pm	Event Concludes

APEN AWARD FOR EXCELLENCE IN EXTENSION

The APEN Awards for Excellence in Extension are open to all extension professionals that reside in Australasia*. These awards are open to individuals or groups, who have demonstrated excellence in extension through a work program completed within the last five years.

* Australasia includes Australia, New Zealand, Papua New Guinea and the Pacific Islands.

Awards are presented in the following categories:

1. APEN Open or Experienced Extensionist (open to all ages)
2. APEN Amabel Fulton Award for Excellence in Extension by a Young Professional (35 years of age or under)

The Award was first presented at the 1999 APEN Conference. In 2009 the Young Professional Award was renamed the APEN Amabel Fulton Award for Excellence in Extension by a Young Professional in memory of the late Amabel Fulton who was a major contributor to APEN and the development of extension in Australia.

APEN OPEN OR EXPERIENCED EXTENSIONIST

- The applicability of the work in the broader practice of extension and contribution to the extension practice profession through providing training, mentoring, papers, article and/or manuals
- Leadership in a major extension program/initiative
- The use or development of extension principles in the work
- Evidence of the effectiveness and efficiency of the work
- A commitment to ongoing professional development
- APEN membership and/or participation in APEN events would be highly regarded

APEN AMABEL FULTON AWARD FOR EXCELLENCE IN EXTENSION BY A YOUNG PROFESSIONAL

- A commitment to ongoing professional development and actively undertaking training and/or mentoring to further develop extension skills
- The use or development of extension principles in the work
- Evidence of the effectiveness and efficiency of the work
- The applicability of the work in the broader practice of extension
- APEN membership and/or participation in APEN events would be highly regarded

Program Day Two

Friday, 11th February 2022

Friday, 11th February 2022

9:00am – 10:30am	Plenary: Conference Opening – The Hon. Mary-Anne Thomas Keynote presentation – Tom O'Dwyer <i>'Extension in a changing environment: An Irish perspective'</i>					
10:30am – 11:00am	Morning Tea					
Abstract Presentations						
11:00am – 11:20am	Jemma Pearl Podcasts as a medium to facilitate farmer-to-farmer learning?	Roy Murray-Prior Some complexities and solutions from behavioural science when promoting behaviour change in smallholder farming systems	Wycliffe Oyunga Understanding the engagement dynamics among collaborating organizations: A case study of the pluralistic AES in Kenya	Mertijn Moeyersons How does the supportive environment influence strategic decisions by farmers in Flemish horticulture?	Adam Barker A method to estimate the impact of extension programmes on economic, environmental, and social outcomes.	Terry Parminter Making the link between water quality and farm planning
11:25am – 11:45pm	Tracy Nelson Bringing utilisation-focused evaluation into effect in virtual workshops	Molly O'Dea The role of agricultural industry professionals in raising the aspirations for careers in agriculture	Dr Jay A Cummins A grounded theory approach to understanding motivation of young professionals in developing and developed countries	Lotta Fabricius Kristiansen Building a strong Knowledge and Innovation system for Beekeeping in Sweden with a global perspective	Roxanne Henwood Introducing sustainability transition concepts to support public research to address complex agri-food challenges	Sarah McIntosh Global connectivity for a global extension team
11:50pm – 12:10pm	David McGill Innovation brokers in the developing country context	Lisa Doi Rayner Application of the Work Assessment Method (WAM) to Australian mixed cropping and sheep enterprises	Clinton Muller & Mary Johnson Building trust in new relationships in the age of zoom; lessons from a tri-national project	Jane Wightman & Bron Walsh When do we know investment in extension has been worthwhile?	Karen Thomas Natural capital accounting for eco-credentials	
12:15pm – 12:35pm	Callen Thompson Are podcasts a useful extension tool for practice change?	Lee-Ann Monks Dairy farmer perceptions of heifer genomics	Danielle England Building Pastoral Sustainability Property Management Planning Program impact assessment	Ogochukwu Anozie Coping strategies for Covid 19 pandemic among leafy vegetable farmers in Epe local government area of Lagos State	Olive Hood and Adrian Englefield Co-design to put the merry back into MERI	Robert Hassett GRASS and LCAT— Supporting extension with innovatively collected land condition data and results
12:35pm – 1:00pm	Lunch					

Program Day Two

Friday, 11th February 2022

Friday, 11th February 2022

1:00pm – 2:00pm **Keynote presentation – Cathy McGowan**
'Extension skills are forever: insights from a career in agriculture, community development, politics and now the next chapter'

Abstract Presentations

2:05pm – 2:25pm	Cynthia Mahoney Cultivate: Behaviours rural leaders need to thrive in tomorrow's world	Warwick Waters CottonInfo's development of a low-cost system for adoption and impact monitoring and evaluation	Shakir Nuruzzaman Women led community-based rice seed entrepreneurship model in Bangladesh: current status, challenges and opportunities	Md Kamruzzaman How can extension services facilitate learning to help the farming sector adapt to flash flooding?
2:30pm – 2:50pm	Natalie Jones Knowledge and information exchange within regenerative networks in south east Queensland	Callum Fletcher Solving the collaboration conundrum – a meaningful approach to improving industry and government collaboration in biosecurity	Maifur Jahan Oishi Impact of Ecosystem management and rural development in Dagonbhuiyan Upazila under Feni District	Md Kamruzzaman Factors influencing the organizational capacity of Extension services to support adaptation to flash flooding
2:55pm – 3:15pm	Donna Lucas Carbon farming – are extension professionals ready?	Rachele Osmond Webinars applauded by the chicken meat industry	Tanzina Tazmim Tani Perceived impact of rice seed production, processing and distribution training on the stakeholders in Bangladesh	Tanjina Parven Dealer-customer partnership in rice production demonstration: assessment of private extension system in Bangladesh
3:20pm	Reflection and Conference Wrap Up			

Conference Speakers



PROF. SHARON LEWIN AO
INAUGURAL DIRECTOR FOR THE PETER DOHERTY
INSTITUTE FOR INFECTION AND IMMUNITY

"I am very excited to be part of the APEN Conference"

Sharon Lewin is the inaugural director of the Peter Doherty Institute for Infection and Immunity, a joint venture between the University of Melbourne and Royal Melbourne Hospital. She is an infectious diseases physician and basic scientist.

Her research focuses on understanding why HIV persists on treatment and developing clinical trials aimed at ultimately finding a cure for HIV infection. She has published over 300 publications and given over 100 major invited talks on HIV cure.

In 2019 and 2020, she was named a Clarivate Web of Science high citation researcher. She is President-Elect of the International AIDS Society (IAS) and co-chairs the IAS Global Advisory board for the Towards an HIV Cure initiative.

She also leads the Australian Partnership for Preparedness for Infectious Diseases Emergencies (APPRISE), an NHMRC funded Centre for Research Excellence. Scientists from the Doherty Institute were the first to isolate and share SARS CoV2 outside of China in January 2020. The institute continues to work on all aspects of diagnostics, therapeutics and vaccines for COVID-19.

"I am looking forward to this conference, as I am a longtime Member of APEN."

Cathy came to national attention when she won the seat of Indi as an independent in 2013. The community backed her again in 2016. In 2019 Indi made Australian political history when Dr Helen Haines was elected as Indi's second, independent woman. During her time as a politician Cathy actively worked in Parliament to develop policy around regional development, constitutional change for first nations people and a solution to the indefinite detention of asylum seekers. In 2019 she was awarded The Accountability Round Table award for political integrity. She is an Officer in the Order of Australia, a Churchill fellow a long time member of APEN and lives very happily on her farm in the Indigo Valley in NE Victoria.



CATHY MCGOWAN AO
FORMER INDEPENDENT FOR THE SEAT OF INDI (VICTORIA)
APEN SUPPORTER (RURAL)

Conference Speakers



DR TOM O'DWYER

HEAD OF SIGNPOST PROGRAMME AT TEAGASC

"I am delighted to be part of the conference."

Tom leads the Signpost Programme with Teagasc, based at the Animal and Grassland Research and Innovation (AGRI) Centre, Moorepark, Fermoy, Co. Cork. He took up this position in late 2020, having served as Head of Dairy Knowledge Transfer (also with Teagasc) for ten years. Prior to that, he served as an Area Manager, Dairy Specialist, and Adviser with Teagasc. In his present role, he heads up a new Teagasc programme tasked with leading climate action by Irish farmers.

He is an experienced leader, with demonstrable achievements in innovation support and strong connections to agricultural research. His interests include effective advisory methods and self-development of both advisers and farmers, and he is also an accomplished facilitator.

In 2014, he completed a Doctorate in Business Administration at Waterford Institute of Technology (WIT), having earlier completed a Diploma in Farm Financial Management, a Masters in Business Administration and a degree in Agricultural Science.

Mary-Anne Thomas was first elected to Parliament as the Labor Member for the regional seat of Macedon in 2014.

She has a strong appreciation of the needs of people living in regional communities, having grown up in a small farming community in north-east Victoria.

Prior to being elected to Parliament, Minister Thomas worked across the public, private and community sectors, including as a communications executive at the Department of Premier and Cabinet, NAB, and Plan International.

She was appointed Minister for Agriculture and Minister for Regional Development in December 2020, having previously served as Cabinet Secretary between 2016 and 2020, as well as Parliamentary Secretary for Health over two years from 2014-2016, and Parliamentary Secretary for Carers from July-November 2016. Since her appointment, Minister Thomas has travelled to every corner of our state, meeting with businesses, farmers, local councils and community organisations.

Minister Thomas is proud to be part of a State Government that is delivering record funding for regional communities. She is focussed on a strong COVID recovery for regional Victoria, through investments that support our regions to thrive and become even better places to live, work, visit and invest.



THE HON. MARY-ANNE THOMAS, MP
MEMBER OF THE VICTORIAN LEGISLATIVE
ASSEMBLY SINCE 2014

Conference Speakers



TANGAROA WALKER
DAIRY FARMER 4 LIFE

Tangaroa Walker is a dairy farmer, author and edutainer. He turned his life around through farming - and with what he learned can help anyone succeed.

Tangaroa's early years were pretty rough. Adopted twice, he went to six different schools by the time he was six. He never read a book in his life and lived to play rugby. But he had a dream, and he knew how to do the mahi (work).

Today, Tangaroa is a true community and industry leader running a successful 500-cow dairy farm and reaching millions as the much-loved face of Farm4Life with his practical, inspiring, crack-up videos on everything from farming to fishing, finance to whanau, management to mental health.

"I am excited to be the MC of this great event."

Libby Price began her career in journalism as a cadet with ABC Rural in 1985, having completed a Diploma at Orange Agricultural College and worked as a jillaroo and horse trainer for several years.

She presented the Country Hour for ABC Perth before moving to Melbourne to work in ABC Radio Current Affairs where she worked as the Bureau Chief. In 1995, Libby turned to television as a Senior Reporter for 7.30 Report, and then in ABC News.

Then in 2000 she returned to her first love, radio, presenting Regional Drive for Victoria and ultimately returned to present the Victorian Country Hour for 12 years.

Libby decided to make the tree change and in 2014 took on the role of Editor of the Benalla Ensign.

Three years later, she was approached by ACE Radio to take on the role as presenter of Country Today, broadcasting across eight stations in Victoria and the Riverina. She broadcasts from her house in Benalla.

Libby has won numerous journalism awards including Best Feature story for her series on deregulation of the Australian Wheat Board, and Best Networked Country Program for Country Today at the ACRA's.



AWARDS NIGHT MC - LIBBY PRICE
PRESENTER/PRODUCER COUNTRY TODAY, ACE RADIO NETWORK

Conference Speakers



CAROLINE WELSH
DEPUTY CHAIRMAN OF GWM WATER

‘I look forward to attending the APEN conference and sharing the exciting developments within the Future Drought Fund and the regional Drought Hubs’

Ms Caroline Welsh is the former Chair of Birchip Cropping Group (BCG), which improves the prosperity of Australia’s broadacre farmers through applied science-based research and extension. Caroline has been a Director of the BCG for twelve years and was Chair for seven. Caroline is also Deputy Chairman of GWM Water which successfully built one of Australia’s biggest pipeline projects the Wimmera Mallee Pipeline in western Victoria. Caroline was previously a member of the Loddon Mallee Regional Development Australia Committee.

Caroline has a degree in Agricultural Science and a Master of Marketing (Agribusiness). She worked in the irrigated horticulture section of the state Department of Primary Industries for 19 years in the areas of industry development, export marketing, extension, irrigation and climate. Caroline received a Churchill Fellowship in 1998 travelling to Asia, South Africa and Chile to investigate markets and competitors of Swan Hill’s fresh stone fruit exports.



Australian Government
Department of Agriculture,
Water and the Environment



Future
Drought
Fund

Drought Resilience Adoption and Innovation Hubs

*Supporting farmers and communities to
be drought ready*

The Future Drought Fund (FDF) provides secure, continuous funding for drought resilience initiatives.

The 8 regionally focused Hubs help farmers build their drought resilience through practical development, extension, adoption and commercialisation activities.

Covering Australia's key agricultural and climatic zones, the Hubs work with farmers, agribusiness and communities to develop and deploy new technologies, practices and knowledge to get their regions ready for drought.

For more on the Hubs, visit www.awe.gov.au/fdfhubs or scan the QR code.

For the latest news on the Hubs, the Science to Practice Forum, and the FDF, please register at haveyoursay.awe.gov.au/future-drought-fund.



Abstracts

Abstracts appear in order of the presentations in the program

Concurrent Session #1: Thursday 10th, 11:15am

Title: Pest alert: Trailblazing pest and disease surveillance across the peri-urban vegetable sector

Madeleine Quirk

Abstract: In partnership with the Victorian, South Australia and NSW state departments of primary industries, AUSVEG is leading an industry surveillance network across Werribee, Virginia, and the Sydney Basin. Working closely with our industry advisory network, AUSVEG produces weekly updates, collecting anonymous reports of endemic pests and diseases, and aggregating and transforming the data into 'Surveillance Updates'. Through these Updates, vegetable growers and agronomists are informed about pest and disease pressure across their landscape in real time. Twelve workshops are being delivered both face-to-face and virtually. Through workshops, AUSVEG is benchmarking attitudes towards biosecurity and understanding industry's biosecurity needs. Following the program, AUSVEG will leverage the Surveillance Updates, and workshop/survey findings to write recommendations to generate support for a national peri-urban strategy. This program is funded through the Department of Agriculture, Water and the Environment (Plant Biosecurity and Response Reform). The program is running from January 2021 until July 2022.



Presenter Bio: Madeleine Quirk joined AUSVEG in 2016. She currently holds the position of Project Officer, leading two programs: the Peri Urban Biosecurity Pilot Program and the Rural Research and Development for Profit Boosting Diagnostics program. Both programs are funded through the Department of Agriculture, Water and the Environment. Maddy studied a Bachelor of Science/Bachelor of Arts at Monash University, majoring in Ecology and Conservation Biology, Geography, and Indonesian Studies. Her key skills and achievements include science communication, project management, and 5 years-experience in biosecurity extension including on-farm biosecurity for the vegetable sector and C&E for a RD&E program on exotic leafminers.

Title: Motivating users of online communication tools to on farm practice change – FutureBeef case study

Sophie Folder, Nicole Sallur, Kimbal Curtis and Alex Ball

Abstract: Increased internet availability and uptake of online communication tools have provided new opportunities for engaging and extending information to rural industries. For remote communities and people, they provide an efficiency gain over traditional labour, time, and travel intensive face to face extension approaches. The question remains, can and does this approach result in meaningful on farm practice change? Using northern Australia's FutureBeef program as a case study, this presentation explores how online communication tools can motivate and support on farm practice change. The findings detail how FutureBeef has influenced practice change decisions and the stages of the adoption pathway affected. Two distinct user types identify how producers use online information including the Active seekers and Interest triggered groups. These findings propose that tailoring online communications to the needs of these user types should maximise their impact on practice change.



Presenter Bio: Sophie Folder BAppSc(Agr), MRurSysMan. Trading as Pear Consulting, Sophie Folder provides specialist project consultancy services in agricultural extension, social research, and sustainable agriculture. Previous extension roles in Victoria and Tasmania and masters studies at the University of Queensland has provided Sophie's expertise in extension and systems management. Sophie enjoys evaluating the impact of projects in agricultural and horticultural industries. Studies include the role of social capital in the Tasmanian cherry industry value chain (2012-13), identifying decision making drivers for improving pasture productivity with Tasmanian Red meat producers (2018) and an evaluation of FutureBeef's communication tools used to engage the northern Australian beef industry (2021).

Title: Livelihood improvement through facilitated extension (LIFE) model

Mary Johnson & Clinton Muller

Abstract: In 2013, the Australian Centre for International Agriculture Research (ACIAR) commenced an eight-year research project to adapt the Landcare approach to the broader needs of conflict-vulnerable areas of central and western Mindanao. This work resulted in the Livelihood Improvement through Facilitated Extension (LIFE) model. Key to the development of LIFE was an emphasis on a socially informed agricultural extension that placed farmers at the centre of decision making and created an environment where the project team and project partners supported farmer groups and their service providers to frame the issues, gather and interpret data, develop and test innovations. Moving to a relational form of how we 'do' agricultural extension is equally applicable to the Philippines as it is to Australia and the rest of the world.



Presenter Bio: Dr Mary Johnson, RMIT Research Fellow, has worked extensively in rural education and community development within Australia and internationally. A recently completed eight-year Australian Centre for International Agricultural Research (ACIAR) funded project developed a community-based agricultural extension model for conflict vulnerable communities. This model simultaneously built community and institutional capacity while improving small holder farmer livelihoods. Learning from this seminal study will be adapted by Fiji partners in a new ACIAR funded research project between Fiji, the Philippines and Australia.

Clinton Muller previously coordinated the Africa Landcare Network and Landcare International, hosted at the World Agroforestry Centre in Nairobi, Kenya. In this capacity, Clinton was working with smallholder farmer groups through collective action and institutional strengthening for improved natural resource management and livelihood outcomes through a Landcare approach. Currently working as a Senior Consultant with RM Consulting Group, a regional environmental and agricultural consultancy in Victoria, Clinton works on a range of agricultural industry research, development and extension projects, whilst continuing to work on international Landcare activities.

Title: Planning through change- adapting delivery of "Our Farm Our Plan" during Covid19 and beyond

Libby Heard

Abstract: Dairy Australia's "Our Farm, Our Plan" program was converted to an online blended offering in response to Covid-19 restrictions. It enabled a greater reach by providing farmers with different delivery options. Whilst still maintaining connection to a group and to the facilitators, blended delivery gives farmers the ability to participate in their own environment and can work at a pace that suits them, whilst achieving the program outcomes. The goal of "Our Farm, Our Plan" is to help farmers to clarify their goals and communicate these to their key business partners. It aims to support farmers to utilise planning tools so they can make better decisions about the future. The program is now available nationally to any dairy farmer by in person, blended or hybrid delivery.



Presenter Bio: Libby Heard is part of Dairy Australia's Farm Performance team and has been involved in delivery and development of "Our Farm, Our Plan" since the pilot stages. Originally from the Riverina but now based in Gippsland, Libby's career has included animal health, teaching, business development, Guide Dog training and farm management across different livestock sectors. Her favourite phrase is "Failure to plan is preparing to fail" which makes this project a very suitable body of work to be involved in.

Title: Stimulating private sector extension in a redmeat supply chain

Bruce Hancock, Jacqui Knee, Mark Inglis, Nicole Reichelt

Abstract: "Meeting market specifications", was a co-innovation trial between JBS Australia – Southern, Research and Development Corporations and collaborators to evaluate and stimulate private sector extension in the red meat supply chain as part of a Dairy Australia led Rural Research and Development for Profit Program. The program of professional development was successful because it was directly driven by the skills gap identified by the 16 livestock buyers through a workshop style skills audit. The audit informed the buyer-driven professional development program, which was enabled by the JBS Management team's willingness to provide the time for this to happen in what is an extremely time demanding industry. Buyer confidence increased to annually identify and access their own professional development training needs. From this, new skills and decision support tools were gained, resulting in impact on the farm practices of more than 3000 beef and lamb producers in the JBS Farm Assurance program.



Presenter Bio: Bruce is a former Rural Solutions SA:PIRSA livestock industry development consultant and was the Sheep CRC/MLA National Lamb Supply Chain Coordinator from 2009 to 2019. Experienced in agricultural development, industry empowerment and human capacity building, he has worked with businesses along the meatsheep supply chain with Research Development Corporations Managers, researchers and adoption agents, ram breeders who supply the genetics, sheep producers, marketers and processors and retailers and exporters. The essential ingredient has been the development of a shared vision of a consumer focus with clear market specifications, feedback and benchmarking on their performance to initiate review and continuous improvement.

Title: Enabling behaviour change: for them and us!

Bruce Hancock, Jacqui Knee, Mark Tiffany Doman, Col Freeman, Clare McDougal, Kath McGloughlin

Abstract: Hunter Local Land Services is a Regional Body delivering NRM, emergency management, biosecurity and sustainable agriculture programs. We describe a process that uses Program Theory in which projects are considered as an opportunity for hypothesis testing. Based on our analysis of 16 Program Plans, we outline four challenges with applying our approach, describe the beneficial outcomes and lessons learned from our experience including unintended outcomes and propose reasons for the variable adoption levels of our approach within the Hunter Local Land Services. Key beneficial outcomes include increased ownership of programs by project planners, greater consideration of the people whose practices we aim to change, significant insights into project rationales and the scale of activities needed for decision makers relative to the issue. Overall this approach enables programs to be managed with greater adaptability while becoming more outcome focussed and people centred. We conclude with an outline of our next steps.



Presenter Bio: Col is a Project and Program Manager with an extensive record of achievement and innovation in Natural Resource Management project design, implementation and evaluation. Col prides himself on his ability to build relationships, enhance performance in teams and systems, engage the community and produce practice change for social, institutional and bio-physical outcomes. Currently the Sustainable Agriculture Officer and Program Theory Adviser with Hunter Local Land Services, Col has previously consulted in the design and evaluation of natural resource management and agriculture programs, and delivered extension programs in NSW and Queensland over a twenty-five year career.

Concurrent Session #2: Thursday 10th, 11:40am

Title: Applying social science theory for enhanced strategic engagement under the Queensland Reef Water Quality Program

Gillian Paxton, Jeff Coutts, & Niall Connolly

Abstract: The Reef 2050 Water Quality Improvement Plan 2017–2022 (Reef Plan) seeks to improve the quality of water flowing from the Great Barrier Reef (GBR) catchments. However, the implementation of this plan and the management of runoff over a vast area and from complex and mixed land uses represents a significant socio-ecological challenge requiring the participation of the land managers in the Reef catchments. However, programs are struggling to engage agricultural communities in programs to improve land management practices. This paper describes an overarching framework for strategic engagement to enhance adoption of agricultural land management practices. Synthesizing the social scientific literature on engagement and community development, it recommends three distinct goals to underpin this framework: mobilising the informal ‘power’ of community by facilitating broad and heterogenous knowledge and social networks, acknowledging and contributing to a ‘culture’ of GBR co-management and ownership, and creating potential for collective impact by building creative and collaborative partnerships.



Presenter Bio: Dr. Gillian Paxton is an interdisciplinary social scientist researcher based in Queensland. Gillian has extensive experience working with community change programs including exploring social and cultural aspects of drought preparation and climate adaptation in the Queensland grazing industry for the Department of Agricultural and Fisheries (DAF) Drought and Climate Adaptation Program (DCAP). Gillian utilised this experience to assist DAF's Enhanced Extension Coordination in GBR project to develop an engagement strategy to more effectively reach currently unengaged producers. Gillian is now based at James Cook University Cairns campus undertaking post-doctoral studies.

Title: Sentinels without borders: how a global pandemic inspired the diversification of iMapPESTS's mobile surveillance suite

Shakira Johnson, Rohan Kimber, Brendan Rodoni, Nicole Thompson, Dean Brookes, Dusty Severtson

Abstract: The iMapPESTS: Sentinel Surveillance for Agriculture project has delivered a suite of new surveillance and diagnostics tools for pests and pathogens. These tools are driven by industry needs following extensive research and development into a flexible, cost-effective system using the latest technologies. Following the first remote deployment of the prototype sentinel (Sentinel 1) in early 2020 to far-north Queensland, the COVID-19 pandemic struck and Sentinel 1 was withdrawn from its trial. The project used this time to learn from the long-



distance travel required to deploy the unit remotely and outcomes from the six months of in-field trials, and adapted the plan for future sentinel units. iMapPESTS has delivered a suite of seven sentinels that have been adapted to provide a range of options to meet various industry needs. The sentinels range in size, deployment method (trailer, skid, modular unit) and composition of traps.

Presenter Bio: Shakira Johnson is the project coordinator for the cross-industry national plant pest surveillance initiative, iMapPESTS. Shakira facilitates cross-collaboration within the project partners and connects with industry to raise awareness on the initiative and capture feedback from potential users to help shape future directions.

Title: Agricultural extension for smallholding farmers: Lessons from Northwest Cambodia

Van Touch, Paula Satizábal

Abstract: Instead of being regarded as experts in their own lives and local contexts, smallholder farmers are often seen as passive recipients of research and extension, thus failing to recognise their role as innovators. We argue that the extension of agricultural technologies alone will not result in a sustained change in farmer practices without enhancing social relations. Our five-year interdisciplinary analysis of farming households in Northwest Cambodia indicates farmers' practices are constrained by their desire to mitigate the compounding effects of climate, economic, and social variability. Time constraints, financial indebtedness, loss aversion in agricultural production, and learning from neighbours all emerge as critical factors in farmers' decision-making. We recommend that new models of agricultural extension centred on smallholder farmer needs and aspirations and that take a relational approach are needed to transform existing models of extension that are based on the provision of technology, capital, and information.



Presenter Bio: Dr Van Touch is a Research Fellow at the School of Geography, Earth & Atmospheric Sciences, at the University of Melbourne. His educational background is in agricultural production systems and climate change adaptation. His professional experience is mostly in the areas of agricultural systems research and development, crop growth simulation modelling, analysed climate change projections, agriculture value chains, rural socioeconomics, and agricultural insurance. More recently, Van has become part of a cross-cultural and interdisciplinary research project "Next generation agricultural extension: social relations for practice change" funded by ACIAR, which seeks to foreground new models of agricultural extension founded on social relations.

Title: Engaging virtual meetings

Noel Ainsworth and John Agnew

Abstract: The COVID-19 pandemic has rapidly transitioned face-to-face workshops to webinars and virtual meetings. These can be adequate for communication of information. However, if building trust, engagement and capacity is required in an extension strategy, then preparation is everything. Drawing upon project experiences, the presenters offer strategies to sharpen your approach to ensure that virtual meetings enable, rather than hinder engagement. This guidance is relevant into the foreseeable future and applicable across software platforms. SHARP strategies include: Segment stakeholders for separate, smaller meetings; Host small break-out rooms to debate the

applicability of information presented; Agenda must be set, be clear and shared with attendees via pre-meeting contact; Rules of engagement (ground rules) must be stated and agreed at the start of virtual or hybrid meetings, so people know how they can participate; Polling is used to review how individuals valued the information and to express their interest in trialling the suggestions.



Presenter Bio: Noel's career has involved a number of management, extension, research, and consulting roles in non-government and government entities. These have been across the disciplines of natural resource management, environment and agriculture. Through this he has built extensive experience and networks in a range of rural industries ranging from tree crops, to vegetables, wine and hydroponics. To back this experience, Noel has formal training in the social sciences, management and plant physiology.

Title: Grower Group Staff Professional Development

Danielle England

Abstract: Grower groups are a large part of the Australian agricultural research, development, and extension funnel. Grower groups have traditionally relied on graduates and/or returning professionals to manage their organisations, however this system of attracting and retaining grower group staff is no longer working. Ag Consulting Co and AgInnovate delivered extension design and planning training to grower groups in WA and SA/Victoria during 2021. Less than 50% of participants that started the program completed it. COVID border restrictions and lockdowns did impact delivery, but for most member groups it was the result of staff changes, or the lack of understanding about the on-going need for professional development around extension. As a result, AgInnovate surveyed grower group staff, management committees, researchers, and supporters to analyse the training needs of the industry. This presentation will look at the results of this survey, the attitude of grower groups to professional development and how grower groups can attract and retain the skills required to effectively manage the projects, farmer and industry expectations, and grower groups.

Presenter Bio: Danielle is passionate about people in agriculture. She has worked extensively across Australia for the past 20 years. Her work has included strategic business development, industry and enterprise strategic planning, agricultural extension and communication, people development training, project design and management. This has included working with Australia's leading grower and industry groups, research organisations and farm businesses to optimise mixed farming profitability and productivity. Danielle has been listed in the Emerald 2014 100 Women in Australian Agribusiness, and was the 2013 Western Australian RIRDC Rural Woman of the Year. Both of these awards recognise her outstanding leadership and passion for the Australian agricultural industry.



Title: Soil Wealth and Integrated Crop Protection vegetable industry extension project: A new and effective way of delivering extension

Gordon Rogers, Anne-Maree Borland, Pieter Van Nieuwenhuyse and Carl Larson

Abstract: The Soil Wealth and Integrated Crop Protection (SW/ICP) project, led jointly by Applied Horticultural Research and RM Consulting Group has been a flagship in the delivery of extension to the Australian horticulture sector. The project has been operating for eight years, and is still strongly supported by growers. The key to the project's ongoing effectiveness is delivering research-based information that is ready to use, and in different forms to suit different learning styles. The presentation will outline the key to the project's success and give examples of some of the most successful extension methods. The most effective delivery methods include: Demonstration sites; Factsheets and case studies; Webinars; Masterclasses; and Cover crops and strip tillage.



Presenter Bio: Dr Gordon Rogers (Applied Horticultural Research) Dr Rogers, (principal of AHR) has expertise and experience in extension, climate science, vegetable soils and applied research. Over the past 25 years, Dr Rogers has managed or led 90 major research projects. Many of these projects have included a strong research extension component. Dr Rogers coordinated the national vegetable extension program VegNET I and is currently Australia's representative on the board of the World Vegetable Centre, headquartered in Taiwan.

Concurrent Session #3: Thursday 10th, 12:05pm

Title: Essential elements to build greater 'buy in' and extend the reach in Reef extension programs

Coutts J., Connolly N., Paxton G., Long P; Samson A and Coutts B

Abstract: This paper describes how a Bayesian model was used to identify the essential elements to build greater 'buy in' and extend the reach, interest, and participation in Reef extension programs by industry and producers. The Bayesian model was used to explore the strengths of relationships between the multiple interconnecting influencing elements of the Reef extension programs that impacted on effective engagement and to derive four pillars that aggregate the influence statements to inform future program design.



Presenter Bio: Dr. Jeff Coutts has a strong background in managing and evaluating change in rural industries and communities. He has evaluated many rural, agricultural and regional projects and programs, runs evaluation training at post-graduate level as well as short courses and is increasingly being sought as an evaluation mentor for project and program teams. He works with national research and development and funding organisations to develop monitoring and evaluation systems to provide effective reporting to government and stakeholders. Jeff has a Masters in Agricultural Knowledge Systems and a PhD in Agriculture and Environmental Science from the then Wageningen Agricultural University, the Netherlands.

Title: Breaking barriers to adoption in AgTech with practical grower-lead demonstration

Dave Gerner

Abstract: Digital technologies for agriculture, and specifically viticulture and winemaking, are becoming essential tools for the wine industry to manage increasingly dynamic climatic, economic, political and social environments. The rapid emergence of technology companies in the AgTech space is both exciting, but also daunting and confusing for farmers who are seeking digital solutions to solve their challenges. The barriers to adoption for the uptake of AgTech are ubiquitous across Australia's wine regions, which traverse the challenges of engagement, education, policy and the delivery of practical programs that deliver immediate value to Australian producers. Wine Australia's AgTech Program aims to break down many of these barriers through the establishment of a series of commercial AgTech demonstration sites throughout the wine production regions of Australia. These demonstration sites generate grower-lead stories about the success and failures of AgTech deployments, which are used to educate the rest of the wine sector.



Presenter Bio: Dave joined Wine Australia in 2020 as the AgTech Program Manager. With a background in environmental science, digital technologies, innovation and wine production, Dave has been acting as a conduit between wine grape growers and wine makers, and the complex system that is technology innovation and business. Dave has been responsible for establishing Wine Australia's AgTech demonstration sites, deploying practical tech solutions to producer sites across Australia and actively telling the grower stories to the broader wine sector. Dave is passionate about the wine sector and in supporting the innovation systems that provide opportunities for growers and wine makers to produce more sustainable and profitably.

Title: Gender-equitable agricultural extension through women and youth engagement in Papua New Guinea

Josephine Caffery, Kusunan Kurika, Lalen Simeon

Abstract: In 2013, the Australian Centre for International Agriculture Research (ACIAR) commenced an eight-year research project to adapt the Landcare approach to the broader needs of conflict-vulnerable areas of central and western Mindanao. This work resulted in the Livelihood Improvement through Facilitated Extension (LIFE) model. Key to the development of LIFE was an emphasis on a socially informed agricultural extension that placed farmers at the centre of decision making and created an environment where the project team and project partners supported farmer groups and their service providers to frame the issues, gather and interpret data, develop and test innovations.



Moving to a relational form of how we 'do' agricultural extension is equally applicable to the Philippines as it is to Australia and the rest of the world.

Presenter Bio: Associate Professor Jo Caffery's linguistic and cultural Australasia experience has enabled her to design and lead place-conscious, culturally and linguistically appropriate, and relevant capacity building programmes for international Australian Aid projects. She currently leads the ACIAR funded research project Gender equitable agricultural extension through institutions and youth engagement in PNG.



Professor Lalen Simeon from Mussau Island in the New Ireland Province, PNG, is the first PNG national to hold the position of Deputy Vice Chancellor of the Pacific Adventist University in PNG. Lalen is fluent in several PNG languages and is an experienced social sciences and health researcher, which has enabled her to research and lead agricultural capacity building projects. She is currently the In-Country Project Leader for the ACIAR funded research project Gender equitable agricultural extension through institutions and youth engagement in PNG.



Mrs Kiteni Kusunan Kurika is from East New Britain Province, PNG, is the Executive Manager of the East New Britain Women and Youth in Agriculture Cooperative Society Association. She is also the ENB Province Project Leader for the Gender Equitable in Agriculture Extension through Institutions and Youth Engagement in Papua New Guinea Research Project. Kiteni is an experienced community liaison officer and capacity building facilitator in agricultural extension & Family Farm Teams training.

Title: "Agriculture Training" - interesting, interactive and inclusive during the COVID19 pandemic

Natacha Hes, Jill Clayton

Abstract: In 2020 COVID 19 came to Australia, fortunately Tocal was already using online platforms and systems, enabling us to move more of our face-to-face delivery online. However, as most trainees and students were inherently practically based and geographically dispersed across NSW, with little expertise in the online space, both staff and students had to adapt to a new learning environment. We became creative, using video evidence and third-party reports, ensuring that practical competence was achieved, and all staff and students were introduced to regular Zoom meetings to facilitate continued interaction. On Farm commitments often interfered with these strategies, so a more personalised approach followed, with individual phone calls, zoom meetings and regular feedback through Canvas to include students who could only attend meetings at irregular hours. By taking agricultural training online and making it interesting, interactive and inclusive, the year has still been a success.



Presenter Bio: Natacha has worked for the Department of Primary Industries at Tocal College for the past 8 years, most recently as Education Officer Digital Delivery. Prior to working at Tocal College, Natacha spent 12 years in the University sector as a casual academic and web editor. Natacha's passion is online education and presenting engaging and interactive content for learners. She has created and delivered hundreds of courses for topics such as chemical training, animal welfare, harvest delivery, conservation, and land management to name a few.

Title: Coaching clinics as an effective extension tool bringing researchers and growers together

Kelvin Montagu, Darren Long, Pieter Van Nieuwenhuysen, Gordon Rogers

Abstract: Coaching clinics are a new concept in the extension of research-based information to growers and advisors. The clinics combine a researcher working together with a respected grower, supported by well-designed extension materials and a practical demonstration site, to effectively communicate new information. The key to success is combining a technical specialist familiar with the research with a respected grower who can explain how specific interventions can work on a commercial vegetable farm. The clinics involved some face-to-face training followed by a practical demonstration of the innovation on a commercial farm. The impact can be improved by involving the demonstration site grower to champion the innovation. Dr Kelvin Montagu will discuss how he worked with Tasmanian potato grower Darren Long on the coaching clinics in Cover Crop Coaching Clinics in NSW and Queensland to demonstrate cover crop research to vegetable growers across Australia in a practical, engaging and effective way.



Presenter Bio: Dr Kelvin Montagu (Applied Horticultural Research) Over the past 25 years Dr Montagu has led multi-agency research and extension teams in cooperative research centres (CRCs). More recently he has managed the Hort Innovation Cover Crop project (VG16068), Soil Wealth project (VG17068); Multi-faceted approach to soil borne disease management (VG15010); and contributed to Understanding and managing impacts of climate change and variability on the Australia vegetable industry (VG12049/41), measuring and managing greenhouse gas emissions and soil carbon for the vegetable, cherry and apple industries.

Title: Supporting community resilience in cotton growing regions

Jana-Axinja Paschen, Marg Ayre, Ruth Nettle

Abstract: This applied community-engaged research was funded by the Australian Cotton Research and Development Corporation (CRDC) to improve understanding of community resilience, and explore potential support roles for agricultural industries, local and state governments to assist communities in resilience planning. The diversity of current interpretations of resilience in theory, policy, and practice continues to hamper implementation of effective resilience building actions. This research used a resilience assessment workbook and facilitated workshop processes that resulted in three locally developed resilience action plans and a tailored planning tool. Key research findings show that resilience planning tools enhance community resilience, but that communities need leadership and facilitation capacity to implement them.



Presenter Bio: Jana-Axinja Paschen is a social scientist and systems thinker with 10 years' experience in applied resilience and innovation systems research. Her particular passion and expertise are in knowledge co-design processes and community-led resilience planning and action across different contexts. Jana-Axinja's research engages diverse audiences and has made scholarly and practice contributions that have been used by industry, policy, and community stakeholders.

Concurrent Session #4: Thursday 10th, 12:30pm

Title: Diamondback moth management in brassicas - a whole of industry response to a major production challenge

Zara Hall

Abstract: In 2017, brassica producers in the Lockyer valley observed declining efficacy to some registered pesticides targeting Diamondback moth. In response to a looming production crisis, Lockyer Valley Growers Inc. lead a number of regional activities, including facilitating the development of an industry-lead, regional, insecticide resistance management strategy; providing shared learning opportunities for growers and other stakeholders; showcasing best-management practices through grower-champion case studies; and communicating best-management practices through industry-preferred communication pathways. In the proceeding years, changes in practices by stakeholders were recorded with an increased emphasis on non-chemical control measures in combination with selective, judicious chemical use. Most producers indicated that they were able to successfully manage Diamondback moth in the proceeding years, however, the way in which they did that had changed from previous seasons with increased use of 'soft' chemistry and conservation of beneficial arthropods.



Presenter Bio: Zara Hall is the Regional Development Officer for Southern Queensland vegetable producers employed through Lockyer Valley Growers Inc. Zara is a member of the Vegetable Extension Network (VegNET) and the technical lead for pest management in vegetables through the VegNET national project. Prior to working in extension, Zara worked in research in vegetables, cotton and grains with a focus on pest management.

Title: Accelerating the trial and adoption of AgTech on Victorian farms

Phillip Guthrie, Mark Sloan, Yan Lai

Abstract: Agriculture Technologies (AgTech) can help farmers make faster, more informed decisions, reduce labour costs and predict and better manage adverse events. However, the use of AgTech on Australian farms is low, with only 10 per cent of farmers estimated to have adopted AgTech to a significant level. The lack of supporting value cases for AgTech, combined with low farmer awareness of the technologies available and their potential on-farm benefits have been posited as possible contributors to the low rate of AgTech adoption. In mid-2020 Agriculture Victoria (AV) launched the On-Farm Internet of Things (IoT) Trial to investigate barriers to the uptake of AgTech and identify potential interventions to support increased adoption. This presentation will share the methodology for the trial, provide an overview of the technologies selected by farmers, reflect on the lessons learned and discuss how these have guided the development of ongoing AgTech extension efforts in Victoria.



Presenter Bio: Mark has a diverse background: from working as a technology support and product development consultant in the AgTech space, to creating his own start-up providing technological solutions for the heavy vehicle industry. He lives on a small property outside of St Arnaud where he and his partner are raising their two small children, as well as the occasional fat lamb. Since joining Agriculture Victoria Mark has been involved in a range of AgTech initiatives that have helped farmers from across the state begin their journey with AgTech. He is currently producing Agriculture Victoria's very first eLearn course dedicated entirely to AgTech and is keen to share the AgTech stories of farmers from across all farming sectors.

Title: Feminist Approaches to Agricultural Research & Extension

Huong Ngo Thi Thanh, Rochelle Spencer, Jane Hutchison

Abstract: CARE International in Vietnam (CVN) uses gender transformative approaches to help achieve the goal of enhancing development outcomes of Thai ethnic minority women and men in the Arabica coffee value chain. Gender inequalities in the access to and control of natural and financial resources including land, credit, and earnings from small enterprises prevail in rural ethnic minority communities in northern, mountainous Vietnam. Gender transformative sessions—developed and implemented into CVN's Technologically Enhanced Agricultural Livelihoods project—actively engage male spouses or family members, to increase their involvement as supporters of women's economic empowerment. Sessions incite critical reflection, action planning, and learning by and with women and men, to transform harmful gender norms and power relations, improve intra-household decision making, and increase mutual spousal support. By engaging with harmful norms and gendered power relations at their root, gender transformative tools create pathways for locally appropriate women's empowerment. We provide guidance on how other programs can prepare to design and implement gender transformative approaches.



Presenter Bio: Dr Ngo Thi Thanh Huong is a Policy Researcher, CARE international in Vietnam. She has a PhD in International Health, over 13 years of experience in development and implementation of multiple major quantitative and qualitative studies across Vietnam and Southeast Asia – epidemiology, health and behavioural science; population and demography, labour and migration, gender and development studies, poverty and women’s economic empowerment; working for CARE International in Vietnam as a policy researcher since 2017, leading and conducting research on policy and development issues to promote rights and sustainable development among the most vulnerable groups such as rural and ethnic minority population, disabled people, migrant formal and informal workers and the poor.

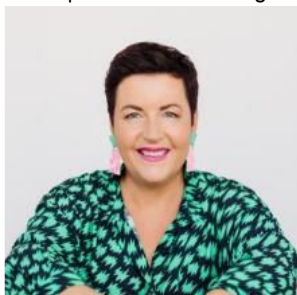


Rochelle - I am a founding co-director of the Centre for Responsible Citizenship and Sustainability - an inter- and trans-disciplinary research hub that endeavours to shape new thinking and practice around three core streams: development; sustainability; nonprofit management & leadership. I hold several discipline specific roles including: University Chair, Research for Development Impact network, governed by the Australian Council for International Development Founding executive committee member, Development Studies Association of Australia Deputy Editor, Development in Practice, a Taylor & Francis journal

Title: Facilitating standout on-line experiences: Busting myths and mindsets about on-line delivery

Cynthia Mahoney and Andrew Huffer

Abstract: The disruption to the workplace caused by the pandemic offered APEN members an exciting opportunity to level up their facilitation skills in the on-line environment. Virtual facilitation was no longer just a nice-to-know, it was essential. Many facilitators struggled with making the transition from face-to-face to on-line. We received feedback that they didn’t understand how to use the technology; they weren’t aware of the range of platforms and tools they could include in their design and they lacked confidence in their ability to create interactive, energising, engaging and effective participant experiences. We designed a participative on-line program constructed around our 3P Virtual Facilitation Framework consisting of People, Process and Platform. Our design encompassed our knowledge of neuroscience and the importance of creating brain-friendly environments. Feedback showed that participants increased their confidence, knowledge and ability to create and facilitate engaging, participative on-line experiences.



Presenter Bio: Cynthia Mahoney is a facilitator, coach, mentor, speaker and author with a passion for personal disruption, neuroscience, positive psychology, courageous conversations, high performance and well-being. Her mantra (taken from the latest neuroscience research) is that “Happier people are higher performing,” and she strives to help leaders and teams achieve this in the workplace. She is an Agricultural Scientist with a Masters in Ag Economics and Rural Sociology and a Diploma of Leadership, Coaching and Mentoring. She has just authored her first book, Cultivate: How neuroscience and well-being support rural leaders to thrive.

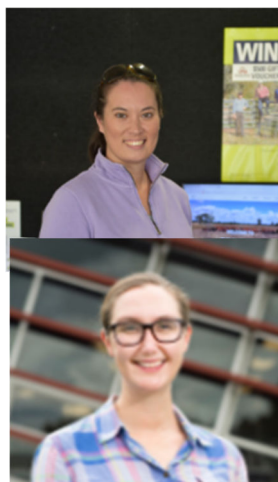


Andrew is an experienced facilitator and stakeholder engagement consultant with 25 years facilitation experience and over 19 years in business. Which means that in this time, he has most likely worked with organisations, teams or communities just like yours to deliver facilitation, team development and stakeholder engagement services in a range of sectors right across Australia and overseas. You’ll get the benefit from his practical experience that includes the delivery of over 950 workshops using participatory approaches to actively involve all people in contributing to effective outcomes. Andrew has also been a partner in two café businesses with his wife, Georgie, for almost 14 years.

Title: Planning and designing a skilled pathway for talent development in Gippsland agriculture and agrifood industries

Amy Cosby and Nicole McDonald

Abstract: A key issue to accelerate growth for the Gippsland agricultural and agrifood industries is the limits imposed by an inadequately skilled workforce. In December 2020, Food and Fibre Gippsland partnered with CQ University to investigate: How can Gippsland agriculture, horticulture, and food manufacturing employers best be supported to build the capacity of their workforce through training initiatives? Interviews and surveys were used to gather a range of employer and employee perspectives. The thematic analysis of qualitative data and descriptive statistics were used to identify key issues, preferences and priorities for workforce development. A range of findings were identified including the technical and soft skills needed to progress from a seasonal worker to supervisor across a range of agricultural and agrifood businesses. A micro-credential style skills pathway could offer those already in employment to upskill in key areas in a timely and relevant manner, as they advance their careers in the industry.



Presenter Bio: Dr. Amy Cosby is a Research Fellow – Agri-tech Education and Extension at CQUniversity Australia with a Bachelor of Agriculture/Bachelor of Laws (Hons 1) and a PhD in Precision Agriculture. Amy is a leading practitioner and researcher in the field of student and teacher engagement within the agricultural industry.

Dr Nicole McDonald is a Senior Research Officer – Agri-tech Education and Extension at CQUniversity Australia with Bachelor of Science Hons 1 (Psychology) and a PhD in the Vocational Psychology of Agriculture. Nicole is a researcher in the field of career development with an interest in agricultural workforce development

Title: 30-years of creating healthy environments in the Shepparton Irrigation Region

Carl Walters, Megan McFarlane and Kelvin Bruce

Abstract: The 1990-2020 Shepparton Irrigation Region Land and Water Management Plan (SIRLWMP) was developed in the late 1980s due to community alarm around increasing salinity and water tables. The objectives of the SIRLWMP were to manage salinity of land and water and improve the social well-being of communities, while increasing productive capacity. The plan was innovative and adaptive in its approach in taking a long-term view of environmental sustainability. The community learned to persist and adapt their approach to build resilience in the socio-economic systems. A 2020 review of the 30 years of implementation revealed the breadth and depth of achievements including: Partners staying the course: developing trust and respect; Improved water management and condition; Estimated \$2.65 billion community and government investment; 4000 whole farm plans; 80GL water saved; 2000ha revegetation and remnant protection; 737km drains; Reduction of salt and nutrients. There is still more to do, and the plan continues beyond 2020.



Presenter Bio: Carl Walters has been working in water and environment industries in northern Victoria for over 35 years. Carl is Manager Sustainable Irrigation at Goulburn Broken Catchment Management Authority. Prior to this, Carl worked with Goulburn-Murray Water in a range of roles, which helps him to bring a balanced and knowledgeable view to achieving long-term change. His extensive background in the irrigation industry provides a different perspective to community engagement and extension within the region. He has a keen focus on building and maintaining real partnerships, putting research and new knowledge into practice through the continued promotion of improved irrigation practices.



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Concurrent Session #5: Thursday 10th, 1:55pm

Title: Learnings from a nation-wide extension program operating through the COVID-19 pandemic

C.A. Millen, B.W. Gudex, P.J. Williams & S.J. Skinner

Abstract: The Southern (SBTS) and Tropical (TBTS) Beef Technology Services project iterations (2016-2021) provided the Australian beef industry with technical support and extension activities to maximise the use and understanding of genetic technologies, including BREEDPLAN®. The projects had a primary audience of approximately 3,500 seedstock producers but also supported commercial producers and industry personnel around Australia. The COVID-19 pandemic severely curtailed the delivery of extension initiatives around the country; consequently, project personnel implemented a range of new and revised extension initiatives, including electronic herd consultations, short video development and online workshops. While these measures allowed the delivery of genetics based extension to an Australia-wide audience in the midst of a global pandemic, opportunities to build rapport with the project audience were greatly reduced. The team intends to utilise both electronic and in-person events in future project iterations, thus offering a range of activities that appeal to the diverse target audience.



Presenter Bio: Catriona Millen is a technical officer with Southern Beef Technology Services (SBTS), based at the Agricultural Business Research Institute in Armidale, NSW. In the previous iteration of the SBTS project (2016-2021), Catriona provided genetics support to 14 stakeholder breed associations and their seedstock producer members, contributing to a >50% increase in the rate of genetic gain during this time. Catriona holds a Bachelor of Science (Monash University) and a Bachelor of Agricultural Science (Honours; University of Melbourne). She has previous genetics research experience and has also worked for the "Get Into Genes" program at La Trobe University.

Title: 'iSPY with my little eye' – how to engage communities

in pandemic times

Edwards C1, Wray A1, Hogan E2 and Jones C1. 1. Central Tablelands Local Land Services 2. South East Local Land Services (previously with Central Tablelands Local Land Services)

Abstract: How do you get the community to search for threatened flora species in a time of pandemic? With a game of iSPY! In October



2020, Central Tablelands Local Land Services issued a challenge to the community to take photos of native wildflowers across the region. The project received 110 photo submissions from 32 participants with over 50 different native wildflowers being photographed and identified. It was an innovative way of engaging with the community, illuminating many threatened and endangered native flora in the region, using digital means and materials.

Presenter Bio: Clare Edwards is a Senior Lands Services Officer (pastures) with the Central Tablelands Local Land Services. She has worked with landholders understanding their pastures, soils and landscapes for the last 25 years.

Title: Participatory on-farm evaluations and selection on genotype-environment interaction and stability analysis of yield and yield-related traits of selected rice varieties (*Oryza sativa* L.)

Muhammad Ashraful Habib, Swati Nayak, Saidul Islam, Biswajit Karmakar, Md. Safiul Islam Afrad, Mohammad Nazmul Islam

Abstract: Farmers adopt varieties that provide benefits such as better productivity, yield stability, insect and disease resistance and grain size/shape/colour. Therefore the present study identified efficient rice varieties in an agro-meteorological region by involving stakeholders in the rice value chain (male & female farmers, extension workers, scientists, agro-input dealers/millers). "Crop cafeteria" was conducted to evaluate twenty varieties in four different agro-climatic regions of Bangladesh in the 2019 monsoon season. Based on measured traits and different stakeholders' preference rankings (on a 5-point rating scale), suitable varieties were identified for promotion to farming communities. Total scores of each variety obtained from stakeholders were added to get the total comparative weightages. Based on these weightages, BRRI dhan52 and BRRI dhan71 were ranked "highly desirable" by the evaluators. Participation of different stakeholders in the "crop cafeteria" could be an effective approach to identify the best varieties for a specific location.



Presenter Bio: Muhammad Ashraf Habib working as a Senior Specialist – Agriculture Research and Development with the International Rice Research Institute. IRRI have actively lead on Seed Systems (product management and assessment of diverse research on varietal dissemination and development activities including rural livelihood, food and nutrition security, climate change, natural resource management, market system, impact assessment, and seed policy analysis) in rice-based agri-food systems in Bangladesh.

Title: Using deliberative processes with Stakeholders in the design of extension approaches: the case of virtual herding technology

Nicole Reichelt and Ruth Nettle

Abstract: Drawing on research conducted in 2017-2020 that focused on the adoption challenges with virtual herding technology (VHT), this presentation describes a participatory process for engaging 13 adoption experts and practitioners to contemplate how best to support the extension and adoption of VHT. The participatory process highlighted that there were three key approaches put forward to support the adoption of virtual herding technology: 1) a privatized adoption pathway; 2) a producer-led adoption pathway, and 3) a top-down governance pathway. The strength of the deliberative process was in capturing the multiple perspectives and principles to be considered



for a cross-industry VHT extension and adoption strategy, however this process did not resolve the tension between the different approaches, which would require the facilitation of ongoing discussions. This suggests that policy for VHT and digitalized agriculture more generally needs to keep testing assumptions about the 'right' extension and adoption pathway for such emerging technologies.

Presenter Bio: Nicole Reichelt is currently a Research Fellow in the Rural Innovation Research Group (University of Melbourne). Nicole leads and contributes to research that focuses on co-designing innovative ways to enable farm practice change, enhance agricultural advisory services and support the adoption new agricultural technologies. She is currently a key researcher in exploring and developing adaptation pathways to future regional climate change scenarios for the red meat livestock sector.

Title: More than a biosecurity sign - increasing adoption of property biosecurity plans

Craig Elliott

Abstract: Property biosecurity is critical in protecting agricultural enterprises from the impacts of pests, weeds and diseases. Despite this, the level of adoption of property biosecurity plans in Australia is low, with time, knowledge and competing factors the predominant barriers to adoption. In 2020, Wine Australia partnered with Wines of WA and WA DPIRD to deliver a pilot series of vineyard and cellar door biosecurity planning workshops that included support for businesses to develop their biosecurity plans during the workshop and then implement those plans in the following months. Early results identified that adoption rates were improving but still low despite ongoing free support and coaching and participants reporting high value for the workshops and ongoing support. In the future, the program will be refined to increase the use of behavioural nudge techniques to increase socialisation and normative behaviour development in the implementation of biosecurity plans by workshop participants.



Presenter Bio: Craig is a Program Manager with Wine Australia focusing on Biosecurity Research, Development and Adoption initiatives. He started with Wine Australia in 2019 in a co-funded program with Hort Innovation to improve industry preparedness for Xylella fastidiosa, Australia's number 1 plant biosecurity threat. Prior to this, Craig has worked as a consultant supporting government and industry associations to be better prepared for biosecurity and other emergencies and worked in senior roles in the Tasmanian and Queensland Governments in biosecurity and natural resource management agencies with responsibility for program development & delivery, training, emergency preparedness and management and operational review roles.

Concurrent Session #6: Thursday 10th, 2:20pm

Title: Adopting an adoption strategy – how the wine industry is embracing complexity for a perfect blend

Jo Hargreaves

Abstract: Wine Australia plays a pivotal role in funding a national strategic program of extension activities to ensure outcomes benefit grape and wine sector levy payers. This presentation will focus on the contemporary extension principles underpinning Wine Australia's Extension and Adoption Strategy 2020–25, and the range of activities Wine Australia is using to enhance research to practice outcomes and practice change in the wine industry. A range of case studies will be explored, including an assessment of ongoing challenges and opportunities for learnings across agricultural extension practices more broadly.



Presenter Bio: Jo joined Wine Australia in 2017 as a Senior Research, Development and Adoption Program Manager. She is responsible for Wine Australia's people development and education portfolio, managing initiatives that support individuals across the wine sector, including the Future Leaders program. Jo also oversees Wine Australia's extension and adoption strategy, encouraging the use of best practice extension approaches to achieve adoption outcomes. Jo's background is in social science research, public policy, education and evaluating the impact of research. Jo is passionate about supporting people and collaborative action that delivers value and outcomes for industry.

Title: Virtual field days – Lessons from forced transition

Carl Larsen, Dimi Kyriakou, Kelvin Montagu, Stuart Grigg & Bonnie Dawson

Abstract: In March 2020, the East Gippsland Vegetable Innovation Days (EGVID) were in the final stages of preparing to welcome over 1,000 local and international visitors to Lindenow, Victoria. After COVID-19 almost caused the event to be cancelled it eventually proceeded with strict regulations and limited numbers on-site. In the lead-up to EGVID and during the event, there was a strong virtual presence through social media and online tools. The transition to 'virtual' field days further expanded the number of people who could access the event online and tailored the content to the target audience. Lessons include being clear on purpose and allowing adaptive planning designing the field day. Delivery can be maximised through brief and targeted online sessions. Impact can be enhanced using multiple platforms, active speaker engagement and deliberate follow-up. This paper explores the key lessons in transitioning to virtual field days along the design, delivery and impact spectrum.



Presenter Bio: Carl Larsen – Associate, B.Env.Sci., B.Soc.Sci. (Env.), PG.Cert.CCPI. Carl is a socio-environmental scientist with over 10 years' experience in planning, delivery and evaluation of agriculture and natural resource management programs, integrated water management, climate change and stakeholder engagement. He understands the practical implications of policy and science on communities and agriculture. Carl has worked with a range of government departments, resource management agencies, research and development corporations, private organisations and communities around Australia on catchment management, sustainable water use, resource management in agriculture/horticulture, land use, climate change, strategic planning, industry development, extension and practice change.

Title: Scaling of the whole-family extension approach in Pakistan: an institutional logics perspective

Alex Russell

Abstract: Scaling refers to the use of an innovation beyond the people involved in its initial development and is critical for innovation to achieve widespread change. Due to the inherent complexities of agricultural systems, the scaling of agricultural innovations can be challenging. This study considers how institutional logics, i.e., the rationalities which shape actors' cognition and behaviour, can be used to help improve negotiation and scaling of the Whole-Family Extension Approach within the smallholder dairy-beef farming system in Pakistan.



Presenter Bio: Alex is a current student at the University of Melbourne undertaking a Master of Agricultural Sciences, specialising in extension and innovation. Alex began a career in the agricultural industry as a consultant, after completing a degree in the environmental sciences. This role provided the opportunity for work both in Australia and overseas, including organisation and farm management in Australia, project support in China and Vietnam, and project management in India. These experiences highlighted the important role of extension in various agricultural contexts and the decision to better understand it.

Title: Livelihood status of floating market stakeholders at Wazirpur Upazila under Barishal District

Md. Safiul Islam Afrad, Md. Shahol Rana, Md. Enamul Haque, Kazi Tamim Rahman, Muhammad Ziaul Hoque

Abstract: This study assesses the livelihood status of floating market stakeholders in Wazirpur upazila under the Barishal district. Mixed research methods were employed to collect data and gather information. Livelihood status was measured in terms of five capitals. A five-point rating scale was used to find out the reasons behind the development of the floating market. The scale included ten constructs reflecting both positive and negative aspects. Studies reveal that a greater part of the stakeholders possessed sufficient human, financial, natural, social, and physical capital. The floating market is close to the majority of the participants' residences, has a smooth communication system, and is a place for tourist attraction, which ultimately contributes to the development of the floating market in the study area. Thus, the floating market might have an impact on the livelihood of the stakeholders. This floating market system can be extended to the other southern parts of the country.



Presenter Bio: MSI Afrad started his career as Assistant Director (Agriculture) in Bangladesh Agricultural Development Corporation in 1997 and shifted his career as Lecturer in the Department of Agricultural Extension and Rural Development (AERD), Patuakhali Science and Technology University in the same year. The researcher joined Bangabandhu Sheikh Mujibur Rahman Agricultural University as Assistant Professor in 2004. He secured Ph.D. from his own Department in 2009. Currently, he has been working as professor in the department. He supervised 2 Ph.D. and 33 MS students and published 88 articles in National and International journals. He also contributed to 5 book chapters.

Title: Understanding knowledge and attitudes relating to redlegged earth mite to improve insecticide resistance management

Lizzy Lowe, Leo McGrane, Dr Michael Santhanam-Martin

Abstract: The redlegged earth mite (RLEM) is one of the most destructive pests in broadacre crops and pastures in southern Australia. In order to limit the evolution of resistance and improve management recommendations of this pest it is essential to understand the factors which influence current management practice. At Cesar Australia we conducted social research into the knowledge, practices and attitudes of growers and agronomists relating to RLEM insecticide resistance management across grain growing regions in Australia to see how chemical-based management is influenced by variables such as risk attitude, risk perception and knowledge. Using the responses from an



online survey we looked at how attitude changed across regions and with career stage, and how perception of risk affected the decision of when (and what) to spray. The survey provides important data to help us develop resistance management plans that target gaps in different groups knowledge or understanding of resistance management. The extension materials which will be developed in response to this survey will help minimise resistance in RLEM going forward and will safeguard the effectiveness of current control options.

Presenter Bio: Dr Lizzy Lowe is a senior extension scientist at Cesar Australia. She leads Cesar Australia's PestFacts south-eastern project and uses her expertise in community engagement and entomology to contribute to a range of other projects and extension activities.

Title: Using structured messaging to assist with grower decisions in complex environments

Brad Pfeffer, Amanda Thomas, Warwick Waters, Paul Grundy

Abstract: Integrated pest management (IPM) has been widely adopted and successful in the Australian cotton industry, helping control key insect pests, improve sustainability, and reduce costs. However, adoption of IPM involves calculated risk and confidence that beneficial insects will predate pest insect populations given time. Conversely, growers also need to consider potential crop damage and whether a chemical application may be required, which may reduce beneficial insect populations. These decisions occur at busy times of year and interact with a range of other complex factors. In this paper, we examine the use of the 'elaboration likelihood model' by the Australian industry's extension program, CottonInfo, to assist growers with the complex decision making around early-season pest management. A combination of locally relevant research and tailored messaging has helped the CottonInfo team develop a template and process to successfully extend and communicate complex information.



Presenter Bio: Brad Pfeffer has been the Communications Lead with the CottonInfo program since July 2021, having previously held a variety of roles managing communications and adoption programs within the agricultural sector within Queensland. The CottonInfo team comprises of a range of extension and technical specialists across the Australian cotton industry, working together to connect growers with research. CottonInfo is a joint initiative of the Cotton Research and Development Corporation, Cotton Seed Distributors Limited, and Cotton Australia.

Concurrent Session #7: Thursday 10th, 2:45pm

Title: Business coaching: Giving 144 farmers skills to build resilience to future droughts

Alexandra Hicks

Abstract: In 2021 a brand new program launched in NSW to give farmers the skills they need to build resilience to future droughts. The Farm Business Resilience Program was launched with joint funding from the Australian Government's Future Drought Fund and the NSW Department of Primary Industries. The program team decided to give farmers across NSW the opportunity to work with a business coach to increase their profitability and business confidence. It was going to be a tough sell to the farmers, convincing them to commit to 10 months with a \$1,500 outlay. The team decided to bring a Behavioural Insights consultant onboard to increase the engagement and adoption by farmers of the program. 170 applications were received from market gardeners to broadacre cropping. 144 farmers were selected for the coaching program with 24 coaches contracted. Feedback has been positive with farmers indicating great value, captured by the program evaluation.



Presenter Bio: Alexandra Hicks is a Program Coordinator with the Farm Business Resilience Program, a new program launched in 2021. Alex has worked with NSW Department of Primary Industries since 2017, starting in the innovative Young Farmer Business Program. Prior to this, Alex worked with the University of Sydney and in regional news media. Outside of the office, Alex runs a paddock to plate farming enterprise near Wellington NSW. She's been described as enthusiastic, passionate and committed, having built a portable micro abattoir with her husband, in between renovating their farm house.

Title: Going with the flow when everything is a disaster'

Sylvia Jelinek

Abstract: Drought, Fires, Storm and Minor Floods, Pandemic, Biosecurity response, Major Floods And back to the pandemic again, and other situations like Plague Locusts and Mice in the back of mind. It's something from a dystopian novel. These are the things that I was faced with when I started with Greater Sydney Local Land Services in 2018 to work in Vegetable Extension. Going with the flow when everything is a disaster, seemed to be the business as usual and why it is important to deviate from the 'plan' when your growers and land holders are in



crisis. Tailoring extension to their needs at the time and shifting focus. What we learnt through delivery being impacted was we had to have the ability to be agile, many events were time sensitive and had to be acted on immediately. Meeting Growers needs at that time was the number 1 priority.

Presenter Bio: Sylvia Jelinek is the vegetable Regional Development Officer and lead role for the VegNET project for Greater Sydney Local Lands Services. She has been working with the vegetable growers in NSW delivering Hort Innovation R&D through tried and proven extension methods. Sylvia is experienced in implementing integrated pest management (IPM) in the Sydney and across NSW with vegetable growers in past projects and many years working in a plant health laboratory focussing in citrus virology with NSW Department of Primary Industries. Sylvia's roles over the years have been plant biosecurity focussed and recently assisted in many emergency management situations.

Title: Behavioural science insights into improving the adoption of conservation agricultural technologies in the eastern Gangetic plains

Deepa Roy, Sk Mahidur Rahaman, Md Istique Asif, Ashish Kumar Mojumdar, Surya Prasad Adhikari, Roy Murray-Prior, Maria Fay Rola-Rubzen

Abstract: Behavioural science insights of the enhancers and constraints to adoption of conservation agricultural innovations were investigated in the eastern Gangetic plains. Focus group discussions and key informant interviews with smallholder farmers and service providers elicited behavioural factors that were categorised on their 'distance' from decision making. Abstract dispositional factors (risk tolerance, moral and environmental concerns, farming objectives) and social factors (norms and signalling motives) were considered cross-cutting issues. They are more difficult and slower to change, hence farmers' perceptions of the technologies must be changed relative to them. Building group efficacy by working with farmers' federations and cooperatives is a strategy to overcome social norms, when combined with demonstrations, social signalling, social recognition and social comparison strategies. Addressing concrete cognitive factors requires relevant, timely and appropriately sequenced messages that are simple, framed aptly, resonate with the target audiences, increase perceptions of self and collective efficacy and use respected local networks.



Presenter Bio: Deepa Roy is Assistant Professor in the Department of Agricultural Extension, Uttar Banga Krishi Viswavidyalaya (UBKV), West Bengal, India. Her MSc and PhD in Agricultural Extension are from Bidhan Chandra Krishi Viswavidyalaya, West Bengal. She is engaged in teaching and research with specialization in training need analysis, adoption behaviour, and gender. She received the 'Young Faculty in Agricultural Sciences' Award of the 5th Venus International Faculty Awards 2019 and the "Young Scientist Award" in recognition of outstanding work in the field extension and extension research. She has published 12 research papers and working with two ACIAR funded research projects.

Title: Miller-farmer preference in selecting promising rice varieties in Bangladesh

Md. Safiul Islam Afrad, Amlan Biswas, Muhammad Ziaul Hoque, Md. Abdullah Al Mamun, M. Ashraful Habib, Swati Nayak, Saidul Islam

Abstract: The study attempted to identify the characteristics of rice varieties preferred by millers and farmers in five Bangladeshi regions (divisions). Primary data were collected from 99 farmers and 16 millers selected by the International Rice Research Institute (IRRI) as sampled respondents using mixed research methods. A 4-point rating scale was used to assess varietal trait preference. The pairwise preference ranking method was used as a qualitative technique. They indicated differential preferences for varieties according to season (dry or wet) with 'higher yield,' 'higher market value,' 'shorter duration' being of importance to the farmers, while 'size and shape of rice grain,' 'rice grain colour,' and 'milling performance' were more highly regarded by the millers. COVID-19 impacted them negatively though there were some positive points also. Farmers and millers showed different preferences for rice variety selection, which researchers should keep in mind during the generation, development, and extension of new rice varieties.



Presenter Bio: Amlan Biswas is currently a Masters student in department of Agricultural Extension and Rural Development (AER), Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh and graduated from the same university under the faculty of Agricultural Economics and Rural Development (AERD). He is from Gazipur district of Bangladesh where he completed H.S.C. and S.S.C. with outstanding results. Since his family is partially involved with agriculture, from childhood he took interest in agriculture which inspired him to pursue research on agricultural aspects. He has been voluntarily working for many social welfare activities.

Title: Understanding how psychological factors influence adoption of sustainable agricultural practices

Angela J Dean, Rachel Eberhard, Umberto Baresi, Anthea Coggan, Felicity Deane, Evan Hamman, Kate Helmstedt, Barton Loechel, Diane Jarvis, Helen Mayfield, Lillian Stevens, Bruce Taylor, Karen Vella

Abstract: A diverse range of policies and approaches are deployed to promote adoption of sustainable agricultural practices. However, research suggests that their effectiveness may be influenced by diverse psychological factors. Here, scrutinise how psychological factors influence adoption of sustainable farming practices using a participatory modelling approach. Expert knowledge—derived from experts key fields of social change and data modelling—was incorporated into a Bayesian network model, which was then validated with policy experts and practitioners. Overall, findings indicate that in the absence of positive social, psychological and contextual characteristics, the



effectiveness of many approaches to behaviour change—including extension—may be limited. Factors influencing adoption include psychological factors such as farmer values, norms and wellbeing. The influence of social factors on instrument effectiveness points to the importance of understanding our target community, and aligning instrument design to suit their needs and capacity.

Presenter Bio: Dr Angela Dean is an environmental social scientist based at The University of Queensland Her research explores community perceptions of environmental challenges and solutions, explores how life experiences enable or constrain engagement in these issues, and examines the effectiveness of approaches to empower communities in responding to environmental challenges.

Title: Young farmer and new entrant mentoring program

Sarah Wallis

Abstract: The Young Farmer and New Entrant Mentoring Pilot Program (2021) provides an opportunity for young farmers to be paired with an experienced farmer to assist them with developing skills to better manage their farm businesses. The program helps young farmers identify risks, build a professional network and develop business goals and strategies. The program uses experienced farm business consultants to support the relationship between the mentee and the mentor. Mentees represent the beef, grains, prime lamb/wool, dairy and mixed farming industries across the geographical spread of Victoria. This presentation will highlight the key successes from the Young Farmer and New Entrant Mentoring Pilot Program including the development of the mentees confidence and motivation in setting their own business goals, understanding the potential challenges with developing their business, and reflecting on their own professional development. Recruitment for mentees for the 2022 Program is currently underway.



Presenter Bio: Sarah Wallis has a Bachelor of Agriculture from the University of Melbourne Dookie Campus. Sarah coordinates the Agriculture Services Young Farmer project. The project delivers farm business skills to young farmers through Young Farmer and New Entrant Mentoring Program, Young Farmer Business Bootcamps, online groups and eLearning modules. This project supports young farmers across all industries where the need is identified and supported by industry. Sarah has worked for the Department since 2006 where she delivered Whole Farm Planning courses.

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Concurrent Session #8: Friday 11th, 11:00am

Title: Podcasts as a medium to facilitate farmer-to-farmer learning?

Jemma Pearl, Kellyanne Harris

Abstract: The 'AgVic Talk' podcast has demonstrated that podcasts are an innovative way to connect to an agricultural audience especially during a pandemic. The Agriculture Victoria podcast channel was launched on 25 August 2020 and now features two shows, 37 episodes and 6,644 listens. Evaluation was conducted on the pilot and demonstrated that podcasts provide farmers and industry access to latest trends, practices and insights in a convenient and engaging way, when and where it suits them. 'AgVic Talk' has shown that you can successfully inform your audience through podcast by creating engaging content, having interesting talent and personal stories. This has been especially helpful when talking about topics that can be hard to get engagement, like farm safety. Audio has been a great medium to convey feeling, with the audience being able to really hear the emotion in the speakers' voices.



Presenter Bio: Jemma completed a Bachelor of Agricultural Science and Bachelor of Business at La Trobe University, before starting her career at the Birchip Cropping Group. Since joining Agriculture Victoria early in 2019, Jemma's expertise has contributed to climate change, seasonal climate, soil moisture and biosecurity projects, on top of the podcast pilot.

Title: Some complexities and solutions from behavioural science when promoting behaviour change in smallholder farming

systems

Roy Murray-Prior, Maria Fay Rola-Rubzen, Rene Villano, Jon Marx P Sarmiento

Abstract: We are applying behavioural science insights (BSI) to encourage adoption of conservation agricultural and sustainable intensification technologies with smallholder farmers in the eastern Gangetic plains. Potential approaches for integrating BSI with traditional extension theory and practice using BSI theories are outlined. BSI approaches use randomised control trials (RCTs) to assess the causal relationships between desired outcomes and alternative interventions. Some regard RCTs as the 'gold standard' for evaluation, others have identified problems. One solution is to randomise at the village level, with random sampling from the farming families in control and intervention villages to assess the impact of the interventions. The control group should then become part of the next stage of investigations and receive a BSI intervention that has proved beneficial. Initial focus should be on interventions that lead to economically significant adoption levels rather than which component is driving change or the underlying BSI explanation for adoption.



Presenter Bio: Dr Roy Murray-Prior was raised on a sugar farm in the wet tropics of Australia. His initial degree in rural science led to a job as an extension officer. He also has degrees in agricultural extension, agricultural economics. His PhD critiqued economic theory for understanding decision making and used hierarchical decision modelling and personal construct theory to study farmer decisions. He has undertaken research, development and extension projects in India, Nepal, Bangladesh, Laos, Philippines, Indonesia, East Timor, Nigeria, Mozambique, South Africa, PNG, and countries of the South Pacific.

Title: Understanding the engagement dynamics among collaborating organizations: A case study of the pluralistic AES in Kenya

Wycliffe Oyunga, Prof. Ruth Nettle, Dr. Margaret Ayre, Dr. Michael Santhanam-Martin

Abstract: Faced with increasing challenges especially reduced financial resources and the liberalization of economies, the agricultural extension system (AES) has undergone transformation to allow the participation of non-government organizations. This is unlike the first half of the 20th century when it was a preserve of government. The resultant pluralistic agricultural extension system (PAES) now sees different organizations collaborating to deliver extension services to farmers. Understanding the dynamics of engagement in collaborative extension projects and programmes provides an understanding how collaboration works and how it can be improved to benefit farmers and other PAES stakeholders. This study examines engagement dynamics and factors that affect them amongst collaboration organizations in the PAES. The study reveals that collaborative engagement is dynamic in duration, type of organizations involved and extent and the nature of collaboration. It further reveals that trust, power and organizational self-interest are some of the factors that affect collaborative engagement dynamics.

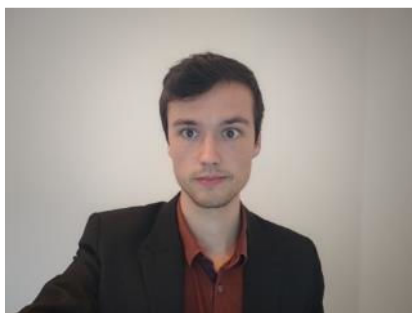


Presenter Bio: Wycliffe Oyunga is a final year PhD student at the University of Melbourne. Previously, he completed his Master of Agribusiness degree (2014) at the same University on an Australia Awards for Africa (AAA) scholarship and was awarded the Dean's Honours award for academic excellence. Wycliffe is a practitioner of longstanding in the field of agricultural extension (advisory) service in his home country Kenya, where he is an extension advisor in the Ministry of Agriculture. He has interest in the general areas of agricultural extension, particularly the role social aspects of the agricultural extension system in promoting sustainable development.

Title: How does the supportive environment influence strategic decisions by farmers in Flemish horticulture?

Mertijn Moeyersons, Erik Mathijs

Abstract: The objective of this paper is to clarify the role of AKIS actors in strategic decisions in Belgian horticulture, and more specifically how the importance of actors differs in time, between farmers and between different decisions. Our data suggest that the supportive environment for operational decisions consists of a diverse mix of family members and private, public and embedded advisory services. We made three key findings for strategic decisions. The supportive environment of a farmer did not change after 10 years of their farming career. The different subsectors of horticulture have the same pool of AKIS actors, but these were not used in the same way by farmers. Farmers facing the same strategic dilemmas did not use the same AKIS actors.



Presenter Bio: Mertijn Moeyersons is PhD fellow at the Division of Bio-economics at the KU Leuven in Belgium. He graduated in 2018 as a Msc in Bioscience engineering and a major in agricultural economics. Following his graduation he started working on European projects as a project assistant. Later, at the start of 2020, he started his PhD on the role of the supportive environment in farmers decision making under guidance of Prof. Erik Mathijs.

Title: A method to estimate the impact of extension programmes on economic, environmental, and social outcomes.

Adam Barker, Denise Bewsell, Vaughan Wilson

Abstract: It is usually difficult to track an extension programme's impact from activities through to outcomes. Challenges include the time for outcomes to be realised, the difficulty of attributing changes in outcomes to specific interventions, and the high cost of collecting evidence of practice change. One consequence is that it is difficult for both extension practitioners, and their investors, to quantify the value that extension programmes deliver. One approach to address this challenge is to supplement traditional evaluation methods with forecasting tools. This presentation describes one such tool – QUICK (Quantifying and Understanding the Impact of Capability and Knowledge). The QUICK model has been used to forecast the outcomes resulting from a family of extension programmes being run across New Zealand. The model highlights the high levels of extension input, and the long timeframes, to 'move the needle' on these outcomes.



Presenter Bio: Adam Barker is Director of Scarlatti Limited - a research, evaluation and analytics firm that works with a range of organisations in New Zealand's primary industries. Adam's work at Scarlatti includes developing approaches to value non-market outcomes and quantify the amount of change resulting from capability building initiatives. Adam holds a Bachelor of Engineering from the University of Auckland and a Doctorate in Engineering from the University of Cambridge, United Kingdom.

Title: Making the link between water quality and farm planning

Terry Parminter and Christine Finnigan

Abstract: A farming community in the Nguturoa Catchment in the Manawatū Region of the North Island in New Zealand monitored nitrogen, phosphorus, and sediment in their waterway. They used that information and knowledge of the soils and topography to identify the potential risk areas on their farms that could affect water quality. These were incorporated in farm plans including practice changes to improve the monitoring results in the future.



Presenter Bio: Terry has been a member and supporter of APEN since its beginnings, he generally participates in conferences, and he writes a number of journal papers each year. Terry has a PhD in management systems in a study of human behaviour models from cognitive social psychology and their application in environmental policy. In New Zealand, Terry works with rural communities, industry-good organisations, regional and central government developing extension strategies to tackle situations involving complex, complicated and chaotic change.

Concurrent Session #9: Friday 11th, 11:25am

Title: Bringing utilisation-focused evaluation into effect in virtual workshops

Tracy Nelson and Gina Lucci

Abstract: The AgResearch Circular Bioeconomy project hosted workshops to explore how to “close the loop” and eliminate waste through multi-disciplinary thinking and innovation. Pandemic travel restrictions meant workshops were held semi-virtually across four locations. A utilisation-focused evaluation (UFE) framework was used to track the success of the workshops, improve on processes for the future, and make it a valuable experience for everyone. An important outcome of the regular evaluation touchpoints was the ability and flexibility to update workshop design to ensure that it was ‘fit for purpose’ with these touchpoints contributing to the success of the hybrid model. Feedback is incredibly important in virtual settings where tone and body language are largely absent, and where the ‘success’ of workshop activities is difficult to gauge. Incorporating UFE principles did not require significant time in terms of implementation, but did require a commitment to the process by the Programme Lead and evaluator.



Presenter Bio: Tracy Nelson has worked as a Social Scientist for the past 17 years. She is currently a Science Objective Leader for Sustainable Agriculture and a Senior Social Scientist at AgResearch, New Zealand. Previously she was the science team leader for the People and Agriculture team. Tracy’s main research interests cover understanding the adoption of new practices and technologies by people and on-farm diversification using qualitative research methods. She has an interest in monitoring and evaluation to ensure the best outcomes for research programmes are achieved.

Title: The role of agricultural industry professionals in raising the aspirations for careers in agriculture

Molly O'Dea, Amy Cosby, Jaime Manning, Nicole McDonald, Bobby Harreveld

Abstract: The COVID-19 pandemic has significantly impacted the way we work and interact with one another, and subsequently how we build trust through new relationships. This paper explores the practicalities and shared lessons of the challenges of remote trust building through the lens of a new tri-national research project between Australia, Fiji and the Philippines. The research project, funded by the Australian Centre for International Agriculture Research (ACIAR) follows an agricultural extension and community development Landcare model at district and national scales in Fiji. The Project was set to commence in March 2021, however it had to adopt an on-line engagement approach in response to the pandemic. This paper shares the lessons and practical advice on networking, brokering, skills sharing and building relationships in cross-cultural contexts through virtual engagement techniques. While significant progress in partnership building has occurred, trust building over a shared meal still remains a priority.



Presenter Bio: Molly O'Dea is a PhD candidate at CQUniversity Australia. She is exploring the nature of agricultural industry-school partnerships as part of the Raising Aspirations in Careers and Education - Gippsland project. Prior to beginning this study, she worked as an Adoption Officer in the Australian sugarcane industry, Farm Manager and Project Officer in agriculture. Molly has completed a Bachelor of Agricultural Science and a Master of Teaching. She brings with her both experience in the agriculture industry and education.

Title: A grounded theory approach to understanding motivation of young professionals in developing and developed countries

Jay A Cummins

Abstract: Young agricultural professionals are challenged by work environments characterised by resource constraints, poor governance and corruption, particularly in developing countries. Understanding mechanisms that drive motivation is essential if workplace environments are to be improved. Using a case study approach, 72 young professionals were interviewed from six countries comprising Eritrea, Niger, Iraq, India, China (Tibet) and Australia. The study applied a grounded theory approach that identified the importance of personal coping mechanisms and resilience to enhance motivation in the emergence of a new theory. Outcomes from the study led to the discovery of four key characteristics crucial to the development of intrinsically motivated young professionals. These were: resilience, mateship, authenticity and altruism. The environments in which many of the research subjects operated rarely supported extrinsically sourced motivational behaviour, with subjects being driven by internally sourced intrinsic motivations. Greater support is required in the workplace, including strategies that support heightened intrinsic motivation.



Presenter Bio: Dr Jay Cummins works with Hort Innovation as a Regional Extension Manager, Tri-State region based in Adelaide. Jay has extensive experience in agricultural extension and adoption research both nationally and internationally, undertaking a range of extension research and capacity building projects in developing countries across Asia, Middle East and Africa. Jay holds a PhD from the University of Adelaide (relating to enhancing the adoption of technologies by Australian grain growers through socio-economic and market segment analysis) and a Doctorate of Business Administration (Southern Cross University) with research focused on understanding the motivational characteristics of young agricultural professionals in developing countries.

Title: Building a strong Knowledge and Innovation system for Beekeeping in Sweden with a global perspective

Lotta Fabricius Kristiansen, Magnus Ljung and Nadarajah Srisikandarajah (Swedish University of Agricultural Sciences)

Abstract: This paper argues the full potential of beekeeping towards sustainable development could be realised by strengthening knowledge and innovation system around beekeeping. Structural deficiencies and lack of advisory services are two bottlenecks for development. A successful 2018 national project to develop the advisory system within beekeeping in Sweden has led to an international initiative called Bee-Extend to build Europe wide “Network for improvement and integration of beekeeping extension, using extension science principles” made up of researchers, advisors and beekeepers from 46 countries and 6 related organisations. Beekeeping involves harnessing complex aspects of environment and managing bee health. Yet information reaching beekeepers is inconsistent and lacks credibility. Professional advisory systems are weak and variable. Disconnect between honey production emphasis and Ecosystem Service function of bees is unhelpful. We present outcomes of early work and ambitions for the extensive international network now evolving as future strong foundation for beekeeping knowledge and innovation.



Presenter Bio: Lotta is a beekeeper since 1998. Works as a consultant and advisor on honeybees and pollination related issues. She is employed at the National Competence Centre for Advisory Services at The Swedish University of Agricultural Sciences. She is the author of a number of basic beekeeping books used in Sweden. In 2019 to 2020 she was the expert coordinator of the European EIP-AGRI focus group on Healthy honeybees and sustainable beekeeping. Since 2019 she is a member of the executive committee of the international bee health organization COLOSS and co-chair of its core project B-RAP, Bridging research and practice.

Title: Introducing sustainability transition concepts to support public research to address complex agri-food challenges

Roxanne Henwood, Helen Percy, Penny Payne, Talia Hicks, Alvaro Romera, Martin Espig, and James Turner

Abstract: Sustainability transitions approaches provide a way of engaging with complex issues. We tested how relevant these concepts are to New Zealand agricultural research by engaging in action research with two research programmes working on complex agri-food sector issues, supporting them to use sustainability transitions thinking. Participants and other science leaders were then interviewed about their use and understanding of sustainability transitions. There was some appreciation and use of sustainability transitions concepts among those



who had received training, though this understanding often lacked clarity. Other science leaders showed some awareness of how they could contribute to transitions, but leaned towards a passive role of providing knowledge and solutions. Our work shows that sustainability transition concepts align well with existing thinking on how to achieve system-level change in the New Zealand agri-food system, but will require a commitment to communication and understanding in order to be enacted.

Presenter Bio: Roxanne Henwood is a social science researcher with a background in horticulture. Initially employed by Massey University as a research officer with a farmer learning project, Roxanne has worked for AgResearch as a social science research associate since 2019. Her work focuses on different approaches to research and how to support transdisciplinarity and transformative research programmes. She has also contributed to a diversity of projects within AgResearch, with publications around perspectives on farm biodiversity, animal welfare, and biosecurity.

Title: Global connectivity for a global extension team

Sarah McIntosh

Abstract: Zespri's Extension team is global and consists of 30+ individuals across five different countries and three different time zones. All teams have one common goal, to inspire and support growers to make continuous improvement in their production of the world's best kiwifruit. This is no small feat and there are many challenges that come with a global team, especially in the current state of the world. Over the past eight months I have been working hard to connect our people and enable them to support each other through the sharing of information and the strengthening of personal connections. In this presentation, I will detail the steps we have taken, and the steps we intend to take in the future, to connect our team through the use of a network of internal global sites and by using Office 365 applications.



Presenter Bio: Sarah McIntosh is a Global Resource Specialist working in the Global Extension Team at Zespri International. Sarah has been with Zespri for 4.5 years and has held other roles within the extension, communications and grower services teams. Her most recent role included the management and administration of Zespri's grower website, social media channels, staff intranet and external facing Zespri.com website. Before Zespri, Sarah completed a bachelors degree in teaching and went on to work in the television advertising space. In her current role, Sarah works to connect a global team of 30+ people through the use of digital workplace applications and beyond.

Concurrent Session #10: Friday 11th, 11:50am

Title: Innovation brokers in the developing country context

David McGill, Margaret Ayre & Hassan Warriach.

Abstract: This research explores the ways in which farm advisors engaged in a farm advisor training program (as part of a research development project) can build innovation broker skills within the current livestock advisory services of Pakistan. Furthermore, it tackles the question; what additional key functions of innovation brokering are important in a developing country context? The study uses qualitative data from two reflective workshops with fifty (7 women, 43 men) farm advisors to draw out functions that are general to advisory roles and those more specific to the Pakistani extension context. The results of this study contribute to the innovation broker literature by identifying three additional innovation broker roles that farm advisors in Pakistan have to play to succeed in the current extension system which include; (1) cross-disciplinary skill development, (2) performing roles beyond their job mandate and (3) the ability to succeed under a hierarchical management systems.



Presenter Bio: David has been working in the international livestock research for development space for over 14 years. He was initially given an opportunity to work in Pakistan managing a research project focussed on dairy extension. This led to a three-year role based in Lahore coordinating research activities, data collection and capacity building of local employees and field officers. The success of this program led to additional funding, building on the previous work and also in terms of project size. David now leads a project in Pakistan looking at 'Improving smallholder dairy and beef profitability by enhancing farm production and value chain management'.

Title: Application of the Work Assessment Method (WAM) to Australian mixed cropping and sheep enterprises

Lisa Rayner, Michael Santhanam-Martin & Nettle

Abstract: Technology has the potential to revolutionise the agri-food sector by addressing issues of labour shortages and social sustainability. However, farmers and advisors are reportedly having difficulty understanding the impact technology will have on workforce organisation and management. The Work Assessment Method (WAM), a quantitative method to assess farm work that has been developed by French livestock scientists and advisors, was applied to two Australian crop and sheep farms in Victoria's Mallee region. Interviews based on the WAM's interview guide were conducted via phone and online with the two case study farms. The WAMs application shows potential as a



tool to support farmers, advisors, and researchers in understanding the possible workforce implications from adopting new technologies. However, further research is required to rework the routine task categories and work definitions to factor in the specific labour and farming features of Australian mixed farming and streamlining to ensure ease of use.

Presenter Bio: Lisa Rayner is a Master of Agricultural Science student who developed a passion for extension and research whilst undergoing her degree. She is currently involved in a research project with the University of Melbourne and Birchip Cropping Group which provided the opportunity to engage with farmers, extension professionals and researchers in exploring tools to help assess workforce organisation.

Title: Building trust in new relationships in the age of zoom; lessons from a tri-national project

Mary Johnson and Clinton Muller

Abstract: The COVID-19 pandemic has significantly impacted the way we work and interact with one another, and subsequently how we build trust through new relationships. This paper explores the practicalities and shared lessons of the challenges of remote trust building through the lens of a new tri-national research project between Australia, Fiji and the Philippines. The research project, funded by the Australian Centre for International Agriculture Research (ACIAR) follows an agricultural extension and community development Landcare model at district and national scales in Fiji. The Project was set to commence in March 2021, however it had to adopt an on-line engagement approach in response to the pandemic. This paper shares the lessons and practical advice on networking, brokering, skills sharing and building relationships in cross-cultural contexts through virtual engagement techniques. While significant progress in partnership building has occurred, trust building over a shared meal still remains a priority.



Presenter Bio: Dr Mary Johnson, RMIT Research Fellow, has worked extensively in rural education and community development within Australia and internationally. A recently completed eight-year Australian Centre for International Agricultural Research (ACIAR) funded project developed a community-based agricultural extension model for conflict vulnerable communities. This model simultaneously built community and institutional capacity while improving small holder farmer livelihoods. Learning from this seminal study will be adapted by Fiji partners in a new ACIAR funded research project between Fiji, the Philippines and Australia.



Clinton Muller previously coordinated the Africa Landcare Network and Landcare International, hosted at the World Agroforestry Centre in Nairobi, Kenya. In this capacity, Clinton was working with smallholder farmer groups through collective action and institutional strengthening for improved natural resource management and livelihood outcomes through a Landcare approach. Currently working as a Senior Consultant with RM Consulting Group, a regional environmental and agricultural consultancy in Victoria, Clinton works on a range of agricultural industry research, development and extension projects, whilst continuing to work on international Landcare activities.

Title: When do we know investment in extension has been worthwhile?

Jane Wightman, Bron Walsh, Adrian Englefield, Olive Hood, Jason Hingston, Jay Cummins

Abstract: A National Industry Development Portfolio review was carried out “to help maximise efficiency of levy investment and impacts for growers”. The review involved a desktop analysis of industry development projects and delivery partner interviews. Key evaluation questions were used to assess the design, implementation and monitoring and evaluation attributes of these projects. Findings indicate the majority of projects demonstrate “effective” or “very effective” grower engagement. Projects adequately provide evidence of meeting project outputs but lack rigour in reporting on outcomes and impact. Delivery partners highlighted confusion in Requests for Proposals and project requirements and the need for capacity building initiatives for project staff. Recommendations to maximise efficiency and impact for growers include improving contractual agreements to enhance the quality of project delivery and providing extension resources and project management training to delivery partners. The Hort Innovation Extension team are working collaboratively with delivery partners to initiate these recommendations.



Presenter Bio: After 10 years farming in the UK, NZ and Australia Jane settled in Australia. After completing a Master of Applied Science – Systems Thinking, the next few years were spent delivering extension in Queensland. Jane also worked in Extension project management – Beef productivity at MLA and has spent 9 years at Hort Innovation in industry services and relationship management and is currently enjoying heading up their Extension team. Jane is enthusiastic about the importance of extension research and is excited about Hort Innovations recent investment in demonstrating the benefits of building capability and capacity in extension delivery for the vegetable industry.

Title: Natural capital accounting for eco-credentials

Karen Thomas

Abstract: This project in the Port Phillip and Western Port region was to demonstrate on-farm natural capital assessments, using Accounting for Nature and Landcare Level 3 methodologies for soil health and native vegetation. There is much interest from many landholders in the region, keen to have evidenced based eco-credentials to support their transition to regenerative based management practices. Accounting for natural capital is one way this could be achieved. Demonstration sites were used to gather reference benchmarking data and baseline field assessments. The results from these were written up into case studies. Several farm walks and events have been held to communicate the learnings and the process for developing natural capital accounts. In future, we hope to deliver a similar project with a local Landcare Network, where interest in eco-credentials is high.



Presenter Bio: Karen has a Bachelor in Ecological Agriculture and Diploma Conservation Land Management. Integrating these qualifications has enabled Karen to promote NRM philosophies and practices in the extension based projects delivered in her region. Karen has been working in sustainable agriculture for over 25 years; from integrated pest and weed management, many research and extension projects with Agriculture Victoria and in recent years as the Regional Agriculture and Landcare Facilitator (or RALF) with PPWCMA. Karen has supported rural recovery for the Port Phillip and Western Port region, following floods and bushfires that have impacted the region over the years. Karen has a strong interest in regenerative agriculture.

Concurrent Session #11: Friday 11th, 12:15pm

Title: Are podcasts a useful extension tool for practice change?

Callen Thompson

Abstract: Central West Local Land Services (CWLLS) has been engaging with producers through podcasts for the last 12 months. The premise for the series is CWLLS staff talking to producers who have made changes in their business, with the hope that listeners will be educated, inspired and empowered to take action and make changes in their own business. The podcast series has been successful at engaging listeners but what we did not know was, how effective is the podcast in getting producers to change their practice. A survey of listeners was conducted which indicated that this podcast series is a useful extension tool to improve producer's knowledge, attitude and create an aspiration to create change, but on its own, it is not leading to a change in practice. Podcasts will need to be integrated into other extension activities such as workshops, which are designed to increase producers' skills, as well as build on knowledge and aspiration.



Presenter Bio: Callen Thompson is a mixed farm advisor with Central West Local Land Services (CWLLS). Now based in Coonabarabran NSW, Callen's background is in agronomy. He worked for ten years as a commercial agronomist based in Northern NSW, then as an extension agronomist for the Northern Territory Government. Callen's current role involves him enabling livestock and crop producers to effectively make decisions to ensure business sustainability. Callen is passionate about pastures and livestock - particularly cattle. He runs a beef cattle operation with his family south of Coonabarabran. Callen has been integral in CWLLS integrating new technology into extension.

Title: Dairy farmer perceptions of heifer genomics

Lee-Ann Monks; Beth Scott; Stephanie Bullen; Michelle Axford

Abstract: Increasing the adoption of female genomic testing, as a driver to accelerate the rate of genetic gain for net profit is a key priority for the Australian dairy industry. The aim of this research was to understand the motivations and barriers to adoption of female genomic testing through semi-structured interviews and self-administered questionnaires. The results showed that farmer awareness of genomics was high, but many had limited understanding of the practicalities of testing. An awareness-building campaign should therefore focus on building understanding of how genomics fits within a farm business. Ensuring farmers have the necessary support to make use of their results will be critical in achieving sustainable adoption. These findings provide the 'people perspective' to inform research, development and extension strategies to increase the rate of adoption of female genomic testing by farmers.



Presenter Bio: Lee-Ann Monks is the founding director of Monks Communication. She holds qualifications in science, communication and public relations. Before establishing Monks Communication, Lee-Ann spent more than 10 years providing communication services in the fields of scientific research, agricultural production and food manufacturing. During this time she established credibility with the media and a reputation as an award-winning journalist who could explain complex topics in everyday language. She held roles as a manager reporting to the board, as a QEAC board member advising at a federal level, in a consultant reporting role, and as an extension officer working with farmers.

Title: Building Pastoral Sustainability Property Management Planning Program impact assessment

Danielle England

Abstract: The Building Pastoral Sustainability Program is a three-year program (2020 – 2022) designed to build the capacity and resilience of pastoral businesses in the SA Arid Lands. Managed by the SA Arid Lands Landscape Board, and an initiative funded by the Australian Government's National Landcare Program, the interim findings of the Impact Report show the program has had a positive impact on participants and their businesses. Danielle will outline the interim results of the impact evaluation, the design process, and the importance of formal evaluation in extension projects.



Presenter Bio: Danielle is passionate about people in agriculture. She has worked extensively across Australia for the past 20 years. Her work has included strategic business development, industry and enterprise strategic planning, agricultural extension and communication, people development training, project design and management. This has included working with Australia's leading grower and industry groups, research organisations and farm businesses to optimise mixed farming profitability and productivity. Danielle has been listed in the Emerald 2014 100 Women in Australian Agribusiness, and was the 2013 Western Australian RIRDC Rural Woman of the Year. Both of these awards recognise her outstanding leadership and passion for the Australian agricultural industry.

Title: Coping strategies for Covid 19 pandemic among leafy vegetable farmers in Epe local government area of Lagos State

Anozie O, Igwe MC, Koyenikan MJ

Abstract: This study examined the coping strategies among leafy vegetables farmers in Lagos State, Nigeria in response to the COVID-19 pandemic. Data was collected from 98 randomly selected farmers on their awareness, perception, coping strategies and constraints with managing the pandemic. Most of the respondents (96%) were highly aware of the pandemic while 62% had an unfavourable perception about it. The key variables that were positively correlated with farmers coping strategies were: formal education ($r=0.661$, $p=0.00$), farm size ($r=0.310$, $p=0.03$), awareness on economy ($r=0.658$, $p=0.000$), health ($r=0.452$, $p=0.000$) and social impact ($r=0.612$, $p=0.000$). Increases in transportation costs ($\bar{x}=2.90$) and lack of access to labour ($\bar{x}=2.80$) were found to significantly constrain the ability of farmers to cope. Farmers' efforts to cope with the pandemic should be encouraged by providing the needed assistance such as soft loans and categorising them as essential workers.



Presenter Bio: Ogochukwu is a junior Faculty member in the Department of Agricultural Economics and Extension Services, Faculty of Agriculture, University of Benin. She graduated with a First-class Honours in the above-named Department and that earned her the position of a graduate assistant in the same Department. She had her Master's degree in Agricultural Extension and Rural Development at the University of Ibadan and is currently a Ph.D. student (Rural sociology) in the same University. She has won a few grants and awards and has attended conferences both locally and internationally (virtually). She has also authored and co-authored some journal articles

Title: Co-design to put the merry back into MERI

Olive Hood and Adrian Englefield

Abstract: In 2020 the Hort Innovation Extension Team conducted a National Industry Development Portfolio Review and an Extension Delivery Partner Needs Analysis Survey. Both initiatives revealed that our approach to Monitoring, Evaluating, Reporting and Improvement (MERI) of extension investments required review. In response, the Hort Innovation Extension team initiated a co-design process with eight of our extension program leads aimed at co-developing a Hort Innovation M&E guide and tool kit that is fit-for-extension purpose. Since inception the participants have been realizing the merrier side of MERI through the sharing of tools and experiences whilst co-developing co-owned resources. The recordings of the events have been used to stage an ethnodrama that captures the lessons from the experience and outcomes. Key themes include developing shared language and concepts, relatability and quality of examples used, and the development of interactive resources. All while capturing the experience of the process and the outcomes achieved.



Presenter Bio: Dr Olive Hood has been facilitating, studying, and building capability in agricultural extension in Australia for over 20 years. Beginning with co-developing improved measurement and management of water resources in the Australian Cotton Industry where she was recognized with a national cotton industry award, Olive has since worked in the grains, grazing and horticulture sectors. Olive's approach to sustaining continuous improvement in extension knowledge and practice has seen her be involved in several programs aimed at building capability in extension including the joint venture for capacity building and more recently working with QDAF HFS to scope opportunities for innovation in horticulture extension across Queensland.



Adrian Englefield is the Hort Innovation Regional Extension Manager for south-eastern Australia. Holding a Bachelor of Applied Science in Viticulture and Wine Science, and a Master of Business Administration from Charles Sturt University, Adrian's early career included managing vineyards before starting off in extension through the NSW Department of Primary Industries as a Development Officer – Viticulture.

Title: GRASS and LCAT—Supporting extension with innovatively collected land condition data and results

Robert Hassett; Matt Brown

Abstract: The Grazing Resilience and Sustainable Solutions (GRASS) project provides extension and on-ground practical support for Queensland graziers to improve land management. Graziers are supported through one-on-one extension, development of an action plan for land management (APLM), and incentive funding for on-property land management and remediation works. The Department of Agriculture and Fisheries (DAF), innovative land condition assessment tool (LCAT), enables extension officers to rapidly and consistently, collect land condition data, and calculate objective results related to grazing land condition and ecological-processes. Data and results are presented in APLMs providing graziers with a record of assessments and guidance on suggested management. Since October 2019, DAF extension officers have collaboratively produced 138 APLMs. As well as improved land condition and reef water quality, recognition of good land management through APLMs may provide further benefits including negotiation with financial institutions and being considered as a low priority for Queensland's Reef protection regulations.



Presenter Bio: Rob is a Principal Agribusiness Development Officer in the Management Practice Adoption team within Rural Economic Development, Queensland Department of Agriculture and Fisheries. Rob has thirty-two years' experience with the Queensland government in land management and administration. He has a practical focus on sustainable natural resource management through technical research, implementation and monitoring, and development and application of operational policy and guidelines. He's fortunate to have had the opportunity to collect land and resource condition data across most of Australia. He's passionate about capability and capacity building to support and protect our lands' economic, environmental, social, and cultural values.

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Concurrent Session #12: Friday 11th, 2:05pm

Title: Cultivate: Behaviours rural leaders need to thrive in tomorrow's world

Cynthia Mahoney

Abstract: The pandemic has highlighted that many of our leadership behaviours and workplace cultures are not fit-for-purpose for the complex world in which we now live. This is being reflected in what is being termed 'The Great Resignation' where many of us are deeply questioning the role of work in our lives and are prepared to move elsewhere if our needs aren't being met. Neuroscience is the new leadership superpower and can help rural leaders support themselves and their people to do well and be well at work. I conducted a survey of my network to uncover what behaviours people wanted their leaders to cultivate (do more of) and to eliminate (do less of). The results correlated strongly with what the neuroscience says enables people to thrive. I also share my six keys on how to be a Cultivating Leader which can enable leaders to achieve sustainable high performance.



Presenter Bio: Cynthia Mahoney is a facilitator, coach, mentor, speaker and author with a passion for personal disruption, neuroscience, positive psychology, courageous conversations, high performance and well-being. Her mantra (taken from the latest neuroscience research) is that "Happier people are higher performing," and she strives to help leaders and teams achieve this in the workplace. She is an Agricultural Scientist with a Masters in Ag Economics and Rural Sociology and a Diploma of Leadership, Coaching and Mentoring. She has just authored her first book, Cultivate: How neuroscience and well-being support rural leaders to thrive.

Title: CottonInfo's development of a low-cost system for adoption and impact monitoring and evaluation

Warwick Waters, Ben Simpson

Abstract: CottonInfo is the Australian cotton industry's joint extension program that connects growers with research. In 2019, CottonInfo transitioned from an external monitoring and evaluation (M&E) provider to an internally designed and managed system using Microsoft Office applications. The system was built over 12 months. Firstly, data collection requirements, including type, sources and timing were mapped. Secondly, a functional input tool using Microsoft Forms was developed to record data. Thirdly, workflows were created using Power Automate to connect and automate data transfer from Microsoft Forms to Power BI. Finally, dashboard reports were designed in Power BI to visualise the data and identify insights. A variety of custom reports were developed for different reporting purposes such as for team members and management committees. This initiative demonstrates that a low-cost M&E system that meets extension requirements can be systematically developed. The CottonInfo team wish to share these learnings with other extension organisations.

Presenter Bio: Warwick Waters has been the Manager of the cotton industries extension program, CottonInfo, for the last seven years. Previous roles include extension delivery in the dairy industry, working in the social research team at AgResearch NZ. He is actively interested in supporting the development of extension in Australian agriculture as the coordinator of the X-RDC Extension Managers Network, an informal group that is focused on sharing extension experience between RDC's and exploring opportunities for co-funding research and development of extension practice.

Title: Women led community-based rice seed entrepreneurship model in Bangladesh: current status, challenges and opportunities

Md. Safiul Islam Afrad, Nuruzzaman, Md. Enamul Haque, Mashrat Jahan , Muhammad Ashraful Habib , Swati Nayak, Saidul Islam

Abstract: This study assessed the current status, challenges, and opportunities of Community Based Rice Seed Entrepreneurship Model (CBRSEM) in terms of systematic mobilization, capacity building, access to quality rice seed, benefits accrued, and frequently encountered constraints. Farmer respondents (n=92) were selected from two CBRSEMs facilitated by the Rangpur Dinajpur Rural Service and implemented by the International Rice Research Institute. Quantitative and qualitative data were gathered through a series of interviews and focus group discussions. Farmers' participation in CBRSEM developed their communication skills, social relationships, and decision-making ability. At the same time, it improved practices in threshing, harvesting, and sowing of quality seeds that increased rice yields. Although the CBRSEM program generated benefits, the respondents continued to face production challenges such as inaccessibility to a moisture meter, high production costs, and labour-intensive manual weeding. CBRSEMs can produce positive impacts despite ongoing production challenges and could be applied at the national level.



Presenter Bio: Nuruzzaman is currently an MS student of Bangabandhu Sheikh Mujibur Rahman Agricultural University under the Department of Agricultural Extension and Rural Development (AER). He has recently completed his Graduation(BS) from the same university under the faculty of Agricultural Economics and Rural Development (AERD). He has passed his HSC and SSC each with a GPA of 5.00 (out of 5.00). He belongs to many organizational participation but one of them Kaler Kantha Shuvashangha BSMRAU Unit which is a fully non-beneficial social welfare organization is run by his jurisdictions. He is also rich in co-curricular activities like painting, singing, management and leadership capacity.

Title: How can extension services facilitate learning to help the farming sector adapt to flash flooding?

Md Kamruzzaman, Katherine Anne Daniell, Ataharul Chowdhury

Abstract: This research examined the roles of the Department of Agricultural Extension (DAE) in Bangladesh in facilitating learning among farming communities to adapt to flash flooding. The research was conducted at the north-eastern part of Bangladesh and data were collected with various respondents, including DAE staff, using key informant interviews and focus group discussions. The findings showed that DAE needs to consider contextual concerns and local needs associated with flash flooding in facilitating learning approaches. The DAE should involve a range of relevant actors, including women farmers and the private sector, and allow them to jointly evaluate the effectiveness and provide feedback on agronomic practices and agricultural technologies suggested for flash flooding adaptation. The research highlights some policy implications for embracing the new roles of Extension services in facilitating learning to help the farming sector adapt to flash flooding.



Presenter Bio: Mr. Md Kamruzzaman is a PhD fellow at the Australian National University, Canberra. He has more than six years of teaching and research experience in Extension and Advisory Services at a public university in Bangladesh. His research interests largely focus on innovation for climate change adaptation, use of digital tools for the agricultural development.

Concurrent Session #13: Friday 11th, 2:30pm

Title: Knowledge and information exchange within regenerative networks in south east Queensland

Natalie Jones

Abstract: Interest in regenerative agriculture is growing rapidly as producers seek new approaches for improving profit, production and environmental performance within their farming system. Innovation in regenerative agriculture is largely driven from the bottom-up, with institutional support from Government and scientific organisations lagging. Semi-structured interviews were used to explore how regenerative producers, and other stakeholders, in the SEQ region access and share knowledge. It also examined what kind of information they are unable to access and identified barriers that may be inhibiting information flow. These insights create new opportunities for supporting the exchange of knowledge and information throughout the region to drive innovation in regenerative agriculture as a viable pathway for driving greater uptake of sustainable agriculture.



Presenter Bio: Natalie Jones is a lecturer and researcher within the School of Agriculture and Food Sciences (University of Queensland). She is a social scientist involved in building a research program around regenerative agriculture, and is leading a consortium of interdisciplinary researchers to further extend the evidence base of regenerative production systems, focusing on biophysical, nutritional and social dimensions. In addition, she has established a strong track-record in studying mental models and values in relation to natural resource management, and is currently involved in an agricultural research project in Fiji aimed at developing a value-chain for coconut wood.

Title: Solving the collaboration conundrum – a meaningful approach to improving industry and government collaboration in biosecurity

Callum Fletcher

Abstract: The presentation will outline the successful pilot of an industry and government collaboration delivered by embedding an industry biosecurity coordinator within DAWE's NAQS plant health surveillance team in Cairns for the majority of 2021. It will discuss specific engagement initiatives that benefited both agencies and delivered new perspectives, skills and improved outcomes for plant biosecurity. This 'sustained collaboration' approach discussed can be used by others working in biosecurity to improve preparedness and resilience across all sectors. Common factors that help improve the relationship-building and trust between industry and government are outlined. Specific approaches to model joint outreach engagement activities targeting key stakeholders will also be presented. This approach provides

a low-cost, high-return model for future embedding scenarios that will be jointly beneficial for both industry and government achieving a truly 'shared responsibility' approach to responding to Australia's growing biosecurity needs and demands.

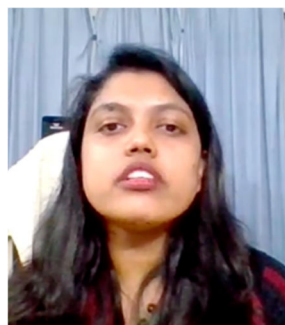


Presenter Bio: Callum Fletcher is the Biosecurity Coordinator at Ausveg and manages the farm biosecurity program. His background is in entomology, and he primarily works on exotic or notifiable insect pests in horticulture. In this role he works across Australia's vegetable industries, state and federal government and research systems to improve the nation's biosecurity preparedness and resilience. His work is to promote improved biosecurity on farm and within communities, represent industry at government forums and committees and to develop research programs that will aid and improve our ability to respond to biosecurity incursions. He was on secondment with NAQS in 2021.

Title: Impact of Ecosystem management and rural development in Dagonbhuiyan Upazila under Feni District

Md. Safiul Islam Afrad, Maifur Jahan Oishi, Md. Abdur Razzaque, Md. Abul Hossain Molla

Abstract: This study evaluated the impact of ecosystem management (EM) on rural development (RD). Ninety respondents were selected from the Feni district, Bangladesh. A mixed research design was employed in the study. The impact of EM on RD was measured in terms of social, economic, environmental, political, and cultural issues using a 4-point rating scale. The majority possessed moderate knowledge and a favorable attitude towards EM practices and indicated high impact of EM on RD. The majority showed low awareness of sustainable ecosystem, rural development issues and labor insufficiency with high cost. They felt more extension services, subsidies, training, input support, and favorable socio-political condition would solve these problems. Gender, occupation, annual family income, training experience, and organizational participation had a positive impact on EM whereas family type had a negative impact on EM. The positive attitudes towards EM&RD mean motivational campaigns and functional training may be arranged for gender-balanced participants.



Presenter Bio: Maifur Jahan Oishi is the daughter of Mr. Shamsuddin Ahmed and Mrs. Del Afroje, born in 1995 in Dagonbhuiyan upazila of Feni district. She is an MS student in the Department of Agricultural Extension and Rural Development, BSMRAU, Bangladesh. She graduated from Department of Agriculture under the faculty of Biological Science, Noakhali Science and Technology University with GPA of 3.67 (out of 4.00). She passed SSC and HSC with GPAs of 3.73 (out of 4.00) and 5.00 (out of 5.00), respectively. She is a debater and took part in different debate competitions along with her academics.

Factors influencing the organizational capacity of Extension services to support adaptation to flash flooding

Md Kamruzzaman, Katherine Anne Daniell, Ataharul Chowdhury

Abstract: This study explores the factors that influence the organizational capacity of the Department of Agricultural Extension (DAE) in Bangladesh to help rice farming adapt to flash flooding. Drawing on the capacity development for agricultural innovation systems theory, data were collected with DAE staff using a survey, focus group discussions and key informant interviews. The results showed that various aspects associated with managing staff competency and establishing contact with other organizations significantly influenced the organizational capacity of DAE. These aspects include the influential position of DAE in various committees, a culture of recognition and rewards for good work, manageable work-loads, freedom of work, support for field activities, support for collaboration, support for ICT use and vehicle supports. This research is significant for the policy makers to enhance the capacity of Extension services for adapting to flash flooding.



Presenter Bio: Mr. Md Kamruzzaman is a PhD fellow at the Australian National University, Canberra. He has more than six years of teaching and research experience in Extension and Advisory Services at a public university in Bangladesh. His research interests largely focus on innovation for climate change adaptation, use of digital tools for the agricultural development.

Concurrent Session #14: Friday 11th, 2:55pm

Title: Carbon farming – are extension professionals ready?

Donna Lucas, Carl Larsen, Dr Doris Blaesing, Clinton Muller, Ossie Lang

Abstract: Increasingly producers are turning their attention to carbon farming. There are opportunities for producers to diversify their income, access new markets, and/or increase farm productivity. However, carbon farming practices and participation in carbon markets is complex. Furthermore, it is difficult to know 'who's who in the zoo', and whom to trust. Extension services often focus on farm practice change, and some programs focus on quite specific practices. In the context of carbon farming, there is a need to focus on capacity building and co-learning. This paper explores the key considerations for effective extension and engagement in carbon farming based on the needs of farmers, land managers and the extension professionals. Key considerations include: an appreciation of the complexity in decision making for landholders, understanding the relevant science about carbon farming and keeping abreast of changing information and policies. Supporting the adoption of carbon farming is thus an extension challenge.



Presenter Bio: Donna is an Associate at RMCG based in Tasmania. She is from a farming background and studied Agricultural Science at the University of Tasmania after working in accounting. Donna has 13 years' experience in private consulting to agricultural businesses in Tasmania and working on national extension projects. Donna works with rural businesses and industries to understand carbon farming, navigate the complexity, and make decisions with confidence.

Title: Webinars applauded by the chicken meat industry

Felicity McIntosh, Rachele Osmond and Jillian Templeton

Abstract: Online delivery isn't a substitute for face-to-face in the chicken meat industry, but it hasn't been all bad. The 'Training and extension for the chicken meat industry' project, which is funded by the AgriFutures Chicken Meat Program, pivoted to online delivery of industry webinars and forums in response to the pandemic in 2020. There has been a great response from researchers and industry. Since early 2020, 18 webinars have attracted 791 participants from 1402 registrations—an average attendance rate of about 56%. Key industry topics such as litter management, ventilation, nutrition, gut health, biosecurity and bird behaviour have been discussed with 25 researchers, encompassing 30 individual research projects. Positive participant feedback, registrations, attendance and the results of an independent mid-term project review indicate this delivery format has an important role alongside face-to-face activities—pandemic or no pandemic.



Presenter Bio: Rachele Osmond is Research Manager for the Chicken Meat Program with AgriFutures Australia. Previously, she initiated and led the successful national training and extension project for the chicken meat program with Queensland's Department of Agriculture and Fisheries. Rachele has been involved with extension for the last 20 years, working across various agricultural industries.

Title: Perceived impact of rice seed production, processing and distribution training on the stakeholders in Bangladesh

Md. Safiul Islam Afrad, Tanzina Tazmim Tani, Foyez Ahmed Prodhan, Md. Arifur Rahman Khan, M. Ashraful Habib, Swati Nayak, Saidul Islam

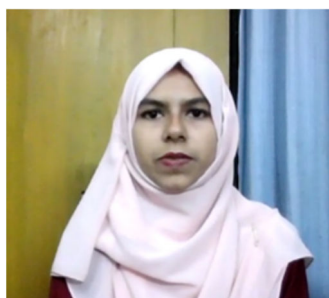
Abstract: The study examined the perceived impact of 6 one-day training programs on rice seed production, processing, and distribution by the rice seed stakeholders. The training was conducted by BADC and founded by IRRI. The stakeholders included 127 rice seed dealers, 42 growers, and 14 dealers cum growers across four divisions of Bangladesh. They were interviewed in face-to-face situations before and after each training session using a pre-designed interview schedule which included 15-relevant questions discussed in the training program. The perceived utilization of training outcomes was measured by using a 5-point rating scale. Results indicate improvement in the learning outcomes of the issue designed for. The differences in the results of pre and post evaluation were found statistically significant. Dealers expressed their perception to have moderate use of their training outcomes whereas growers and dealer cum growers were highly optimistic to use their knowledge and skill obtained from training.

Presenter Bio: Tanzina Tazmim Tani enrolled as an MS student under the Department of Agricultural Extension & Rural Development, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh in winter 2020. She graduated from the same university under the Faculty of Agricultural Economics & Rural Development with CGPA 3.127 out of (4.0). She has passed SSC and HSC in 2012 and 2014 with GPAs of 5.00 and 5.00, respectively. By this time, she almost completed her course works and pursued her research intensively. She wants to work with renowned research institutions in the future and achieve skills in the field of research.

Title: Dealer-customer partnership in rice production demonstration: assessment of private extension system in Bangladesh

Md. Safiul Islam Afrad, Tanjina Parven, Shaikh Shamim Hasan, Sajia Sharmin, M. Ashraful Habib, Swati Nayak, Saidul Islam

Abstract: The main objective of this study was to evaluate the private extension service rendered through dealer-customer cooperation for rice farmers. Thirty-three rice seed dealers and 92 farmers across 6 divisions of Bangladesh, were the focus of the study. Mixed research methods were used and five-point rating scales were constructed to evaluate the strong and weak points of the system. Farmers indicated high profit, greater improvement in decision making, and improved marketing skills as the strong points while benefit to small farmers, increasing local rice production and improvement in decision making were identified as the vital points by the dealers. Farmers indicated the slow distribution of inputs as the weakest point but both parties agreed that they were poorly integrated. However, the results indicate that both dealers and farmers benefit from the system. As this is a new approach, further evaluation is necessary as private extension expands.



Presenter Bio: Tanjina Parven is an MS student of Department of Agricultural Extension & Rural Development, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh. She graduated from the same university under the Faculty of Agricultural Economics & Rural Development with securing GPA 3.356 (out of 4.0). She received general government scholarship in SSC. She passed SSC and HSC with GPA of 5.0 and 4.83 (out of 5.0). She secured solid position as one of the top three in inter-university competitions, essay writing competitions etc. She has been engaged in extensive studying and research. She dreams for working with renowned research institution in future.

Poster Presentations: from Thursday 10th, 3:45pm – 4:45pm

Title: Pivoting extension to support RubyRed Kiwifruit™ growers during COVID 19 pandemic in 2021

Iona Condie and Robin Barker-Gilbert of Zespri Global Extension Team, Tauranga, New Zealand

Abstract: RubyRed Kiwifruit™ is a new kiwifruit variety and knowledge about producing a new kiwifruit commercially is gained as it progresses through the pre-commercial trial and in the first few years of growing it commercially. In 2021, Zespri planned five extension activities with growers of the new RubyRed Kiwifruit™ to share knowledge about establishing the new variety and producing its first commercial crop*. The Zespri Global Extension Team pivoted with each activity to meet changing government requirements to keep people safe from the COVID 19 pandemic. Lessons were learnt about managing people, adapting to unfamiliar technology, and communicating clearly. The extension team and the RubyRed Kiwifruit™ growers saw activities pivot effectively and knowledge about growing the new variety and delivering extension during a pandemic cumulate with each event. Note: The red kiwifruit in supermarkets to date has been from the pre-commercial trial.



Presenter Bio: Robin has been with Zespri for 18 months working as an extension specialist supporting the commercialisation of the new RubyRed™ variety in conjunction with general extension tasks. He previously worked for kiwifruit postharvest companies including Seeka and Aongatete in grower and packhouse management roles. Developing relationships in an authentic and fun way have been important in all Robin's roles.

Title: Developing and maintaining Australia's vegetable and potato industry's biosecurity integrity through best management practice changes

Zali Mahony, Callum Fletcher

Abstract: The AUSVEG Farm Biosecurity Project, co-managed with Plant Health Australia, aims for improved preparedness, response, and management of biosecurity risks to the Australian vegetable and potato industries. Established in 2014, the project has employed various primary engagement tools to achieve program goals, however, its success can be attributed to its ability to support cultural and social shifts in industry as well as evolve and adapt to environmental challenges and pandemics. Through this we have seen an increase in growers reporting suspect pests and diseases, high standards of on-farm biosecurity measures, staff training and their increased capacity to recognise key pests and symptoms of disease, and the installation of farm gate biosecurity signs. The project has succeeded in evolving the narrative on the importance of biosecurity as well as shifting the social construct behind biosecurity responsibility from a solely government responsibility, to a shared responsibility.

Presenter Bio: Zali Mahony joined AUSVEG in March 2021 and holds the position of Biosecurity Officer working on the AUSVEG Farm Biosecurity Project, aimed at helping improve farm preparedness to biosecurity risks and raising the awareness of potential biosecurity threats. Prior to AUSVEG, Zali studied a Bachelor of Science in Agriculture at the University of Sydney, specialising in Entomology and received First Class Honours for her project looking at the interactions between non-native pine beetles, their fungal associates and pine trees in NSW forests as well as relevant biosecurity implications.

Title: How do we get kiwifruit growers to trial alternative bud breakers?

Osamu Francis

Abstract: The New Zealand Environmental Protection Agency recently reassessed the use of the bud breaker enhancer Hydrogen Cyanamide and is proposing to phase out its use in the production of kiwifruit due to health risks to applicators and the environment. Hydrogen cyanamide is an important chemical that supports the production of kiwi fruit, and its loss would impact growers' profitability. In response, Zespri is looking at alternative bud breakers that are safer to use and safer on the environment. The Global Extension Team has started a discussion group with growers who have trialled alternatives and with agri-chemical companies that manufacture the products. The objective is for more growers to trial alternatives next winter to gather data in order to better prepare for the future. The key findings are that few growers are using alternatives at the moment, and that the results are varied with typically worse results than hydrogen cyanamide.



Presenter Bio: Osamu Francis works as the New Zealand Extension Delivery Manager in the Global Extension Team at Zespri International Ltd.

Title: Farms2Schools- taking farms into schools during a global pandemic

Karen Thomas

Abstract: This project was funded during the COVID-19 pandemic as part of the State Government's Working for Victoria stimulus package to maintain professional employment throughout the extended lockdown in Victoria. The Port Phillip and Westernport Catchment Management Authority (PPWCMA) employed three project officers to deliver in-person incursions and excursions to the school community in greater Melbourne, but this was thwarted by lockdowns. Instead, farmers connected with students remotely; initially when students were in-home and later in 2020, in the classroom. The challenges of utilising multiple online platforms, internet access and classes of up to 25 children learning from home were numerous but the program adapted to meet these challenges. Farmers confidently moved away from pre-prepared PowerPoint presentations to host live sessions from their paddocks, taking students on tour. The program ran for six months; delivered 240 online incursions; and involved 49 schools, with 9963 students and 40 farmers participating.



Presenter Bio: Karen has a Bachelor in Ecological Agriculture and Diploma in Conservation Land Management. Integrating these qualifications for managing NRM in productive landscapes is the focus of Karen's work and passion. Karen has been working in sustainable agriculture for over 25 years; firstly, in integrated pest and weed management, IPM research and Ag extension projects with Agriculture Victoria and in recent years as the Regional Agriculture and Landcare Facilitator (or RALF) with PPWCMA. Karen has supported rural recovery for the Port Phillip and Western Port region, following floods and bushfires that have impacted the region over the years. Karen was introduced to farming through her grandparents and relatives who lived in the Wimmera and SW Vic districts during Karen's childhood. Karen is an advocate for regenerative farming and supporting food and fibre production in Melbourne's food bowl.

Title: Inspiring the next generation of beef producers to be productive and proactive pastoralists

Matthew Richardson

Abstract: Facilitating the adoption of practice change can often pose a challenge to extension officers. One strategy is to engage with the next generation. Rockhampton Department of Agriculture and Fisheries (DAF) beef extension officers were offered the opportunity to work with Rockhampton Grammar School's agriculture program. Extension officers explained to the students that the GRASS program has been designed to support Queensland graziers to develop and implement a tailor-made action plan for land management (APLM). The APLM provides graziers with tools and information to identify, improve and maintain their land condition while improving ground cover and



reducing soil loss. Extension officers demonstrated the Land Condition Assessment Tool (LCAT) and gave students the opportunity to try it for themselves. This on ground method proved very popular with the students. The experience left DAF extension staff advocating the importance of engaging with students as an essential strategy to achieve practice change.

Presenter Bio: Matthew Richardson is a Beef Extension Officer working for the Department of Agriculture & Fisheries based in Rockhampton, Queensland. He has worked in this role since February 2021. Prior to this Matthew completed a Bachelor of Agriculture at the Central Queensland University. He is actively involved in the Grazing Resilience and Sustainable Solutions Program (GRASS) & The Northern Breeding Business initiative (NB2) as well as the day-to-day beef extension work.

Title: Subsurface drip irrigation performance in northern Victoria from the farmers perspectives

Rabi Maskey, Amjed Hussain and Rebecca Pike

Abstract: Ongoing uncertainty in water allocation and rising water prices in northern Victoria mean that farmers may think about changing their flood irrigation system to pressurised systems. Subsurface drip irrigation (SDI) systems deliver water to the plant root zone. This is more water efficient than flood systems which have higher losses due to evaporation, surface drainage and deep drainage. A desktop study conducted by Agriculture Victoria showed that significant gains in pasture production and water savings were required for SDI to be economically sustainable. This paper explores the cost, performance, issues, and solutions of SDI systems operating within northern Victoria. This study will present the strengths and issues of SDI from the perspective of farmers using this system and the potential to make it more efficient and affordable. It will also identify research and extension gaps that need to be addressed to make these systems economically viable and feasible for irrigators.



Presenter Bio: Rabi Maskey is a Senior Irrigation Extension Officer with Agriculture Victoria located in Tatura. Rabi has been working as an extension officer in the area of irrigation and drainage technology by assisting irrigators to improve water use efficiency on farm. He is currently involved in the development of guidelines to provide direction for farmers going through the process of selecting appropriate irrigation systems for their requirements. He has also been recently involved in developing series of benefit-cost case studies focusing on different irrigation infrastructure technologies adopted by farmers in northern Victoria. These studies focused on understanding the benefits and impact of irrigation infrastructure investment on farm profitability.

Title: Working in a pandemic- a digital solution to lockdown

Isabel Bryce, Ryan Honor

Abstract: Extension officers face challenges in their everyday roles and are constantly looking for better ways to communicate and engage with their stakeholders. When COVID came along, extension officers from the Queensland Department of Agriculture and Fisheries (DAF), who were working to increase adoption of best practice in the Great Barrier Reef catchment, had to think outside the box and develop digital solutions to keep connected to their stakeholders including: a monthly e-newsletter; a podcast; videos; online webinars; a virtual field day; online facilitation training; a digital 'flip-book'. 'Necessity is the mother of invention' and our DAF Reef extension teams met the challenges thrown up by the pandemic by developing different and fit for purpose ways to stay connected with our stakeholders. These new methods are now incorporated into their regular extension engagement activities.



Presenter Bio: Isabel originally trained and worked as a journalist before attending university and graduating with a degree in Economics, followed by a Masters degree in Community Education. She has demonstrated expertise in strategic communication and stakeholder engagement in a range of high-profile roles in government and the private sector in Australia and the UK. Her current role is with the Queensland Department of Agriculture and Fisheries reef water quality program where she works with extension staff to help them extend their reach to a wider range of stakeholders and communicate the benefits of adopting best practice to growers and producers.

Title: Influences on landholder decision-making - A visualisation

Morag Anderson and Doris Blaesing

Abstract: Under the National Landcare Program: SmartFarms Small Grants, RMCG delivered a program for those working in Landcare/NRM in Tasmania to further develop their landholder engagement and extension skills. Webinars and workshops were delivered in 2020/2021. We developed a 40-page guide "Landholder engagement – communicating, learning, and influencing decision-making" that captured all content and provides project legacy, distributing it to participants and other interested stakeholders. The guide discusses theories of communication, adult learning and decision-making and highlights the complexity of on-farm decision-making. It describes the engagement and timeframes that may be required to achieve on-farm and related natural resource management changes. The guide contains an infographic that summarises and illustrates some of the many factors that influence landholder decision-making. These have been collated from several sources including participants. Based on positive feedback, particularly for the infographic, we believe it is useful for all extension practitioners and wish to share it more widely.



Presenter Bio: Morag Anderson, Consultant, RMCG, BSc (Hons), Dip.Proj.Mgmt. Morag has a science background and a broad understanding of environmental disciplines. She has a very good understanding of regulatory processes, with skills in conceptual frameworks, critical thinking, editing, facilitation and project management. She has worked across a wide range of waste management, natural resource management, agriculture, aquaculture and renewable energy projects. Alongside strategy work, she often finds herself developing materials to communicate technical information to a wider audience and co-ordinating stakeholder engagement.

Title: The Work Assessment Method shows potential to improve performance and social sustainability on Australian dairy farms

Michael Santhanam-Martin & Ruth Nettle

Abstract: Social aspects of livestock systems, including farm workforce and work organisation, have received less research attention than the biophysical and technological aspects. We tested the applicability to Australian of a French method for assessing work organisation: The Work Assessment Method (WAM). The WAM examines different types of work (routine, seasonal), who does the work (owner-managers, employees, contractors) and how these change seasonally. A measure of social sustainability is a key feature. We trialed the WAM on two Victorian dairy farms. The method characterised in detail the sources of overwork for each farm, enabling discussion of how the social sustainability and overall performance of the farms could be improved. The farmers reported that the method provided insights not available from current financial and physical analyses. The WAM shows potential for supporting farmers, advisors and researchers in work aimed at improving farm social sustainability and profitability, but requires adaptation to Australian conditions.



Presenter Bio: Michael Santhanam-Martin is a lecturer in Agricultural Production Systems at the University of Melbourne. He has a background in international agricultural development and Indigenous community development. He has been a member of UoM's Rural Innovation Research Group since 2011 and has carried out research on industry governance, social sustainability of farming systems, farm succession, climate change adaptation, and several aspects of farm work. Michael's research has mostly focused on the Victorian dairy and horticultural industries. Michael teaches mostly in UoM's Bachelor of Agriculture degree.

Title: Improvised extension – Connecting with Queensland graziers through a pandemic

Ryan Honor

Abstract: Promotion of the Grazing Resilience and Sustainable Solutions (GRASS) project was disrupted by the Covid-19 pandemic. Travel restrictions prevented face-to-face contact with the target stakeholders. Virtual approaches were adopted by the DAF GRASS project team to create awareness of the project and to effectively conduct project activities. Initially, a promotional four-minute video was produced to outline the structure and benefits of the GRASS project. The GRASS project video was published on the DAF FutureBeef YouTube channel, along with a GRASS podcast. Ongoing virtual connection to graziers involved with the GRASS project was maintained through the monthly release of the 'Grazing Update' e-newsletter. Virtual approaches to connecting with stakeholders were successful as the promotional video had 1,363 views on YouTube and 7 FutureBeef e-bulletin articles featuring GRASS have had 1,302 views, to date. Virtual strategies are now being incorporated into ongoing extension approaches to complement traditional, face-to-face engagement activities.



Presenter Bio: Ryan Honor is a Beef Extension Officer at the Department of Agriculture and Fisheries, Rockhampton, Queensland. Ryan enjoys assisting graziers through his involvement in the Grazing Resilience and Sustainable Solutions Program (GRASS) & The Northern Breeding Business initiative (NB2).

APEN 2022
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2022 Extension Micro-Courses

AgInnovate is proud to deliver a range of 90 minute workshops once a month during 2022 for extension professionals.



Please join us as we look at the theory behind the topics, and then explore how we use them in the real world of agricultural extension. It's a great opportunity to swap stories and to see how other extension officers from across Australia are using these tools and techniques.

All will be delivered by Danielle Lannin England and Rebecca Wallis, as well as a range of extension specialists from across Australia. Both Dani and Bec have extensive experience in designing, delivering, and managing agricultural extension programs.

From local farmer-led trials to national programs, they have been there and done that.

March | Monday 7th | 11am EDST

Adult Learning Cycle

To effectively change what you do, you need to go through the action learning cycle which lets you research the topic, plan your approach, try it, and adjust it for future use.

This goes for everything from making a cup of tea to changing crop types. This workshop will introduce you to the adult learning cycle and give you practical tips on how to incorporate it into your everyday work.

April | Monday 4th 11am EDST

Opening and Closing with Purpose and the Call to Action

Often what sticks with us when we leave a workshop, field day or farm walk is the last thing we heard. So, it is really important we give farmers the chance to remember other things, and also to think about how they might apply it at home. This workshop will give you the tips and tricks to enable this to happen, plus a lot more that will make your job as a learning facilitator a lot easier.

May | Monday 9th 11am EST

Facilitating Learning Groups

Learning groups are great fun, and a great way for farmers to learn. There are tips and tricks you can use which will help you achieve your project goals, and ensure the farmers get the most out of their day.

June | Tuesday 7th | 11am EST

Making Subject Matter Experts Work for You

We all need subject matter experts. They are the key link between research and extension. But how do you use them so they benefit the farmers, and not the other way around (AKA ticking a box on a research funding contract).

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July | Monday 4th | 11am EST

Creating Engagement in Extension Programs

Creating engagement between landholders, grower groups, researchers and government agencies is one of the keys to successful extension. This workshop will let you define what engagement means to you and provide you with practical tips on how to create, maintain and measure engagement.

August | Monday 8th | 11am EST

Managing Change in Rural Australia

As the quote goes, 'change is hardest at the beginning, messiest in the middle and best at the end' (Robin Sharma). To adopt anything farmers need to change. This workshop will introduce you to different change models and look at how we can provide support to farmers to make the change easier.

September | Monday 5th | 11am EST

Project Management for Agricultural Extension

As extension professionals it's not all about the fun stuff with farmers, we need to ensure we are meeting the needs of our funding bodies as well. This workshop will give you some simple project management tools to make the job a bit easier.

October | Monday 10th | 11am EDST

Stakeholder Mapping

Our stakeholders (target farmers) are the most critical element of any extension project. Taking the time to map them, and their information sources and trusted advisors, is one of the key success factors for any extension program. Join us in this workshop to find out the approaches to use and tools to make it easier.

November | Monday 7th 11am EDST

Intro to Evaluation

Evaluation starts at the beginning of any good extension program. Yes, you heard it correctly! Find out why evaluation starts-at-the-start and find out how you can make it easy and enjoyable, something that adds value to your work as an extension professional.

December | Monday 5th | 11am EDST

Adult Learning Styles

When we ask farmers to adopt a new tool or practice into their business, they need to learn about it, and then adopt it for use on farm. Adults learn in different ways so it is important we use different delivery styles to tap into our different learners. This workshop will introduce you to the different styles and give you tips on how to use them.

For more information phone Dani on 0429676077

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AGMARDT

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We strategically invest in Food and Fibres initiatives that encourage:

- innovative thinking,
- research capability
- collaboration
- developing emerging leaders in New Zealand's primary sector

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