CONFERENCE PROGRAM
AFIC 2019 - GOLD COAST, QLD
MEETINGS AND SESSIONS

WEDNESDAY SEPTEMBER 4TH

Fertilizer Australia Meeting
13:00 – 15:30  Fertilizer Australia Board Meeting – The Board Room
15:30 – 16:00  AFTERNOON TEA – Hydrate Bar
16:00 – 17:00  Fertilizer Australia AGM – Cypress Room 1

AFSA Meeting
15:30 – 16:00  AFTERNOON TEA – Hydrate Bar
16:00 – 17:00  AFSA National AGM – Cypress Room 2

Welcome Reception
18:00 – 21:00  Poolside RACV Royal Pines

THURSDAY SEPTEMBER 5TH
Royal Poinciana Room

08:30 – 10:00  Session 1 – Public Policy and Economics
Fertilizing the farm and not the estuary – working towards best practice in collaboration with industry – Malcolm Robb
Regulating for reef water quality - an update – Elisa Nichols
Protecting agriculture’s freedom to operate – Matthew Cossey
Economic update - where to for Australia’s agricultural sector – Phin Ziedell

10:00 – 10:30  MORNING TEA
Trade Display – Hydrate Bar
Trade Display – Norfolk Hall
Machinery Display – Podium Lawns
Opportunity for interaction with the More Profit from Nitrogen group
### THURSDAY SEPTEMBER 5TH

#### 10:30 – 12:00  Session 2 – Market opportunities and fertilizer market outlook

- **A cotton industry in northern Australia a new opportunity with some old challenges** – Dr Stephen Yeates
- **Kalium Lakes - developing Australia’s first SOP operation** – Brett Hazelden
- **Panel discussion on supply and demand factors likely to impact the Australian fertilizer market over the coming 2 years to be chaired by Tanya Rybarczyk (CSBP)** – The panel will consist of Carl Roache (Argus Media), Chen Shiqing (Wengfu), Stephan Titze (Incitec Pivot Fertilisers), Brett Freer (Landmark) & Dr Kate Burke (Think Agri).

#### 12:00 – 14:00  LUNCH

- Trade Display – Hydrate Bar
- Trade Display – Norfolk Hall
- Machinery Display – Podium Lawns
- Opportunity for interaction with the More Profit from Nitrogen group

#### 14:00 – 15:00  Session 3 – Technology and Agribusiness

- **The 4th revolution, technology in agriculture** – Dr Mike Briers
- **Soil testing - a great investment, not just another cost** – Peter Brick
- **Using the SnapBait structure for in-field calibration of fertiliser spreaders** – John Moore
- **Bosh and Monash Universities Ag Tech Launch Pad - fostering innovation** – Emma Lucia

#### 15:00 – 15:30  AFTERNOON TEA

- Trade Display – Hydrate Bar
- Trade Display – Norfolk Hall
- Machinery Display – Podium Lawns
- Opportunity for interaction with the More Profit from Nitrogen group

#### 15:30 – 17:00  Session 4 – Fertilizer and Application Technology

- **The Soil CRC - what’s on the horizon?** – Dr Michael Crawford
- **Precision agriculture for improved productivity and environmental outcomes** – Dr Rob Bramley
- **Fertilized legumes significantly improve productivity and returns from pastures in the Brigalow Belt** – Gavin Peck
- **Potassium and the Australian grains industry** – Dr Rob Norton
THURSDAY SEPTEMBER 5TH - (Continued)

18:30 – 19:00 PRE-DINNER DRINKS
– Prince Room Foyer

19:00 – 23:00 CONFERENCE DINNER AND AWARDS PRESENTATION
– Prince Room

FRIDAY SEPTEMBER 6TH – Jacaranda and Kerrie Webb Room

9:00 – 10:30 Session 5 – Fertilizer Shipping and Logistics

Meeting the low sulphur fuel challenge – Angela Gillham
Road transport - making practical sense of the chain of responsibility – Sean Carlson
Fertilizer zinc products dangerous goods status and the implications – Stephen Annells

OR

7:45 – 16:30 Field Tour & More Profit from Nitrogen Program Session

7:45 Coaches depart RACV Royal Pines Gold Coast
8:45 Brief coffee stop @ Bangalow, departure strictly 09.00
9:30 Visit Alstonville, Center for Tropical Horticulture: Nutrient, soil and tree health in sun-tropical/ tropical horticulture
10:30 Depart for NSW DPI Wollongbar Agricultural Institute
11:00 MPfN Research Projects Snapshot Presentations, Wollongbar Agricultural Institute (NSW DPI).
12:30 Lunch, King Brown Camp Oven
13:30 Depart Wollongbar for Tweed Valley
14:30 Farm Visit, Stott’s Creek: Sugarcane fallow/ cover cropping management impacts on mineralisable N & soil health
16:00 Arrive Coolangatta Airport
16:30 Arrive RACV Royal Pines Resort Gold Coast
SPEAKER PROGRAM
TIME AND SESSIONS
Malcolm Robb  
Manager Aquatic Science, Department of Water and Environmental Regulation.  
Joondalup WA.

Fertilizing the farm and not the estuary – working towards best practice in collaboration with industry

Synopsis
In the South West of Western Australia, estuary water quality has a long history of decline related to both agricultural and urban pollution. The links between agricultural land use practices and poor water quality are clearly demonstrated through water quality monitoring of rivers and estuaries and numerical modelling of nutrient transport pathways from paddock to stream. On the exceedingly low phosphorus retention soils of WA, much of the phosphorus applied as fertiliser is lost to rivers, drains and ultimately estuaries.

Optimising fertiliser use to agronomic need will bring improvements in farm profitability and regional water quality. Working in partnership with Fertilizer Australia, Western Dairy, Fertilizer manufacturers, farmers, NRM groups and State Government, the sustainable agriculture project provides whole farm nutrient mapping and agronomic advice matching fertiliser to agronomic yield. With funding from the Smart Farming Partnership program, 36 trials across 6 major catchments have been established to demonstrate and communicate the advantages of optimising fertiliser use.

Biography
Malcolm graduated from Finders University with an Honours degree in marine geology before working in Queensland as an exploration coal geologist and subsequently completing a Master degree in Oceanography ate the University of Alaska. He then worked as a contract oceanographer and environmental consultant in the US for ten years before returning to Australia to a role with the WA Government to provide science support for the management of algal blooms in coastal water. Over the last 20 years his team has developed a range of strategies to reduce nutrient and organic loading to estuaries based on sound scientific evidence. Recently he developed both the Regional Estuaries Initiative and the Revitalising Geographe Waterways strategy to bring together a range of actions across six South West Estuaries including the Sustainable Agriculture program which focuses on optimising fertiliser use in agriculture and developing best practice effluent management.
Public Policy and Economics

Elisa Nichols
Executive Director, Office of the Great Barrier Reef
Brisbane QLD.

Regulating for reef water quality - an update

Synopsis
This talk will outline the Queensland Government's Reef Protection regulation package, which contains new requirements for growers and advisors operating in Great Barrier Reef catchments.

Biography
Elisa Nichols is the Executive Director of the Office of the Great Barrier Reef in the Department of Environment and Science. She is responsible for the coordination and implementation of the Queensland government's Reef water quality policy and programs. Her role involves developing partnerships to deliver programs, engaging with communities on the ground and representing the Queensland government on Great Barrier Reef matters nationally and internationally. She has been with the department and its former incarnations for more than fourteen years, specialising in environmental management policy, programs and legislation.

Matthew Cossey
Chief Executive Officer, CropLife Australia
Canberra ACT.

Protecting agriculture's freedom to operate

Synopsis
Matthew Cossey will deliver key messages of protecting the agriculture industry's freedom to operate from a plant science industry perspective. Mr Cossey will also discuss the importance of stewardship in the industry. With the challenges in agriculture so immense, it cannot be overstated how important the broader issue of stewardship is. Stewardship, in all its forms, is key to those challenges and is in the self-interest of the entire farming sector.

Biography
Matthew Cossey commenced as Chief Executive Officer of CropLife Australia in January 2011. Prior to joining CropLife, Matthew served as a senior executive and a member of the Australian Executive Leadership Team for one of the world's leading defence and technology companies, Raytheon. Before entering the private sector, Matthew was Secretary General and Campaign Director for one of Australia's major political parties in Canberra, a position he held for more than six years. He was Chief of Staff and Senior Defence Adviser to the then Shadow Minister for Defence from 1998 to 2002 and before that worked as a political adviser in the Senate for three years.
Public Policy and Economics

Phin Ziedell
Agribusiness Economist, National Australia Bank
Melbourne VIC.

Economic update - where to for Australia’s agricultural sector?

Synopsis
Australia’s agricultural sector finds itself at something of a crossroads. On one hand, prices for many agricultural commodities are booming, underlined by lamb hitting all time highs earlier this year, and many export markets are looking strong. On the other, drought continues to plague New South Wales and Queensland and you can’t grow anything in dust. Looking to the future, our agricultural sector will need to manage increasingly challenging climatic conditions while continuing to produce high quality food and fibre, all while facing potentially resurgent competition globally.

Biography
Phin Ziedell is an Associate Director at NAB Group Economics and is NAB’s Agribusiness Economist. He is responsible for analysing and reporting on the trends and developments in the agribusiness industry and works closely in conjunction with bankers in NAB’s Agribusiness division. He also covers the energy sector, infrastructure and consumer spending. Phin joined NAB in mid-2014. He was previously an economist at the Victorian Department of Primary Industries and Victorian Treasury.
SESSION 2
Thursday September 5th
10:30 - 12:00
Market opportunities and fertilizer market outlook

Dr Stephen Yeates
Principal Research Scientist, Commonwealth Science & Industrial Organisation (CSIRO)
Townsville QLD.

**A cotton industry in northern Australia a new opportunity with some old challenges**

**Synopsis**
The is a lot happening with commercial cotton investment in tropical Australia in 2019 due to lifting of restrictions on growing GM cotton, availability of new land, new GM varieties with Bollgard 3 proteins controlling key caterpillar pests and promising trial results. Cotton can provide the base crop needed for larger scale developments. It is high value with a large export market and its seed is used by the local cattle industry. Essential is locally developed practices to grow cotton in northern climates. Insect pest management and crop nutrition for infertile soils subject to large wet season losses of soluble nutrients remain major challenges.

**Biography**
Stephen Yeates has 37 years of experience as an agronomist and crop physiologist. His 27 years working in tropical Australia includes living in all jurisdictions and researching many crop species. Currently he works across tropical Australia with cotton investors and other research organisations developing sustainable cotton farming systems and essential people skills to manage these systems.

Brett Hazelden
Managing Director, Kalium Lakes
Perth WA.

**Kalium Lakes - Developing Australia’s first SOP operation**

**Synopsis**
Kalium Lakes Limited is an exploration and development company, focused on developing the Beyondie Sulphate Of Potash Project located 160 kilometres south east of Newman on the edge of The Little Sandy Desert in Western Australia. With a binding offtake agreement in place with K+S, Kalium Lakes is on track to become the first Australian business to produce 90,000 tonnes of Sulphate of Potash each year for both domestic and international markets.

**Biography**
A Metallurgist who brings more than 21 years of experience, in project management, engineering design and operations serving the Australasian resources industry. Brett has been involved in a broad range of commodities including numerous mergers, acquisitions and due diligence reviews. As well as other roles, he has held senior positions at Rio Tinto, Fluor, Newcrest Mining and Iron Ore Holdings.
SESSION 2

(continued)

Market opportunities and fertilizer market outlook

Panel discussion on supply and demand factors likely to impact the Australian fertilizer market over the coming 2 years to be chaired by Tanya Rybarczyk (CSBP).

The panel will consist of Carl Roache (Argus Media), Chen Shiqing (Wengfu), Stephan Titze (Incitec Pivot Fertilisers), Brett Freer (Landmark) & Dr Kate Burke (Think Agri).

Tanya Rybarczyk
General Manager, CSBP Pivot Fertilisers
Kwinana WA.

Biography
Tanya Rybarczyk is General Manager of CSBP Fertilisers, where she leads a business of over 300 people servicing Western Australian growers. CSBP Fertilisers is a market leader in the manufacture and supply of fertilisers and agriculture services and is part of Wesfarmers Chemicals, Energy & Fertilisers (WesCEF) portfolio of leading, sustainable businesses. WesCEF belongs to the Industrials Division of Wesfarmers, one of Australia’s largest private sector employers. Tanya completed a Bachelor of Commerce at the University of Western Australia, has a Graduate Diploma in Applied Finance and is a Chartered Accountant. She is Vice Chair and Treasurer of Fertilizer Australia and a graduate of the Australian Institute of Company Directors.

Dr Kate Burke
Consultant, Think Agri
Moama NSW.

Biography
Dr Kate Burke of Think Agri Pty Ltd is an agri-strategist serving corporate and family operated entities across several ag sectors. Equally comfortable in the boardroom and the paddock, has a background in applied, agronomy services and commercial management in corporate agriculture. Kate has managed several crop nutrition projects and is a keen advocate for combining climate data with soil and plant diagnostics to make astute fertilizer decisions in an increasingly volatile climate. Kate introduced this approach across an 80,000 Ha cropping portfolio and negotiated tailored fertilizer procurement agreements across Australia during her time as Commercial Manager of Warakirri Cropping Pty Ltd.

Chen Shiqing
General Manager, Wengfu Intertrade Ltd
Guiyang, China

Biography
Working in Wengfu Intertrade Ltd. (WFI), a subsidiary of Guizhou Phosphate & Chemical Group (GPCG) which is the new name of Wengfu & the largest producer of phosphate fertilizers & chemicals in China. Mr. CHEN Shiqing, General Manager of WFI, has been serviced the international business of Wengfu for almost 20 years. During past 20 years, Chen witnessed the great change of China from net import to net export of phosphate fertilizers. He also contributes a lot for Wengfu’s export business to a global network including WFA, and product portfolio from merely phosphate rock to high quality fertilizer & chemicals.
Market opportunities and fertilizer market outlook

Carl Roache
Senior Editor, Asia Fertilizers, Argus Media
Singapore

Biography
Carl Roache is the Senior Editor for Asian Fertilizers at Argus Media, based in the company’s Singapore office. He is responsible for coordinating regional coverage for the global fertilizer reports. Prior to his move to Singapore in 2016, Carl edited the global Argus Potash report and the Fertilizer Europe publication from the London head office. Carl has over a decade of experience covering commodity markets. Before joining Argus in 2013, he worked as an editor for ICIS/Reed Business Information covering a range of sectors including fertilizers, petrochemicals and refined products. He is an NCTJ/NCE qualified newspaper journalist and started his career working for Northcliffe Media in the UK.

Brett Freer
General Manager Fertiliser & Distribution, Landmark Operations
Melbourne VIC.

Biography
Brett joined Landmark Operations’ Corporate Strategy team in 2009 after having completed 5 years with PriceWaterhouseCoopers in their Strategy Consulting Practice. The sale of AWB to Agrium in 2010, saw Brett move into the parent company (Agrium Inc), taking on a Corporate Development and Strategy role for the Asia Pacific Region. During this time, Brett focused on the acquisition and growth of the Landmark business whilst assessing potential further development in the SE Asian region. From 2016 Brett has been responsible for the national Landmark Fertiliser business focusing heavily on building a nutritional portfolio of products and services to better serve the crop nutrition needs of the market. The Landmark Fertiliser business saw a significant change in 2018 with the acquisition of the Macrofertil business from LDC and the acquisition of Nutrian (liquid fertiliser manufacturer) in 2019, further transitioning it from its traditional distribution model towards a vertically integrated fertiliser supplier.

Stephan Titze
President, Incitec Pivot Fertilisers
Melbourne VIC.

Biography
Stephan has over 25 years of experience in Agribusiness, with an emphasis in crop protection, seeds and irrigation. He has held senior management positions in Syngenta, Zeneca and ICI Australia in Asia – including China, Japan, Korea and Indonesia –, as well as across Europe and Australia. During his time in Asia, Stephan served five years as Chairman of Crop Life China and Vice President for the Swiss Chamber of Commerce in China – with a key highlight of being named China’s Swiss CEO/Entrepreneur of the Year in 2011. Most recently, Stephan led the rapid growth of Netafim, the world’s largest irrigation company in Asia Pacific, as their Division Head and China Chairman. Stephan holds a Bachelor of Applied Science (Rural Management, Agricultural Marketing) with First Class Honours from the University of Queensland, Gatton College.

12:00 - 14:00 LUNCH
Trade Display – Hydrate Bar
Trade Display – Norfolk Hall
Machinery Display – Podium Lawns
Opportunity for interaction with the More Profit from Nitrogen group
SESSION 3    Thursday September 5th
14:00
Technology and Agribusiness

Dr Mike Briers
Chief Executive Officer, Food Agility
Sydney NSW.

The 4th revolution, technology in agriculture

Synopsis
The Australian food system as we know it is on a path towards the most significant revolution since the inception of commercial farming back in the 18th century. Digital technology is transforming not just the process of farming, but the relationship between participants in the supply chain. What are the emerging technologies that are driving innovations in soil and plant health and what are the barriers to adoption? And importantly, how can Australia make sure it reaps the benefits of what is becoming known as the Fourth Agricultural Revolution?

Biography
Mike was named in the Knowledge Nation 100 as Australia’s chief evangelist for big data and the internet of things (IoT) and appointed Australia’s first Industry Professor of IoT at UTS. He is the founding CEO of Food Agility CRC where he is translating his pioneering work in fintech and big data to guide the digital transformation of the food and agriculture sector. Mike's pioneering efforts in fintech and e-research led to the global success of SIRCA and the founding of big data company RoZetta, e-research service provider Intersect, and co-founding of Capital Markets CRC and AgTech business, The Yield.

Peter Brick
Technical Sales Specialist, Decipher Agtech
Baraham NSW.

Soil testing - a great investment, not just another cost

Synopsis
Soil testing is a major decision support tool which is undervalued and often incorrectly performed. Advances in technology now mean there are many options to incorporate a structured best practise approach to soil testing, but there are still cultural and historical barriers to this adoption in the industry.

Biography
Peter has over 10 years of experience in providing soil and plant nutritional advice to growers, whilst supporting and enabling their agronomists and consultants to implement practical precision agriculture technologies into their business. He is passionate about combining technology and science together to improve productivity and profitability.
Technology and Agribusiness

Bosh and Monash Universities Ag Tech Launch Pad - fostering innovation

Synopsis
The AgTech LaunchPad will be a dedicated micro trial site to develop and translate AgTech innovations and showcase new and emerging technology. The facility has been established by Monash and Bosch and is open for collaboration with other university, research, industry and government partners. The key objectives of the LaunchPad are to:

- Provide a key step to translate research between lab and full scale farm trial
- Test agricultural technologies in an easy to access urban location close to researchers
- Refine prototypes on a small scale in a managed environment
- Provide a platform to support Australian Agriculture to become a $100 billion industry

Biography
Emma develops multi-disciplinary strategic partnership opportunities across Monash University to grow new and emerging market sectors. In her role as an Industry Partnership Manager, Emma's focus lies in agtech, energy and sustainable communities. Emma has led the development of the AgTech LaunchPad with Bosch and works closely with its academic directors to support growth of research translation. Prior to joining the Industry Partnerships team, Emma has worked in the energy, property and social enterprise sectors, focusing on partnership development and strategy. Emma is also a Monash alumnus, having completed a double degree in Arts and Mechanical Engineering, before returning to complete the Master of Sustainability.

John Moore
Senior Research Officer, Western Australian Department of Primary Industries and Regional Development
Albany WA.

Using the SnapBait Structure for In-field Calibration of Fertilizer Spreaders

Synopsis
The power of mobile phones can be harnessed to improve fertilizer use efficiency. From mobile phone snapshots across the swath of a fertilizer spreader the number and distribution of the various sized particles can be analysed. From this, the optimum swath width can be calculated and/or adjustments made to achieve the desired rate or distribution. Data or images can be transferred to a central computer if proprietary analysis is required or old phones are used. With the newer smartphones the analysis can be done on the phone. Summary results could be uploaded for research at the operators' request.

Biography
John Moore is from the Department of Primary Industries in WA. He developed the HerbiGuide website, program and apps for weed, insect and disease control. This led to and work on image analysis for mapping snails and detection of weed seeds in grain. These skills were then deployed to look at the distribution of pesticides and baits to increase efficacy. The mobile phone apps SnapCard, to determine size and distribution of spray droplets, and SnapBait, to measure the distribution of snail baits and calibrate bait spreaders, were then made. Having seen these apps, the fertiliser group became interested in the potential to develop them for fertiliser spreader calibration. David Weaver is a fertiliser expert and Carlos Babatiba-Rodriguez is an IT expert and the 3 authors are from DPRID in Albany, WA.
SESSION 3 (continued)

Technology and Agribusiness

15:00 - 15:30 AFTERNOON TEA

Trade Display – Hydrate Bar
Trade Display – Norfolk Hall
Machinery Display – Podium Lawns
Opportunity for interaction with the More Profit from Nitrogen group

Dual Chelate Fertilizer Pty Ltd specialises in advanced plant nutrition and uses patented technology to create a unique fertilizer formulation that was developed to deliver plant nutrients and minerals efficiently into plant tissues where nutrient corrections are required.

Please come and see our staff during the conference for more information.
SESSION 4
Thursday September 5th
15:30
Fertilizer and Application Technology

Dr Michael Crawford
Chief Executive Officer, Soil CRC
Newcastle NSW.

The soil CRC - what’s on the horizon?

Synopsis
The Soil CRC commenced in 2017 with 10 years of funding from the Australian Government and its 40 research and industry partners. With $60 million cash and $110 million of in-kind resources, it is the largest collaborative soil research effort in Australia’s history. Its purpose is to deliver research that gives farmers the tools and knowledge to improve their soil management and increase their productivity and profitability. In his presentation, Michael will outline the programs and projects of potential relevance to the fertilizer industry and highlight opportunities for closer collaboration and involvement.

Biography
Dr Michael Crawford has over 25 years’ experience in extension, research and science management in areas related to soil science, farming systems and natural resource management. Michael has an honours degree in agricultural science from the University of Melbourne and a PhD in soil science from the University of Adelaide, undertaken through the former CRC for Soil and Land Management. He has operated at senior levels of government and research management, and has worked closely with grower groups, farming communities and relevant industry stakeholders. He commenced as the inaugural CEO of the CRC for High Performance Soils in September 2017.

Dr Rob Bramley
Senior Principal Research Scientist – Precision Agriculture, CSIRO (Agriculture and Food)
Adelaide SA.

Precision agriculture for improved productivity and environmental outcomes

Synopsis
Precision Agriculture (PA) is not new – but it is also perhaps not as adopted as the potential benefits suggest it should be, despite initiatives such as the “4Rs” or demonstrations of enhanced profitability through improved resource use efficiency or selective harvesting. Using examples from the sugar and grains sectors, this presentation will illustrate the importance of focussing on the ‘right data’ at the ‘right scale’ in addition to the ‘right product’ at the ‘right rate’ at the ‘right time’ in the ‘right place’ if improved productivity and environmental outcomes are to be realised.

Biography
Dr Rob Bramley is a Senior Principal Research Scientist with CSIRO, based at the Waite Campus, Adelaide where he is also Site Leader. He is an internationally recognised researcher in Precision Agriculture (PA) and while particularly recognised for pioneering the development of Precision Viticulture, his broader expertise is reflected by his leadership and engagement in major PA projects across the wine, grains and sugar sectors, both Australia and overseas. A Soil Scientist by training, he has worked for CSIRO for almost 30 years and is a life member of SPAA (Society of Precision Agriculture Australia).
Fertilizer and Application Technology

Gavin Peck
Principal Pasture Agronomist, Department of Agriculture and Fisheries
Toowoomba QLD.

**Fertilized legumes significantly improve productivity and returns from pastures in the Brigalow Belt**

**Synopsis**
Legumes and fertilizer offer a significant opportunity to increase the productivity of Queensland’s beef industry. The Brigalow Belt bio-region has the largest areas of sown pastures in northern Australia, however productivity has declined by approximately 50%. Legumes are the most widely applicable and cost-effective option for improving productivity, however there is low levels of successful commercial adoption. Producers and farm advisors have traditionally thought that phosphorus fertiliser is not cost-effective for legume-based pastures in this region, however recent studies suggest large and increasing areas of low plant available soil phosphorus, large fertilizer responses by tropical legumes and good economic returns.

**Biography**
Gavin is a Principal Pasture Agronomist working on sown pastures in the Queensland Department of Agriculture and Fisheries (DAF). He has research and extension experience in pastures, agronomy, soils, land management, conservation and downstream impacts of agriculture. Gavin currently leads the sown pastures team for southern and central Queensland in DAF and leads research, development and extension projects working on improving the productivity and sustainability of sown pastures in Queensland. In particular this work involves improving the reliability and productivity of pasture legumes to improve the performance of sown grass pastures.

Dr Rob Norton
Principle Consultant, Norton Consulting
Horsham VIC.

**Potassium and the Australian grains industry**

**Synopsis**
Potassium (K) is an essential plant macronutrient taken up in large quantities and moves as a free ion and performs many functions in plants. As a cation, K exists on the soil colloids, but other pools also contribute to plant response, but accurate soil tests for K are still lacking. Responses by grains to added K have been recognised in WA for many years, but in eastern Australia, depletion over time is showing new regions with K responses, such as northern vertosols and red vocalics. Placement, timing and rate of K are all important.

**Biography**
Rob Norton has expertise in crop nutrition, farming systems and agronomy. For the past 40 years has worked in education, training and research for the Australian grains industry with The University of Melbourne, where he still holds an adjunct position. Up until 2017 he was the IPNI Regional Director (Australia New Zealand). He is now engaged in soil fertility projects across Africa as well as local consultancies to a range of public and private organisations. He holds a PhD in crop agronomy and has authored 150 refereed scientific publications, as well as many more articles for industry. His work was recognised in 2017 with awards from the Grains Research and Development Corporation and Fertilizer Australia.

18:30 - 19:15  PRE DINNER DRINKS – Prince Room Foyer

19:30 - 23:00  CONFERENCE DINNER & AWARDS PRESENTATIONS – Prince Room
Meeting the low sulphur fuel challenge

Synopsis
The international shipping industry is preparing for one of the most significant compliance challenges ever experienced. While it is extremely difficult to predict, some estimate the move from 3.5% to 0.5% allowable sulphur content in marine bunker fuel will increase the industry’s annual fuel bill by 25% to 60%, and given the narrow margins for some sectors of the industry, with the necessary flow on effects to freight rates. Angela will provide an overview of possible compliance options being considered by the industry, what factor lay behind some of these investment decisions being made, ongoing related challenges likely to be faced by the shipping industry, and what new challenges lay just around the corner.

Biography
Angela joined MIAL in 2003 and has worked across the organisation in various roles, but always with a focus on safety and environment and sustainability policy. Currently employed as MIAL’s Deputy CEO, Angela has a background in environmental science and has managed and coordinated industry input into several shipping related research and development projects and represents the interest of the Australian shipping industry to government. Angela also participates in international forums including the International Chamber of Shipping and as industry adviser to the Australian delegation to the International Maritime Organization.

Road transport - making practical sense of the chain of responsibility

Synopsis
Under the so called chain of responsibility, all parties in the road transport supply chain have a “primary duty” for safety of road transport. Sean will explain in plain english what this means to those involved with road transport of fertilizers. He will give examples of actual court cases and the sort of practical steps that your business should be taking to manage these legal requirements. He will finish an open Q&A session where you can ask about any scenario and get answers (without the legal jargon!).

Biography
Sean is an engineer who has specialised in Logistics Safety for more than a decade. He is Principal Engineer and a Director of Engistics Pty Ltd, one of Australia’s leading engineers in the field of Road Transport safety. Sean has experience in Australia, United Kingdom and New Zealand with safety and compliance projects in the road transport and warehouse sectors including load restraint, safe loading and unloading and industrial traffic management. He has recently been the technical lead for the Forest Industry Code of Practice sponsored by the National Heavy Vehicle Regulator.
Fertilizer Shipping and Logistics

Stephen Annells
Executive Manager, Fertilizer Australia
Canberra ACT.

Fertilizer zinc products dangerous goods status and the implications

Synopsis
The Australian Government has introduced regulations regarding the transportation of dangerous goods, which includes trace elements such as Zinc. These regulations are overseen by “The Competent Authorities Panel” (CAP) which includes EPA and Worksafe bodies, at a state level. These requirements are somewhat unwieldy and present increased and unnecessary costs to the fertilizer industry. Fertilizer Australia is working with the CAPs to try and limit the requirements to ensure the fertilizer industry can both comply and not be burdened with unnecessary regulation.

Biography
Stephen Annells has a career long association with the agricultural sector and a passion for its people, plants and animals. After studying at the Waite Agricultural Research Institute in Adelaide, Stephen embarked on a career that spanned a number of industries, largely in grain, supply chain management, fertilizer, horticulture, sugarcane and government. His career has taken him around the world and all over Australia working for organisations such as the Australian Barley Board, AusBulk, Elders, Casetech, the SA Government and most recently, Sugar Research Australia. Stephen was promoted to senior management early in his career and brings strong commercial, strategic, pragmatic but empathetic leadership to all of his roles.

Field Tour & More Profit from Nitrogen Program Session

7:45 Coaches depart RACV Royal Pines Gold Coast
8:45 Brief coffee stop @ Bangalow, departure strictly 09.00
9:30 Visit Alstonville, Center for Tropical Horticulture: Nutrient, soil and tree health in sun-tropical/ tropical horticulture
10:30 Depart for NSW DPI Wollongbar Agricultural Institute
11:00 MPfN Research Projects Snapshot Presentations, Wollongbar Agricultural
12:30 Lunch, King Brown Camp Oven
13:30 Depart Wollongbar for Tweed Valley
14:30 Farm Visit, Stott’s Creek: Sugarcane fallow/ cover cropping management impacts on mineralisable N & soil health
16:00 Arrive Coolangatta Airport
16:30 Arrive RACV Royal Pines Resort Gold Coast
The More Profit from Nitrogen Program (MPfN) is a four year partnership between Australia’s four most intensive users of nitrogenous fertilisers: cotton, dairy, sugar and horticulture. The Program is conducting research and development to increase nitrogen use efficiency (NUE) across the four sectors whilst improving profitable and sustainable use. By better understanding the influence of contributing factors on NUE in farming systems, the Program is:

- Generating greater knowledge and understanding of the interplay of factors to optimise N formulation, rate and timing across industries, farming regions and irrigated/ non-irrigated situations;
- Generating greater knowledge and understanding of the contribution (quantifying rate and timing) of mineralisation to crop or pasture N budgets; and
- Generating greater knowledge and understanding of how enhanced efficiency fertiliser (EEF) formulations can better match a crop or pasture specific N requirements.

The Program is supported by $5.889 million funding from the Australian Government's Rural Research and Development (R&D) for Profit program in addition to cash and in-kind contributions from each of the industry sectors, research organisations and collaborating partners equating to $9.757 million.

Ten research sub-projects are being delivered by 8 lead research agencies, together with a further 24 collaboration partners, encompassing 72 interacting research, technical and PhD candidate positions. The research is informing new N fertiliser formulations, application and measurement technologies, decision support tools and best management practice guidelines. A total of 40 field based trials have been established, from Darwin in the north to Hobart in the south, and are supported by laboratory experimentation and modelling.

The MPfN Program is at the mid-way point of activities but is already resulting in a more collaborative research effort to accelerate aligned research methodology, standardising terminology to reduce confusion for industry end users and communicating NUE outcomes using common indicators across the four industry sectors. It has become the platform for cross-industry collaboration on N management, and the results are fostering unprecedented information and knowledge exchange amongst Australia’s leading scientists. Since commencing in 2016, the MPfN Program has produced early outputs which are already embedded into industry extension programs, reducing lag time between the research and adoption by cotton, sugar, horticulture and dairy producers. By mid-2022, it will deliver technologies and decision support resources that will significantly increase NUE to reduce environmental impact whilst increasing the long-term sustainability and profitability of Australian farming businesses.
**Dairy MPfN Projects**

**Increasing nitrogen use efficiency in dairy pastures.**

**Lead Partner:** Queensland University of Technology  
**Partners:** NSW DPI and Dairy Australia  
**Project Leader:** Dr. David Rowlings  
**Project Background: [Dairying for Tomorrow Website](#)**  
Trials established to investigate interactions between N application (including EEFs), soil mineralised N and irrigation in sub-tropical pasture systems.

**Improving dairy farm nitrogen efficiency using advanced technologies.**

**Lead Partner:** University of Melbourne  
**Partner:** Dairy Australia  
**Project Leader:** Dr. Helen Suter  
**Project Background: [Dairying for Tomorrow Website](#)**  
Gaining a better understanding of the amount of N supplied through mineralisation to dairy pastures in South West Victoria. An industry nutrient calculator, which accounts for mineralised available N, will be developed for the industry Fert$mart N BMPs.

**Quantifying the whole farm systems impact of nitrogen best practice on dairy farms.**

**Lead Partner:** University of Melbourne  
**Partners:** Tasmanian Institute of Agriculture (TIA) and Dairy Australia  
**Project Leader:** Prof. Richard Eckard  
**Project Background: [Dairying for Tomorrow Website](#)**  
Employing Australian dairy’s *DairyMod* to test and validate current industry *Fert$mart* N BMPs across key dairy farming regions.
**Project Backgrounds: SRA Website**

**Smart blending of enhanced efficiency fertilisers to maximize sugarcane profitability.**

**Lead Partner:** Queensland Department of Environment and Science  
**Partners:** Sugar Research Australia, HCPSL, Farmacist, TRAP Services, QDAF, QDEHP  
**Project Leader:** Dr. Weijin Wang  
Investigation into optimal blending ratios of EEFs with conventional urea to better match sugarcane crop N dynamics across five sugarcane regions.

**Improved nitrogen use efficiency through accounting for deep soil and mineralisable N supply & deployment of EEFs to better match crop N demand.**

**Lead Partner:** NSW Department of Primary Industries (NSW DPI)  
**Partners:** Sugar Research Australia, Sunshine Sugar, Southern Cross University  
**Project Leader:** Dr. Lukas Van Zwieten  
Assessment of N stores in soils of sub-tropical sugarcane regions to improve understanding of N supplied from mineralisation and optimal use of EEFs to better match crop N demand. A dose response model for urea and PCU is being developed.

**New technologies & managements: transforming NUE in cane production.**

**Lead Partner:** Queensland Department of Agriculture and Fisheries  
**Partners:** Sugar Research Australia, University of Queensland, Agresearch  
**Project Leader:** Dr. Matthew Redding  
Targeted formulation and management technique options investigated to better match N release to cane crop demand by controlling N transformation and solubility and combating N “leakiness” to the environment.
Optimising nutrient management for improved productivity & fruit quality in mangoes.

**Lead Partner:** NT Department of Primary Industry and Resources

**Partners:** Hort Innovation, QUT, Australian Mango Industry Association.

**Project Leader:** Dr. Constancio (Tony) Asis

**Project Background:** [Hort Innovation Website](#)

Research is using $^{15}$N to quantify plant N and cycling through the soil-plant-atmosphere system of mango crops and determine soil mineralised N to inform industry NUE BMPs, including EEF options.

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Optimising nutrient management for improved productivity & fruit quality in cherries.

**Lead Partner:** Tasmanian Institute of Agriculture/ University of Tasmania

**Partners:** Hort Innovation, Cherry Growers of Australia

**Project Leader:** Dr. Nigel Swarts

**Project Background:** [Hort Innovation Website](#)

Research is using $^{15}$N to quantify plant N and cycling through the soil-plant-atmosphere system of cherry crops and determine soil mineralised N to inform industry NUE BMPs, including biological options.
More profit from nitrogen - enhancing nutrient use efficiency in cotton.

Lead Partner: NSW Department of Primary Industries (NSW DPI)

Partners: Cotton Research & Development Corporation, CSIRO, UoM & University of Queensland

Project Leader: Dr. Graeme Schwenke

Project Background: CottonInfo Website

Investigating the intricate relationship between N supplied through soil mineralised and fertiliser sources, P supply, fertiliser placement & timing, and irrigation strategy to achieve greater NUE and improved P soil nutrition.

Optimising nitrogen and water interactions in cotton.

Lead Partner: University of Southern Queensland (National Centre for Engineering in Agriculture)

Partners: Cotton Research & Development Corporation, QUT

Project Leader: Dr. Dio Antille

Project Background: CottonInfo Website

Increasing understanding of the influence of rainfall/irrigation wet-dry cycles on mineralising soil organic N into plant available forms and trial of a potentially available organic N rapid soil test.

This project was completed in August 2018 and the final outcomes of this two year project will be presented.
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“Aglime is an important part of the puzzle, and the growth of our new pastures is really accelerated compared to the older pastures.”

Mark Hammond, Gippsland, VIC

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