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TropAg2015

Tropical Agriculture Conference 2015
Meeting the Productivity Challenge in the Tropics

16-18 November 2015 | Brisbane Convention & Exhibition Centre



Acknowledgements

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Welcome from the Committee



I'd like to personally welcome each of you to the TropAg2015 Conference. It's an exciting time for tropical agriculture and food science as we strive to address some of the biggest challenges of our lifetime. How will we feed an increasing population in the tropics? And what are the opportunities presented by rapidly rising living standards across Asia?

This is the inaugural International Conference on Advances in Agriculture and Food for the Tropics which meets our need for a high level, multi-disciplinary, international scientific conference that focuses on advances, and controversies, in tropical agriculture research.

The goal of the conference is to bring together many of the leading scientific voices and facilitate cross-border collaboration, new project development and technology transfer – with a focus on the delivery of a diverse range of tropical and subtropical agricultural scientific advances for the food, plant and animal industries.

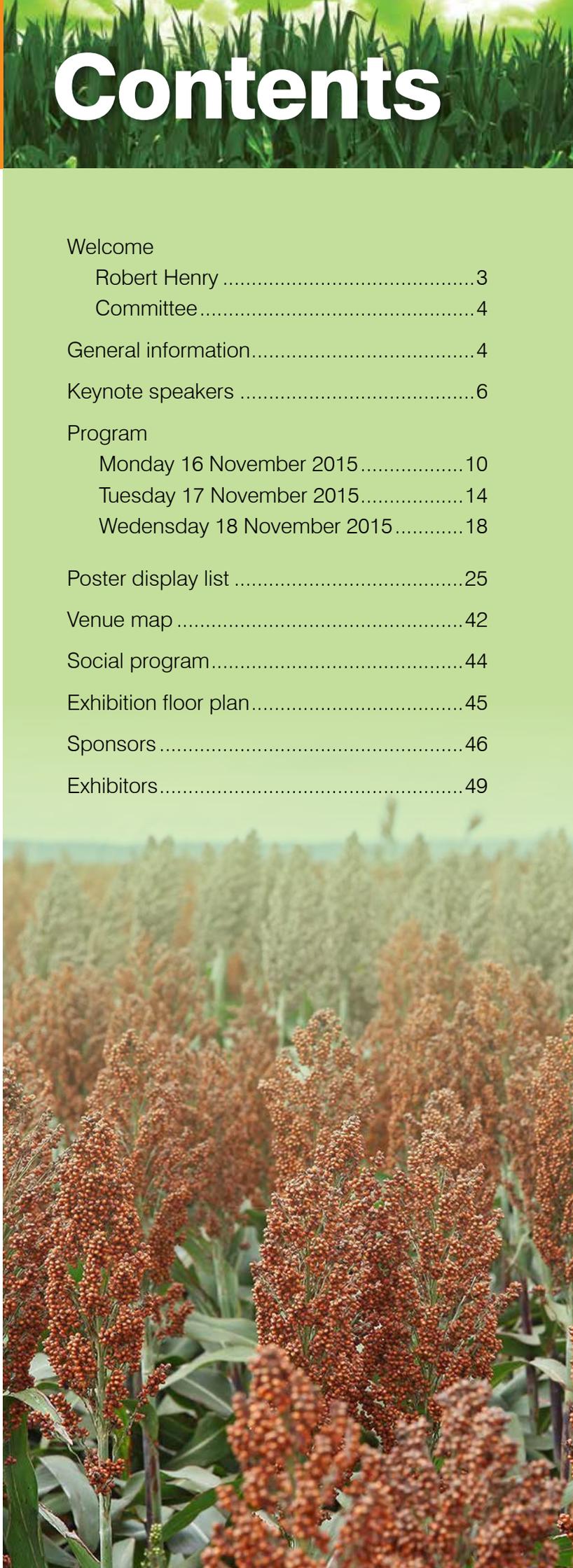
The conference is designed to focus on research advances within the agriculture industries located in the subtropics and tropics including livestock (beef, dairy, pork, poultry) grain and pulse crops, sugarcane and horticultural crops. The research presented will cover a diverse range of aspects that are both pre-farm gate and post-farm gate but with a clear focus on agricultural products most of which are used for food.

I do hope you enjoy TropAg2015.

Robert Henry

Chair of the TropAg Scientific Committee
Professor of Innovation in Agriculture
Director of the Queensland Alliance for Agriculture and Food Innovation (QAAFI)

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Program Committee

Chair Prof Robert Henry, Director of Queensland Alliance for Agriculture and Food Innovation (QAAFI), The University of Queensland

Members:

Dr Graham Bonnett, Research Director for the Integrated Agricultural Systems Program of CSIRO's Agriculture Flagship, CSIRO

Prof Peter Waterhouse, Professor of Molecular Genetics, Science and Engineering Faculty, Queensland University of Technology

Prof Graeme Hammer, Director of Centre for Plant Science, QAAFI, The University of Queensland

Prof Stephen Moore, Director of Centre for Animal Science, QAAFI, The University of Queensland

Professor Mike Gidley, Director of Centre for Nutrition and Food Sciences, QAAFI, The University of Queensland

Prof Ian Godwin, Professor in Plant Molecular Genetics, School of Agriculture and Food Sciences, The University of Queensland

Conference Organiser



ICMS Australasia
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Fax: +61 (0) 7 3255 1004
Email: info@tropagconference.com.au

Abstracts

The abstract book is available for download from the conference website.

Car parking

The Convention Centre's undercover car park can be accessed from Merivale or Grey Street and is a maximum of AUD26 per day. The car park is open 24 hours a day with onsite security.

Conference Compendium

Every registered delegate will receive an official Conference compendium upon registration that will include a copy of the conference program, sponsor inserts and other items.

Conference Venue

Brisbane Convention & Exhibition Centre
Cnr Merivale and Glenelg Streets
South Bank, Brisbane, QLD 4101

For the best access to the Tropical Agriculture Conference 2015, please use the Grey street entrance to the Brisbane Convention & Exhibition Centre. The Grey street entrance is located on Grey Street, between Glenelg & Russell streets.

Dietary requirements

If you have advised the Conference Secretariat of special dietary requirements, your catering will be available at a designated table. Please speak to a member of catering staff at the commencement of each meal break / social function.

Duplication / recording

Unauthorised photography, audio taping, video recording, digital taping or any other form of duplication is prohibited in the congress sessions.

Emergency details

In an emergency telephone 000 for Ambulance, Fire Service or Police. For non-emergency medical situations call 13 12 33 for an ambulance.

Exhibition opening times

The exhibition will be held in the Boulevard Level Foyer and will be open at the following times.

Monday 16 November	8.00am – 5.30pm
Tuesday 17 November	8.30am – 5.00pm
Wednesday 18 November	8.30am – 1.30pm

Internet and WIFI Access

Wireless internet (Wi-Fi) will be available free of charge for delegates at the BCEC. Join the BCEC Link network. There is no password required.

Mobile phones and electronic devices

As a courtesy to speakers and your fellow delegates, please switch off your phones and electronic devices during presentations and whilst in session.

Name badges

For security purposes, delegates, speakers, exhibitors and staff are required to wear their name badge to all sessions, the exhibition and social functions. Entrance into sessions is restricted to registered delegates only. If you misplace your name badge please see staff at the registration desk to arrange a replacement.

Note Pad and Pen

Every registered delegate will receive a note pad and pen in their delegate compendium, to be used during and after the Conference has concluded.

Sponsored by



Registration and information desks

The registration desk is located on the Boulevard level of the Brisbane Convention & Exhibition Centre. The desk will be open at the following times.

Monday 16 November	7.00am – 5.30pm
Tuesday 17 November	8.00am – 5.00pm
Wednesday 18 November	8.30am – 4.00pm

Smoking

Smoking is not permitted indoors at the Brisbane Convention & Exhibition Centre. Smokers must always remain at least 4m from any doorway when smoking. Fines can be imposed for smoking in prohibited places.

Speakers' preparation room

The speakers' preparation room is located on the Arbour Level. Please visit the staff in the speakers' preparation room to load your presentation. Please be sure to load your presentation at least 3 hours prior to your scheduled presentation time. To access the Arbour level speakers preparation room, take the Lift from Boulevard level down one level to Arbour (A) level. When the lift doors open, please turn left.



Keynote Speakers

Hon William Byrne

Queensland Minister for Agriculture and Fisheries and Minister for Sport and Racing



Born and raised in Bundaberg, former Lieutenant Colonel Bill Byrne was sworn in as Minister for Agriculture and Fisheries and Minister for Sport and Racing on February 16, 2015. He was first elected as the Member for Rockhampton in March 2012 and spent his first three years in the Queensland Parliament as a Shadow Minister for Police, Corrective Services and Emergency Services; Construction and Public Works; National Parks, Sport and Recreation. Prior to his political career he served in the Australian Army for nearly three decades – as a Major in the regular Army from 1980 to 1999 and then as a Lieutenant Colonel in the Reserve from 2000. He is a former Commanding Officer of Central Queensland's 42nd Battalion, Royal Queensland Regiment. During his time in the Reserve he held civilian regional management positions within the Department of Defence, where he was responsible for the sustainable management of the Shoalwater Bay Military Training Area. He is also a qualified marine coxswain, a rural fire-fighter and an emergency management incident controller. The Minister is has been married to wife Kim for 30 years and they have three adult daughters.

Sir Gordon Conway

Imperial College London



Sir Gordon was Chief Scientific Adviser to the Department for International Development 2005-9. Previously he was President of The Rockefeller Foundation and Vice-Chancellor of the University of Sussex. He was educated at the University of Wales, the University of Cambridge and the University of the West Indies, before completing a PhD at the University of California. In the early 1960's, working in Sabah, North Borneo, he became one of the pioneers of sustainable agriculture. He was elected a Fellow of the Royal Society in 2004 and an Honorary Fellow of the Royal Academy of Engineering in 2007. He was made a Knight Commander of the Order of Saint Michael and Saint George in 2005. He was recently President of the Royal Geographical Society. His

most recent book *One Billion Hungry: Can we Feed the World?* Was published in October 2012. He has also authored *The Doubly Green Revolution: Food for all in the 21st century* (Penguin and University Press, Cornell) and co-authored *Science and Innovation for Development* (UK Collaborative on Development Sciences (UKCDS)).

Professor Wayne Powell

CGIAR, UK



Wayne Powell is currently Chief Science Officer, CGIAR and has more than 25 years experience working in the field of contemporary plant genetics, and was previously Director of the Institute of Biological, Environmental & Rural Sciences (IBERS) at Aberystwyth University, Wales. Prior to this, Professor Powell was Director and CEO of the National Institute of Agricultural Botany (NIAB) in Cambridge, following his post as Professor and Foundation Head of the School of Agriculture and Wine, University Adelaide, Australia. He also held the position of Deputy Director of the Scottish Crop Research Institute (SCRI), Dundee, UK, from 2000-2004, and was responsible for leading and facilitating the development of the Institute's scientific vision, with overall responsibility for the Institute's research programs. Between 1998 and 2000 Professor Powell worked at the Du Pont Company in Wilmington, Delaware, USA, where he gained experience operating within a global private sector organization.

Professor Cathie Martin

John Innes Centre, UK



Cathie's interests span from fundamental to applied plant science. She researches into the relationship between diet and health and how crops can be fortified to improve diets and address the global challenge of escalating chronic disease. This work has involved linking leading clinical and epidemiological researchers with plant breeders and metabolic engineers to develop scientific understanding of how diet can help to maintain health promote healthy ageing and reduce the risk of chronic disease. Cathie is also involved in genetic screens to identify crops which lack toxins that cause nutritional diseases. Cathie recently

completed seven years as Editor-in-Chief of The Plant Cell, through which she piloted new features in scientific publishing, including 'Teaching Tools in Plant Biology'. She is a member of EMBO, AAAs, and she was recently awarded an MBE for services to Plant Biotechnology.

Dr Donald Nkrumah

Bill and Melinda Gates Foundation, USA



Dr Nkrumah joined the Bill and Melinda Gates Foundation in 2013 as a Senior Program Officer within the Agricultural Development Program's Livestock Initiative. Donald leads the implementation of the foundation's dairy value chain and technical work in livestock genetics. His work at the Gates Foundation is focused on the

development of investments for institutional transformation and for building capacity at critical partner livestock development organizations to implement modernized platforms for genetic improvement of tropical dairy and poultry; investments for the implementation of programs to develop and apply tools to increase rates of genetic gain in appropriate tropical dairy and poultry systems; and development of investments for the expansion of effective public-private sector systems for multiplication and delivery of appropriate improved genetics and breeding tools to increase affordable access (especially for women) to higher-producing dairy animals and tropically-adapted chickens. He holds a BSc in Tropical Agriculture from the University of Cape Coast, Ghana, an MSc in Food Animal Science from the University of Bristol, a PhD in Animal Science (Genetics and Ruminant Nutrition) from the University of Alberta, and an MBA in Integrated Management from Michigan State University.

Professor Kenneth Cassman

University of Nebraska, USA



Dr Cassman is a Systems Agronomist on the faculty of the University of Nebraska (USA) who has worked on most of the world's major cropping systems. His research focuses on ensuring local and global food security while conserving natural resources and protecting environmental quality for future

generations. He is best known for his work on crop yield potential, nitrogen use efficiency, ecological intensification, and as co-author of the textbook, Crop Ecology. During his 37-year career, he worked on agricultural development projects in Brazil and Egypt and was on the faculty of the University of California-Davis from 1984-1990. He served in leadership positions as Head of Agronomy, Plant Physiology, and Agroecology at the International Rice Research Institute in the Philippines (1991-1995), as Head of the Agronomy and Horticulture Department at the University of Nebraska (1996-2004), and as Chair of the Independent Science and Partnership Council of the Consultative Group for International Agricultural Research (2011-2013).

Professor Randy Ploetz

University of Florida, USA



Randy Ploetz joined the faculty at the University of Florida's Tropical Research and Education Center in 1986 and was promoted to professor in 1996. He is an authority on diseases of tropical fruit crops. He has written books, scientific papers, and popular articles on these topics, and visited over 60 countries while

working on these problems. He is an ad hoc reviewer for scientific journals, and has served professional societies and the University of Florida in diverse capacities. He is the former Director of the Office of International Programs and Editor-in-Chief of APS Press of the American Phytopathological Society (APS), and has served on numerous standing and ad hoc committees for that society. He is a former president of the Florida Phytopathological Society and the founding editor of the newsletter of that society, and is a former vice-president and managing editor for refereed papers for the Florida State Horticultural Society.

Keynote Speakers

Dr Vivienne Anthony

Syngenta Foundation for Sustainable Agriculture, Switzerland



Viv Anthony has worked at the cutting edge of private sector agricultural research and development for twenty years. She is the Scientific Advisor in the Syngenta Foundation for Sustainable Agriculture on crop genetic improvement for smallholder farmers in developing countries. She works with both public and private

R&D organisations to enable innovative technology to reach smallholders, particularly in Africa. Within the Foundation she is also responsible for crop diversity and biotechnology stewardship using her experience in previous senior management roles in Crop Enhancement Research in Zeneca, and in Syngenta as Global Head of Crop Protection Product Development and Regulatory Affairs for Seeds and Biotechnology. She spent her early research years in fungicide invention and has a PhD in Plant Pathology from University of Wales, Bangor, UK.

Professor Graeme Hammer

QAAFI, University of Queensland, Australia



Graeme is a Professor in Crop Science and Director of the Centre for Plant Science (CPS) in the Queensland Alliance for Agriculture and Food Innovation (QAAFI), which is a research institute of The University of Queensland, Australia. Graeme conducts research on the physiology and genetics of complex adaptive

traits in field crops with a focus on water productivity in cereals. His research underpins the development of mathematical models of crop growth, development and yield that enable simulation of consequences of genetic and management manipulation of crops in specific target environments. He has played a leading role in the design and on-going development of the APSIM crop modelling platform, which is now used world-wide. His research approach provides unique opportunities to: Aid crop management and design for enhanced production in water-limited environments; Enhance the utility of molecular breeding for drought adaptation, and Identify avenues to cope with climate risks in field crop production. He is a Fellow of the Australian Agriculture Institute and was awarded the Australian Medal for Agricultural Science in 2013 and Farrer Memorial Medal in 2012.

Dr Mario Herrero

CSIRO, Australia



Mario over 20 years experience working on agriculture and livestock systems, mainly in the developing world. His research looks for solutions to feed the world sustainably in the next 40 years. His areas of expertise are farming and food systems modelling, climate and global change, livelihoods and nutrition

security. He earlier led ILRI's Sustainable Livestock Futures and Climate Change programmes. He has written over 250 fully refereed papers, reports and book chapters and regularly contributes to the editorial boards of key journals in the field.

Margaret Stuart

Nestlé, Australia



Margaret is head of Corporate and External Relations at Nestlé Oceania, where she has responsibility for communications and public affairs across Australia, New Zealand, Papua New Guinea, Fiji and the Pacific and for managing the issues shaping Nestlé's operating environment. She has over 20 years

specialist communication and issue management experience in the healthcare, food and agribusiness sectors, working in both consulting and in-house roles in Australia and New Zealand. Her background includes consulting to a range of companies in agriculture, food and health as well as holding senior roles in Novartis, Syngenta and Schering-Plough.

Professor Michael Gidley

QAAFI, University of Queensland, Australia



Professor Gidley obtained a Bachelor of Science (Hons) in Chemistry, at the University of London in 1977 and went on to complete his PhD in Chemistry at the University of Cambridge in 1982. Before establishing CNAFS in 2003 (a joint initiative between UQ and the Queensland Government), Professor

Gidley worked for Unilever Research in the United Kingdom for more than 20 years, beginning as a research scientist and culminating as the Group Leader for Plant-based Foods and Ingredients. Professor Gidley's major research interest is the linking of plant molecular structures to macroscopic properties with relevance to plant-based food properties. In particular, Professor Gidley is interested in investigating polysaccharide assemblies such as plant cell walls (as part of the Australian Research Council Centre of Excellence in Plant Cell Walls and starch granules, particularly the way these structures are assembled in nature and then disassembled during manufacturing and later during digestion. Professor Gidley's field of research involves the use of spectroscopic, microscopic and materials analyses of natural materials and model systems. Insights into structure-property relationships are obtained and can then be used to provide targets for raw materials and processes with enhanced food and nutritional properties.

Program - Monday

Monday 16 November 2015

Room: Boulevard Auditorium

08:55

Introduce TropAg and Hon. William Byrne

Prof Peter Høj, Vice Chancellor and President, The University of Queensland

09:00

Opening Address

Honourable William Byrne, Minister for the Department of Agriculture and Fisheries, Queensland Government

09:15

Welcome to TropAg

Prof Robert Henry, Director of Queensland Alliance for Agriculture and Food Innovation (QAAFI), The University of Queensland

09:20

Session I – Defining the Challenge

Chairperson: **Dr Nick Austin**, CEO, Australian Centre for International Agricultural Research

Opening Keynote Address

The role of public goods in addressing global food and nutrition security

Professor Wayne Powell, Chief Science Officer, CGIAR

10.20

Morning Tea

10.50

Session I – Defining the Challenge (cont'd)

Chairperson: **Dr Nick Austin**, CEO, Australian Centre for International Agricultural Research

Keynote Address

Tropical livestock production and health constraints?

Dr Donald Nkrumah, Senior Program Officer, Global Agricultural Development, Bill and Melinda Gates Foundation

11:25

Keynote Address

What impacts do plant diseases have on tropical agriculture?

Professor Randy Ploetz, Tropical Research & Education Centre, Institute of Food & Agricultural Sciences, University of Florida

12:00

Keynote Address

Nutrition security - diverse and evolving targets

Professor Mike Gidley, Director of Centre for Nutrition and Food Sciences, QAAFI, The University of Queensland

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Australian Government
Australian Centre for
International Agricultural Research



12:35

Keynote Address

Climate risks and the productivity challenge in field crops

Professor Graeme Hammer, Director of Centre for Plant Science, QAAFI,
The University of Queensland

13.10

Lunch

14:10

Session II – Solutions through Integrated Farming Systems

Chairperson: **Dr Brian Keating**, Executive Director of Agriculture, Food and Health, CSIRO

Keynote Address:

How can integrated farming systems be marshalled to meet the productivity challenge in the tropics?

Dr Mario Herrero, Chief Research Scientist on Food Systems and the Environment, CSIRO

14:45

Session II – Solutions through Integrated Farming Systems

Chairperson: **Dr Brian Keating**, Executive Director of Agriculture Food and Health, CSIRO

Pathways for the sustainable development of agriculture

Assoc. Prof Daniel Rodriguez, Centre for Plant Science, QAAFI, The University of Queensland

15:00

Co-designing the transitions towards integrated market oriented mixed farming systems in semi-arid Zimbabwe

Dr Sabine Homann-Kee Tui, Senior Scientist – Markets, Institutions and Policies,
International Crops Research Institute For The Semi-Arid Tropics (ICRISAT), Zimbabwe

15:15

Financial and opportunity costs of agricultural labour in Cambodia: implications for rice production technologies

Dr Robert Farquharson, Agriculture and Food Systems, University of Melbourne

15:30

The digital frontier and the northern beef industry

Prof Ian Atkinson, Tropical Leader and Director of the eResearch Centre, James Cook University



Program - Monday

Monday 16 November 2015

Room: Boulevard Auditorium

15.45

The University of Queensland DVCR Student Scholarship Award Ceremony

Presented by **Prof Alastair McEwan**, UQ Graduate School Dean,
The University of Queensland

The Queensland Crawford Fund Student Scholarship Award Ceremony

Presented by **Prof Kaye Basford**, Chair of The Queensland Crawford Fund Committee,
The Crawford Fund

Opening of TropAg Poster Display

Presented by **Malcolm Letts**, Executive Director - Regions and Industry Development,
Department of Agriculture and Fisheries, Queensland Government

16:00

Poster Session & Afternoon Tea

17:30

Reception

EXHIBITION AND POSTER AREA

Partnering to produce the future of tropical agriculture

Now ranked in the top 10 agricultural research institutions in the world, The University of Queensland is partnering with the Queensland Government to provide global leadership in tropical and subtropical agriculture. The joint partnership, known as the **Queensland Alliance for Agriculture and Food Innovation (QAAFI)**, provides unparalleled expertise and access to infrastructure resources in animal science, horticulture crop science, food science, broad-acre crop science, agribusiness and production systems. Through QAAFI, Queensland will be at the forefront of solutions to the biggest challenges facing the Australian and international agricultural and food industries. See more at www.qaafi.uq.edu.au



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Create change

Program - Tuesday

Tuesday 17 November 2015

Room: Boulevard Auditorium

09:00

Session III – Market Driven Solutions

Chairperson: **Dr Matthew McDonagh**, General Manager:
On-farm Innovation & Adoption, Meat & Livestock Australia

Opening Keynote Address

#Likeandshare: How the changing consumer dynamic is affecting demand for tropical agriculture

Ms Margaret Stuart, Corporate and External Relations Manager, Nestle Oceania

09:30

Keynote Address

Can demand-driven approaches to breeding increase smallholders' adoption of new plant and animal genetics?

Dr Vivienne Anthony, Senior Scientific Advisor, Syngenta Foundation For Sustainable Agriculture

10:00

Morning Tea and Poster Session

11:00

Session III - Market Driven Solutions (cont'd)

Chairperson: **Dr Matthew McDonagh**, General Manager:
On-farm Innovation & Adoption, Meat & Livestock Australia

Micronutrient biofortification of acid and neutral soils for enhanced crop production and improved Anthocyanin contents of sweet potato

Prof Anabella Tulin, The University of the South Pacific, Samoa

11:15

Identifying the sensory basis of consumer preference for red and yellow papaya in Australia

Dr Heather Smyth, Centre for Nutrition and Food Sciences Research Fellow, QAAFI,
The University Of Queensland

11:30

Progress in the breeding of high oleic, early maturing peanut varieties in Australia

Dr Graeme Wright, Peanut Breeding, Seed and Innovation, Peanut Company of Australia

11:45

Use of genomic tools to improve eating quality of northern Australian beef

Dr Matthew Kelly, Senior Research Analyst, AACo

12:00

Lunch



13:00

Session IV - Science Driven Solutions

Chairperson: **Mr Selwyn Snell**, Chairman, Horticulture Innovation Australia Limited

Keynote Address

What can plant science do for human health?

Professor Cathie Martin, Group Leader, John Innes Centre and Professor at the University of East Anglia, United Kingdom

13:35

GM organic crops: The future of food security in the tropics

Prof Ian Godwin, School of Agriculture and Food Sciences, The University of Queensland

13:50

Nanotechnology for sustainable agriculture: Innovative solutions for protecting crops and livestock

Assoc. Prof Neena Mitter, Centre for Plant Science, QAAFI, The University of Queensland

14:05

Pearl millet (*Pennisetum glaucum*) genotypes contrasting for transpiration sensitivity also differ in their dependence on Aquaporin mediated and apoplastic water transport pathways

Murugesan Tharanya, Research Scholar, International Crops Research Institute For The Semi-Arid Tropics, India

14:20

Genomics and tick vaccine development

Assoc. Prof Ala Lew-Tabor, Centre for Animal Science Principal Research Fellow, QAAFI, The University of Queensland

14:35

Afternoon Tea

15:00

Session IV - Science Driven Solutions (cont'd)

Chairperson: **Mr Craig Burns**, Managing Director, Rural Industries Research & Development Corporation, Australian Government

Keynote Address

How to bridge the gap between possible and existing production?

Professor Ken Cassman, Robert B Daugherty Professor of Agronomy, Co-PI, Global Yield Gap Atlas, Editor-in-Chief, Global Food Security, USA

Program - Tuesday

Tuesday 17 November 2015

Room: Boulevard Auditorium

- 15:35** **Tropical plant diseases: Facing the challenge**
Prof Andre Drenth, Centre for Plant Science Professorial Research Fellow, QAAFI,
The University of Queensland
- 15:50** **The challenge of maize production in the tropics: interaction of temperature,
radiation and nitrogen with implications for climate change**
Mr Samuel Bacon, Cropping Systems Advisor, Seeds Of Life, Timor-Leste.
- 16:05** **Subtropical grasses can improve out of season production in temperate
Western Australia**
Mr Paul Sanford, Livestock Research Senior Research Officer, Department of Agriculture And Food,
Government of Western Australia
- 16:20** **Innovation and technology in the grains industry**
Ms Jan Edwards, General Manager Farming Systems, Soils and Agronomy – North, Grains Research and
Development Corporation
- 16:35** **Poster Award Ceremony**
Presented by **Ms Sarah Meibusch**, Deputy Director –
Business Development and Engagement, QAAFI, The University of Queensland
- Awards** Best Poster sponsored by QAAFI
Best Poster sponsored by Women in QAAFI

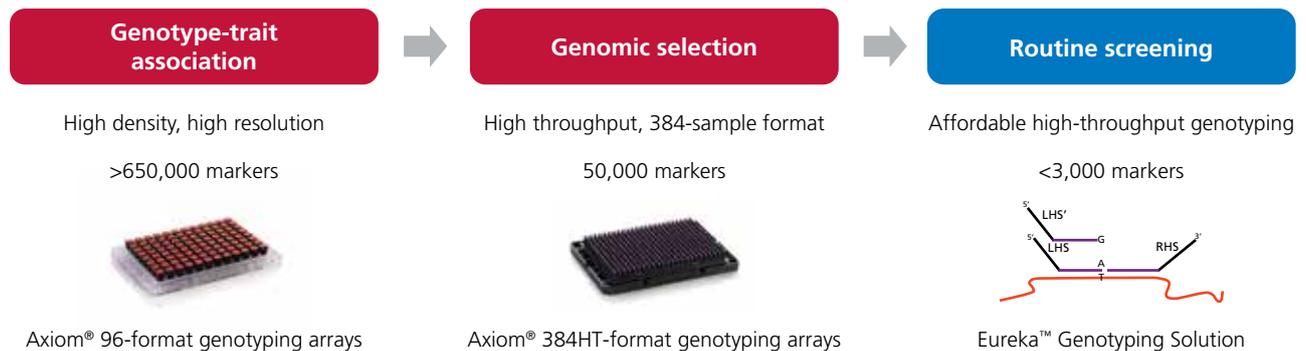
19:00

Conference Dinner

SKY ROOM

Genotyping by arrays and NGS

Select the right platform for your research and breeding program



Learn how Affymetrix is helping to revolutionize the agrigenomics industry at the following symposia talk and poster session.

Topic: **How evolving technologies are changing farming systems**
Symposia presenter: Graham Alder, General Manager, Beef + Lamb New Zealand Genetics
Session: **Genomic technologies for tropical agriculture**
Date/time: Wednesday, November 18, 2015, 9:05–9:40 AM

Topic: **Eureka™ Genotyping Solution: customizable, affordable, and scalable genotyping for agrigenomics**
Session/Poster no: **Science driven solutions (Poster #146)**
Date/location: November 16–18, 2015, the Boulevard Room

Visit Affymetrix at Booth #9 to learn more.

To learn more about agrigenomics genotyping products from Affymetrix, visit www.affymetrix.com/agrigenotyping



Program - Wednesday

Wednesday 18 November 2015

09:00

TropAg2015 Symposia

Five symposia will be conducted concurrently to showcase research and developments in tropical agriculture. Each symposium is closely aligned to the major themes of the conference.

Symposium topics include:

1. Future of Sugarcane
2. Control of Tropical Livestock Parasites into the Future
3. Food Safety Issues and Challenges in Global Supply Chains
4. Genomics Technologies for Tropical Agriculture
5. Redesigning Photosynthesis to meet the Global Productivity Challenge

10.00

Morning Tea

10.30

TropAg2015 Symposia continues

12.30

Symposia Concludes and Lunch commences

1. Future of Sugarcane Symposium Program BOULEVARD ROOM 2

Convener: **Dr Frikkie Botha**, Executive Manager Research, Sugar Research Australia

Sponsored by
 Sugar Research Australia

09:00

Introduction

Presented by Dr Frikkie Botha, Sugar Research Australia

09:10

Broadening the genetic base of sugarcane: Genetic diversity and introgression opportunities

Presented by Dr George Piperidis, Sugar Research Australia

09:35

Failing to capitalize on genetic gains in sugarcane farming systems

Presented by Prof Mike Bell, Centre for Plant Science, QAAFI, The University of Queensland

10:00

Morning Tea



10:30 **Mechanisation: Challenges and Opportunities**
Presented by Chris Norris, Norris Energy Crop Technology, Brisbane

11:00 **Is there a role for precision agriculture in sugarcane?**
Presented by Dr Rob Bramley, Precision Agriculture, CSIRO Agriculture

11:30 **Revenue diversification opportunities from sugarcane**
Presented by Assoc. Prof Ian O'Hara, Centre for Tropical Crops and Biocommodities,
Queensland University of Technology

12:00 **Closing Comments and Questions**

12:30 **Symposium Concludes**

2. Control of Tropical Livestock Parasites into the Future Symposium Program

ABOUT ROOM 2

Conveners:

Assoc. Prof Ala Lew-Tabor, Centre for Animal Science, QAAFI,
The University of Queensland

Dr Peter James, Centre for Animal Science, QAAFI,
The University of Queensland

Sponsored by



09:00 **Welcome and Introduction**

Dr Peter James, Centre for Animal Science, QAAFI, The University of Queensland

09:10 **Expansion of tropical animal production in Australia: the One Health implications**

Assoc. Prof Simon Reid, School of Public Health, The University of Queensland

09:35 **Parasite resistance and new options for chemical control**

Dr Andrew Kotze, CSIRO Agriculture

10:00 **Morning Tea and Two Minute Poster Talks**



Program - Wednesday

Two Minute Poster Talks

- Poster 1:** **Innovative approaches to controlling a threat to bees in the sub-tropics**
Ms Brogan Amos, Department of Agriculture and Fisheries, Queensland Government.
The University of Queensland.
- Poster 2:** **Chemical prevention and treatment of Old World Screwworm (*Chrysomya bezziana*) infestations for exotic incursions in Australia**
Mr Geoff Brown, Department Agriculture & Fisheries, Queensland Government
- Poster 3:** **Biopesticides for house fly control: Development of commercial fungal formulations**
Mr Steven Rice, Department of Agriculture and Fisheries, Queensland Government
- Poster 4:** **Development of a yeast surface display library cell line to examine tick:host interactions**
Mr Tom Karbanowicz, Centre for Animal Science, QAAFI, The University of Queensland
- Poster 5:** **Genetic characterization of Australian *Eimeria*, the causal agent of coccidiosis in chickens**
Dr Jess Morgan, Centre for Animal Science, QAAFI, The University of Queensland
- Poster 6:** **Immunisation using microspheres of poly glycidyl methacrylate functionalized with MSA-2 peptide to protect cattle from babesiosis**
Dr Rodriguez Valle, Centre for Animal Science, QAAFI, The University of Queensland
- Poster 7:** **Tea tree oil formulations for cattle tick (*Rhipicephalus australis*) control**
Mr Jason Yim, Centre for Animal Science, QAAFI, The University of Queensland
- 11:05** **Barbervax: a new technology for livestock helminth control**
Dr Brown Besier, Department of Agriculture and Food, Government of Western Australia
- 11:30** **Synthetic biology pipeline for detection and mitigation of parasites and diseases of farmed animals**
Dr Wayne Johnston, Institute of Molecular Biology, The University of Queensland
- 11:45** **Genomics and parasite vaccines**
Assoc. Prof Ala Lew-Tabor, Centre for Animal Science, QAAFI, The University of Queensland
- 12:00** **Parasites expanding their range**
Dr Peter James, Centre for Animal Science, QAAFI, The University of Queensland
- 12:15** **Concluding comments**
Assoc. Prof Ala Lew-Tabor, Centre for Animal Science, QAAFI, The University of Queensland
- 12:30** **Symposium Concludes**



3. Food Safety Issues and Challenges in Global Supply Chains Symposium Program

BOULEVARD ROOM 3

Convenors:

Dr Mary Fletcher, Centre for Animal Science, QAAFI, The University of Queensland

Dr Yasmina Sultanbawa, Centre for Nutrition and Food Sciences, QAAFI, The University of Queensland

Dr Rao Rachaputi, Centre for Plant Science, QAAFI, The University of Queensland

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09:00

Introduction

Dr Mary Fletcher, Centre for Animal Science, QAAFI, The University of Queensland

09:05

Global trade and domestic food standards

Mr Peter May, Food Standards Australia New Zealand

09:25

Climate change impact on food safety – mycotoxins as a case study

Prof Wayne Bryden, School of Agriculture and Food Sciences, The University of Queensland

09:45

Allergens and bioactives in peanut – Impacts on peanut supply chain as a case study

Dr Alice Lee, ARC Training Centre for Advanced Technologies in Food Manufacture and School of Chemical Engineering, University of New South Wales

10:00

Morning Tea

10:30

Food safety needs for fresh fruits and vegetables – avocado supply chain as a case study

Prof Dharini Sivakumar, Tshwane University of Technology, South Africa

10:50

On-farm aspects of food safety with relevance to the poultry industry

Dr Pat Blackall, Centre for Animal Science, QAAFI, The University of Queensland

11:10

Managing Campylobacter through the poultry meat supply chain to improve public health outcomes

Mr Philip Pond, Safe Food Production Queensland

11:30

Novel and innovative approaches to detect food pathogens and other contaminants in real-time in the supply chain – sensor technologies

Dr Stephen Trowell, CSIRO

11:50

Food safety issues and challenges in the tropics

Dr Marie Connett, Global Development Portfolio and Agricultural Lead, Global Good Fund, Washington, DC

Program - Wednesday

Wednesday 18 November 2015

12:10 **Panel Discussion** – What are the future food safety challenges in tropical Australia and beyond? How do we keep ahead of the game? Come prepared with your questions to challenge the experts!

Moderators:

Dr Mary Fletcher (Centre for Animal Science, QAAFI, The University of Queensland)

Dr Yasmina Sultanbawa (Centre for Nutrition and Food Sciences, QAAFI, The University of Queensland)

Dr Rao Rachaputi (Centre for Plant Science, QAAFI, The University of Queensland)

12:30 Symposium Concludes

4. **Genomics Technologies for Tropical Agriculture Symposium**

BOULEVARD ROOM 1

Conveners:

Prof Ian Godwin, School of Agriculture and Food Sciences, The University of Queensland

Prof Stephen Moore, Centre for Animal Science, QAAFI, The University of Queensland

Sponsored by



09:00 **Introduction**

Prof Ian Godwin, School of Agriculture and Food Sciences, The University of Queensland

09:05 **How evolving DNA technologies are changing sheep farming systems**

Graham Alder, Beef + Lamb New Zealand

09:40 **A hybrid approach to sequencing the sugarcane genome**

Dr Karen Aitken, Plant Industry, CSIRO

10:00 **Morning Tea**

10:30 **Reverse genetic analysis of disease resistance in polyploidy crops**

Dr Kemal Kazan, Agriculture Flagship, CSIRO

10:55 **DNA Profiling and data management solutions for tropical agriculture research and practice**

Dr Andrezej Kilian, Diversity Arrays Technology Pty Ltd

11:20 **From sequence to consequence: integrating technologies for enhancing complex, quantitative traits in sorghum**

Dr Emma Mace, Department of Agriculture and Fisheries, Queensland Government

11:45 **Polymorphisms in taste receptor and nutrient sensor genes associated with tropically adapted pig breeds**

Dr Nadia De Jager, Centre for Nutrition and Food Sciences, QAAFI, The University of Queensland



12:10 **Transcriptome of reproductive axis tissues pre and post puberty in *Bos indicus* heifers**
Prof Stephen Moore, Centre for Animal Science, QAAFI, The University of Queensland

12:30 Symposium Concludes

5. Redesigning Photosynthesis to meet the Global Productivity Challenge Symposium Program

BOULEVARD AUDITORIUM

Convener:

Prof Graeme Hammer, Centre for Plant Science, QAAFI,
The University of Queensland

Chairperson:

Prof Murray Badger, ARC Centre of Excellence for Translation Photosynthesis,
Australian National University



Sponsored by

ARC CENTRE OF EXCELLENCE FOR
**translational
photosynthesis**

09:00 **Introduction**

Prof Murray Badger, ARC Centre of Excellence for Translation Photosynthesis,
Australian National University

09:10 **Improving the access to CO₂**

Prof Susanne von Caemmerer, Research School of Biology, Australian National University,
Canberra. ARC Centre of Excellence for Translational Photosynthesis, Australian National University

09:35 **Improving light utilization**

Prof John Evans, Research School of Biology, Australian National University, Canberra.
ARC Centre of Excellence for Translational Photosynthesis, Australian National University

10:00 **Morning Tea**

10:30 **Building the C₄ photosynthetic engine in rice: Progress and challenges**

Dr Robert Furbank, ARC Centre of Excellence for Translation Photosynthesis,
Australian National University. CSIRO Agriculture, Canberra

10:55 **Identifying and exploiting natural variation of photosynthesis in wheat, a C₃ crop**

Dr Anthony Condon, ARC Centre of Excellence for Translation Photosynthesis,
Australian National University. CSIRO Agriculture

11:20 **Using Sorghum as a C₄ model to identify natural photosynthetic variation**

Assoc. Prof David Jordan, The University of Queensland, QAAFI, Centre for Plant Science,
Warwick. ARC Centre of Excellence for Translational Photosynthesis, The University of Queensland

11:45 **Modelling the effects of improved photosynthesis at the crop scale**

Prof Graeme Hammer, Centre for Plant Science, QAAFI, The University of Queensland.
ARC Centre of Excellence for Translational Photosynthesis, Australian National University



Program - Wednesday

Wednesday 18 November 2015

12:10

Panel Discussion – Is this a pipe dream? Why target photosynthesis now? What realistic time frame is involved to make a difference? Come prepared with your questions to challenge the experts!

Moderators:

Prof Graeme Hammer, Centre for Plant Science, QAAFI, The University of Queensland. ARC Centre of Excellence for Translational Photosynthesis, Australian National University

Dr Robert Furbank, ARC Centre of Excellence for Translation Photosynthesis, Australian National University. CSIRO Agriculture, Canberra

12:30

Symposium Concludes

13:30

Session V – Vision 2050

BOULEVARD AUDITORIUM

Chairperson: **Dr Mary Corbett**, Board Chair,
Cotton Research and Development Corporation

Closing Keynote Address

Tropical Agriculture 2050

Sir Gordon Conway, Director of Agriculture for Impact and a
Professor of International Development at Imperial College London, United Kingdom

14:30

Session VI – Synthesis

BOULEVARD AUDITORIUM

Panel discussion of key issues and ways forward.
Questions will be welcomed from the audience.

Panel Moderator: **Sir Gordon Conway**, Director of Agriculture for Impact and a Professor of
International Development at Imperial College London, United Kingdom

Panel Members:

Prof Wayne Powell, Chief Science Officer, CGIAR

Dr Vivienne Anthony, Senior Scientific Advisor, Syngenta Foundation for Sustainable Agriculture

Prof Robert Henry, Director of QAAFI, The University of Queensland

Prof Ken Cassman, Robert B Daugherty Professor of Agronomy, Co-PI,
Global Yield Gap Atlas, Editor-in-Chief, Global Food Security, USA

Prof Cathie Martin, Group Leader, John Innes Centre and Professor at the
University of East Anglia, United Kingdom

15:30

Conference Closes

Poster Display List

Below is a list of the TropAg 2015 Conference poster presentations. Each poster has a unique poster board number. For poster board locations, please see below;

Posters numbered CF001 – CF010: Boulevard Room (BR)
Posters numbered P001 – P174: Boulevard Room (BR)
Posters numbered P175 - P222: Outside Boulevard Room
Posters numbered P223 – P251: Outside Boulevard Room 3 (B3) in foyer

Theme 1 – Defining the challenge

CF001	Dickson Benny , Clifton Gwabu Watermelon as one of the profitable crops for smallholders farmers: A case study of Rigo district, Central Province, Papua New Guinea
CF002	Eddie Ti Tjih Tan , Rafat A M Al Jassim, Bruce R. D’Arcy, Mary T Fletcher Understanding in vitro Metabolism of Indospicine in Camels to improve food safety
P001	Colin Birch , Lawrence Bonney, Stephen Ives, John McPhee, Douangboupouha Bounneuang, Vang Seng, Bo Sokun, Silinthone Sacklokham Whole of system and value chain analyses reveal research needs in horticulture in Laos and Cambodia
P002	Philmah Seta-Waken, Mark Boersma, Colin Birch High yielding, quality cabbages and the challenges of production in the high altitude area of Central Province, Papua New Guinea: An approach to increasing the supply of temperate vegetables into the Port Moresby markets
P003	Grace Chideya-Phiri , Kingsley Agho, Adam Komarek, William Belloti Is it time to vary the 3 rules definition of conservation agriculture package to suit farmers practice? Evidence of stepwise adoption from Malawi
P004	Allan Dale How the governance of Northern Australia can help or hinder agriculture
P005	Denise Dayao , Justine Gibson, Patrick Blackall, Conny Turni Antimicrobial resistance genes in bacterial respiratory pathogens isolated from Australian pigs
P006	Rowan Eisner , Leonie Seabrook, Clive McAlpine Agricultural dependence on petrochemicals and the threat to biodiversity of post peak agricultural extensification
P007	Mary Fletcher The toxicity of Indospicine to grazing animals: An under-recognised hazard
P008	Glen Fox , Loraine Watson-Fox, Robert Henry Seeding future research: Observations from seed increase efforts with australian wild rices
P009	Mike Gidley Nutrition security - Diverse and evolving targets
P010	Adrian Hathorn , Emma Mace, David Jordan, Shuaishuai Tai A first generation Haplotype map of Sorghum
P011	Susanne Heisswolf , David Carey, Stephen Ginns Transforming horticultural production systems: remaining competitive on world markets to help meet global food demands
P012	Bruce Hill The commercialisation of the Achacha tropical fruit

Poster Display List

-
- P013 **Patrick Mason**, Robert Henry, Frikkie Botha, Agnelo Furtado | UDP-6-Glucose dehydrogenase: An important catalyst and regulator of carbon partitioning in Sugarcane
-
- P014 **Ronald Master** | Potential growth response of kikuyu (*Cenchrus clandestinus*) to applied phosphorous on low PBI soils
-
- P015 **Miranda Mortlock**, Pelotshweu Moepeng | An african diamond: From technology transfer, research and development in agriculture in Southern Africa (Botswana Livelihoods- 20 years of progress)
-
- P016 **Keith Noble** | Eyes wide open: Planning a resilient future for North Australian agriculture, come hell or high water
-
- P017 **Joel Ochieng**, Vivian Tuei, Trizah Milugo, Richard Oduor | How ready is Sub-Saharan Africa to adopt Biotech Crops? Lessons from Kenya
-
- P018 **Tania Paul**, Philmah Seta-Waken, Clifton Gwabu, Dickson Benny, Norah Omot, Gomathy Palaniappan, Claire Webb | The challenge of reviving the demand for traditional vegetables in the face of increasing urbanisation in Papua New Guinea: A case study
-
- P019 **Agustina Asri Rahmianna**, Medo Kote, Rao C.N Rachaputi, Yohanes L. Seran, Damianus Adar, | Increasing productivity of mungbean under subsistence farming in Eastern Indonesia
-
- P021 **Anabella Tulin**, Jedess Miladel Salomon, Janice Marie Monderondo | Indigenous knowledge on natural resource management and coping mechanisms of people living in climate change vulnerable marginal uplands
-
- P022 Reema Singh, Patrick Blackall, **Conny Turni** | *Haemophilus parasuis* - Research in Australia
-
- P023 **K. Waha**, E Stephenson, M. Herrero, P Thornton, S Fritz, L See, M Rufino | Adaptation through crop diversification
-
- P024 **Jim Watson**, Bangyou Zheng, Scott Chapman, Karine Chenu | Projected impacts of climate change on drought stresses in Australian wheat
-
- P025 **Tony Webster**, Perry Poulton, Cuan Petheram, Peter Stone, John Hornbuckle, Ian Watson | Quantifying the potential for the Flinders and Gilbert catchments in northern Australia to increase food production through irrigated cropping
-





Theme 2 – Solutions through integrated farming systems

CF009	Leoncio Ugarte-Guerra , Tony Page Feasibility of smallholder nursery microenterprises as sustainable germplasm delivery mechanisms in Papua New Guinea
P026	Femi Akinsanmi Advances and search for robust biological fertility indicators for sustainable soil health management in Perennial tree crops
P027	Maree Bowen , Stuart Buck, Fred Chudleigh, Kylie Hopkins, Timothy Emery, Byrony Daniels Utilising high output forages for profitable beef production in the subtropics
P028	Anthony Young , Cathy Nock Diverse Leifsonia genotypes are associated with sugarcane in Australia
P029	Phillip Banks, Douglas Lush, Lee Hickey, Jack Christopher Can winter cereals be developed into a major industry for tropical Australia?
P030	Diego F. Correa , Hawthorne Beyer, Skye R Thomas-Hall, Hugh Possingham, Peer M Schenk Growing of Microalgae for the production of Biofuels in Queensland, Australia: Ensuring energy production and farming in tropical and subtropical areas
P031	Alan Cruickshank , Xuemin Wang, David Jordan Grain Sorghum genetic determination of perenniality
P032	Mark Crawford, Shreevatsa Kodur, Kerry Bell, Yash Dang , Anna Balzer The influence of tillage on crop productivity for no-till systems in sub-tropical to semi-arid climates of Australia
P033	Jeff Daniells TR4 in north Queensland - What now? Meeting the productivity challenge in Bananas
P034	Mesfin Dejene Ejigu, Robert Dixon , Alan J Duncan, David McNeill, Kerry Walsh, Endalkachew Woldemeskel Variability of food fodder traits in grain legume genotypes in Ethiopia: 1. Seed and residue yields, morphological characteristics and straw quality in common bean
P035	Ariel Ferrante , Karine Chenu, Peter de Voil, Joseph Eyre, Barbara George-Jaeggli, James McLean, Greg McLean, Daniel Rodriguez Maize yield determination in Northern Region: Hybrid by environment by management interactions
P036	Lina Maria Gonzalez , Sergi Astals, Paul Jensen, Steven Pratt, Peer Schenk Anaerobic digestion of microalgae via closed-loop nutrient recycling: A sustainable integrated system to produce bioenergy for farms
P037	Sophie Vandermeulen, Carlos A Ramirez-Restrepo, Sultan Singh, Rob Kinley, Chris P Gardiner, Joseph A.M Holtum, Jerome Bindelle, Iain Hannah Intra-cultivar potential of Desmanthus spp. as a greenhouse gas mitigation strategy for tropical livestock pastoral systems
P038	Bruce Hill Achacha - a fresh start for an exotic tropical fruit
P039	Stuart Irvine-Brown , Solomon Jamal Hassen, Joe Eyre, Job Kihara, Haekoo Kim Soil Organic Matter inputs under tropical agricultural cropping systems: Where do they come from? What are they made of? Why does this matter?
P040	Elio Jovicich , Heidi Wiggerhauser Protected cropping of vegetables in the Australian tropics
P041	Md Jahangir Kabir , Rob Cramb Farmers' perceptions of and responses to environmental change in coastal Bangladesh

Poster Display List

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- P042 **Julius Kotir**, Ron Johnstone, Greg Brown, Nadine Marshall | Global change and sustainability in linked social-environmental systems: An application of systems dynamics approach within the Volta River Basin agri-food systems in Ghana, West Africa
-
- P043 **Louis Kouadio**, Roger Stone, Philippe Tixier, Shahbaz Mushtaq, Torben Marcussen | Robusta coffee model: An integrated model for coffee production at farm and regional scale
-
- P044 **James McLean**, Daniel Rodriguez, Joseph Eyre, Andries Potgieter | Use of proximal sensing in the monitoring of agronomic experiments
-
- P045 & DVCR1 **Nascimento Nhantumbo**, John Dimes, Miranda Mortlock, Isaiah Nyagumbo, Daniel Rodriguez | Improving farming systems design and management: the role of model assisted participatory crop season planning in Sub-Saharan Africa
-
- P046 **Stephen Ockerby**, Chris Gardiner, Aholiab Aoetpah, Iain Hannah, Nick Kempe | Sugarbush - A break-crop for sustaining sugarcane productivity in the tropics
-
- P047 **Peter O'Reagain**, John Bushell, Joe Scanlan | Stocking strategies for sustainable and profitable beef production in a variable and unpredictable climate
-
- P048 **Rao (RCN) Rachaputi**, Kerry Mechenzie, Nikki Seymour, Rebecca Raymond, Doug Sands, Yashvir Chauhan | Achieving reliable yields of legume break crops is the key for sustainable integrated farming systems
-
- P049 **Daniel Rodriguez**, Michael Burgis | What do farmers want?
-
- P050 Joseph Eyre, Peter de Voil, Arial Ferrante, **Daniel Rodriguez** | A GxExM approach to evaluate the suitability of prolific maize cropping systems in Queensland
-
- P051 **Peer Schenk** | Algae energy farms for food, feed and fuel
-
- P052 **Solomon Seyoum**, Rao Rachaputi, Yash Chauhan, Solomon Fekybelu, Boddupalli Prasanna, Motlock Miranda | Optimizing genotype x environment x management interactions in Maize to increase rainfed yield in eastern and southern Africa
-
- P053 **Ahmad Suriadi**, Moh Nazam, Anny Mulyani | Improved food security of smallholder farmers through integrated maize-livestock system in dryland and semi-arid in eastern Indonesia
-
- P054 **Abdullah Taufiq**, Rao C.N Rachaputi, Ahmad Suriyadi, Muchlish Adie, Agustina Asri Ramianna | Improving soybean productivity in Eastern Indonesia
-
- P055 **Omphile Temoso**, David Hadley, Renato Villano | Sources of efficiency, productivity and output growth in Botswana agriculture
-
- P056 **Ian Watson**, Cuan Petheram, Peter Stone | Agricultural development for the northern Australian tropics
-
- P057 **Ian Watson**, Jocelyn Davies, Andrew Hall, Fafa Sow, Souleymane Ouedraogo, Kumuda Dorai | Innovation systems, food security and gender realities in a Senegalese livestock-crop system
-
- P058 **Stephen Yeates**, Merrill Ryan, Michael Hewitt, Jane Auer, Kerry Stockdale, Steven Rodges, Paul Willis | Adapting mungbean to irrigated farming systems in the semi-arid tropics



Theme 3 – Market driven solutions

CF004	Anh Tram San , Richard Webb, Heather Smyth, Daryl Joyce, Peter Hofman, Andrew Macnish A convenient sample preparation protocol for scanning electron microscope examination of mango skin disorders
CF006	Wenny Sunarharum , David Edwards, Sharon Pun, Caterina Torrisi, Glen Fox, David Williams, Heather Smyth Discrimination of 26 coffees from different geographical locations based on non-volatile composition
CF008	Tiparat Tikapunya , Glen Fox, Heather Smyth, Agnelo Furtado, Robert Henry Quality of Australian wild rice
CF010 & DVCR5	Paula Calvo , Kent Fanning, Kinnari Shelat, Tim O'Hare High temperature during kernel development significantly increases Carotenoid concentration of Zeaxanthin-biofortified and yellow Sweet-corn
P059	Damianus Adar , Fredrik L Benu, Rao Rachaputi, Medo Kote, Tony Basuki, Yohanes Lekiseran Farmer groups play a key role in improving productivity and profitability of mungbean in West Timor, Indonesia
P060	Patricia De Jesus Beltran Alarcon Pabel Method
P061	Minghai Fu, Cherie Collins, Dave Henman, Eugeni Roura Effects of bitter compounds on growth performance and carcass traits in finishing pigs
P063	Frances Cowley , Dianne Mayberry, Theo Mahiseta, Dian Ratnawati, Dicky Pamungkas, Dennis Poppi Increasing the profitability of Indonesian smallholder cattle enterprises by purchasing high quality by-product feeds
P064	Kendrick Cox , Craig Lemin, Mark Keating, Emma Hegarty, Kiri Broad, Joe Rolfe, Bern English, Steven Dayes, Stewart Buck New pasture plants to improve beef cattle performance in seasonally dry zones of northern and central Queensland
P065	Alan Cruickshank , Tony McCosker, Mat Clancy, David Jordan, Emma Mace In-harvester spectroscopy for better feed grain quality
P066	Karl Rich, Duong Nam Ha , Nguyen Thi Duong Nga, Nguyen Thi Thu Huyen, Kanar Hamza, Lucy Lapar Market-based approaches to food safety and animal health interventions: lessons from smallholder pig value chains in Viet Nam
P067	Agnelo Furtado , Robert Henry Understanding bread-making in wheat using transcriptome analysis
P068	Clifton Gwabu , Belinda Yawanies, Dickson Benny Market attributes of sweet potato (<i>Ipomea batatas</i>) and its prospects in Port Moresby, Papua New Guinea
P069	Kanar Diyzee , Hikuepi Katjuongua, Amos Omore Smallholder dairy producers in rural Tanzania: a value chain approach
P070	Kanar Diyzee , Karl M Rich, A Derek Baker, Sirak Bahta, Hikuepi Katjuongua Smallholder market competitiveness for beef production in Botswana: A quantitative value chain approach
P072	John Hine Science along wont solve agricultural productivity

Poster Display List

-
- P073 **Binh Ho**, Khang Tran | Quality characteristics and storage for floating rice (*Oryza sativa* L.) in the Mekong Delta of Vietnam: a preliminary study
-
- P074 Susan M Inu, George Curry, Gina Koczberski, **Tom Kukhang** | Socio-economic factors influencing household productivity and farm investment decisions on labour mobilisation among coffee households in Bena, EHP, Papua New Guinea
-
- P075 **Jing Li** | Self-adaptive rotation schedule of vegetable production cooperative considering uncertainty demand
-
- P076 **Dianna Liu**, Andrew Cusack, Margaret Currie, Sharon Pun, David Edwards, Yasmina Sultanbawa | Value adding Papaya with plant extracts
-
- P077 **Natalia Lozano**, Helen Ross | Smallholders' perceptions of the completed goat improvement projects implemented by a local NGO in Chillan river watershed, Peru
-
- P078 **Angus McKerrow**, Eric Ng, Ximing Sun | Moving from commodity to value added beef product
-
- P079 **Stephen Mudge**, Emma Mace, David Jordan, Bradley Campbell, Jimmy Botella, Ian Godwin | More energy in sorghum grain: manipulating starch accumulation genes
-
- P080 **Marta Navarro**, Francesca Sonni, Gabi Netzel, Smita Chaliha, Roger Stanley, Yasmina Sultanbawa | Assessment of the bioactivity of sorghum syrup, a by-product from the bio-fuel industry
-
- P081 **Michael Netzel**, Anna Bobrich, Kent Fanning, Michael Rychlik, Yan Diczbalis | Carotenoids in unexploited tropical fruits grown in Queensland, Australia
-
- P082 **Ravi Nirmal**, Agnelo Furtado, Robert Henry | Identification of candidate genes which may control milling quality of wheat
-
- P083 **Adam O'Donoghue**, Bing Zhang, Kent Fanning, Tim O'Hare | How tomato carotenoids and cooking influence the anti-proliferative effect of tomatoes on in vitro PC3 prostate cancer cells
-
- P084 **Tim O'Hare**, Kent Fanning | Why take a supplement: Zeaxanthin-Biofortified sweet-corn for macular degeneration
-
- P085 **Usha Pappu**, Heather Smyth, Len Coote | Consumer psychology of flavour: What consumers see in a coffee?
-
- P086 **James Petrie**, Thomas Vanhercke, Surinder Singh, Allan Green | Game-changing technology for production of oils in tropical biomass species
-
- P087 Farheen Bhatti, Johann Pierre, **Anne Rae**, Jai Perroux, Graham Bonnett | Knowledge to support risk assessment of weediness of GM sugarcane: limits to vegetative propagation
-
- P088 **Agustina Asri Rahmianna**, Joko Purnomo, Rao C.N Rachaputi, Eriyanto Yusnawan, Didik Harnowo | Minimizing aflatoxin contamination in peanut supply chain using tolerant cultivar
-
- P089 **Parimalan Rangan**, Agnelo Furtado, Robert Henry | Deep transcriptome sequencing of wheat seeds at different development stages reveals a dynamic gene expression pattern and regulatory network
-
- P090 Peter Tinyani, Mfuzi Makwakawa, **Dharini Sivakumar**, Puffy Soundy | Influence of photo-selective shade

netting to improve fruit quality at harvest and during post-harvest storage

-
- P091 **Francesca Sonni**, Evan Moore, Fabio Chinnici, Claudio Riponi, Heather Smyth | Volatile and sensory characterisation of Australian dry white wines from Cv. Verdelho produced in the Queensland Granite Belt Region
-
- P092 **Yasmina Sultanbawa** | Extracting value from food waste by recycling
-
- P093 **Azage Tegege**, Dirk Hoekstra, Berhanu Gebremedhin, Solomon Gizaw | Experience of mass hormonal Oestrus synchronization and insemination of cattle to improve supply of dairy genetics under smallholder conditions in Ethiopia
-
- P094 **Hue TM Tran**, Carlos Alberto Cordero Vargas, Slade Lee, Agnelo Furtado, Heather Smyth, Robert Henry | Variation of physical characters of green bean in coffee (coffea arabica) germplasm
-
- P095 **Conny Turni**, Tamsin Barnes, Joanne Meers, Kit Parke, Pat Blackall, John Al-Alawneh | Establishing the underlying causes of pleurisy
-
- P096 Andrew Hall, Jocelyn Davies, **Ian Watson** | A more systems driven approach to monitoring, evaluation and learning in agricultural research for development projects
-
- P097 **Tony Webster**, Ibrahim Atokple, Prince Etwire, Dogood Alhessan, Peter Carberry | Expanding supply of improved seed to farmers in northern Ghana to increase food security
-
- P098 **Anja Winkelbach**, Bernard Tarca, Katrina Campbell, Michael Stowasser, Walter Thomas, Eugeni Roura | Reduction of dietary sodium by substituting NaCl with monosodium glutamate (MSG) maintains the hedonic value in a rice soup application
-

Poster Display List

Theme 4 – Science driven solutions

-
- CF005 **Saira Sultan**, Gabi Netzel, Simone Osborne, Micheal Netzel, Mary Flatecher | In vitro digestion models for measuring Indospicine bioaccessibility and stability in Camel meat
-
- CF007 **Benigni Alfred Temba**, Mary Fletcher, Glen Fox, Jagger Harvey, Sheila Okoth, Yasmina Sultanbawa | The use of natural plant products for inactivation of Aflatoxin producing *Aspergillus flavus* by Photosensitization
-
- P099 **Muhammad Umair Ahsan**, Alice Hayward, John Wilkie, Christine Beveridge, Neena Mitter | MicroRNAs control of vegetative phase transition in tropical/subtropical horticultural crops
-
- P100 **Karen Aitken**, Paul Berkman, Anne Rae | A hybrid approach to sequencing the sugarcane genome
-
- P101 **Karen Aitken**, Andrew Farmer, Paul Berkman, Phillip Jackson, Xianming Wei, Emily Deomano, Cedric Muller, Mike Dietrich, Bob Dietrich, Raja Kota | Generation of a 345K sugarcane SNP chip
-
- P102 **Galih Kusuma Aji**, Fred Warren, Eugeni Roura | Variability in the sweet taste sensitivity to sucrose, maltose and glucose in humans
-
- P103 **Anahid Al-Amery**, Lara Simone Pretorius, Jessica Dalton-Morgan, Lilia C Carvalhais, Richard Moyle, Peer M. Schenk | Use of non-coding RNA to confer disease resistance against plant viruses
-
- P104 **Fahad Alderees**, David Williams, Andrew Cusack, Margaret Currie, Ram Mereddy, Zhi Ping Xu, Yasmina Sultanbawa | Bioactive properties of Australian native herb extracts
-
- P105 **Kirill Alexandrov** | Synthetic biology pipeline for detection and mitigation of parasites and diseases of farmed animals
-
- P106 **Duc-Anh An-Vo**, Shahbaz Mushtaq, Bangyou Zheng, Karine Chenu, Jack Christopher, Scott Chapman | Quantification of direct and indirect cost of frost for Australian wheatbelt
-
- P107 **Hayba Badro**, Agnelo Furtado, Robert Henry | Genotyping by Sequencing in Rice
-
- P108 **Mike Bell**, David Lester, Doug Sands, Lawrence Smith, Peter Want, Gary Harch | Improved soil test diagnostics and fertilizer management strategies to address multiple nutrient constraints in rainfed cropping systems reliant on stored soil moisture
-
- P110 Rod Baker, **Sean Bellairs**, Julian Gorman | Yield of the Australian native bush mango (*Buchanania obovata*) is affected by fire regime and regional variation
-
- P111 **Marcelo Benvenuti**, Dennis Poppi, Iain Gordon | Sward structure and foraging behaviour of cattle grazing reproductive tropical pastures
-
- P112 **Shamsul Bhuiyan**, Barry Croft, Phil Jackson, Graham Stirling, Mike Cox | Development of nematode resistant sugarcane variety through introgression breeding in Australia
-
- P113 J Lopez-Ochoa, J Montes-Garcia, C Vaizquez, P Sainchez, V.M. Perez-Mairquez, E Soriano-Vargas, **P.J Blackall**, S Vaca, E Negrete-Abascal | Gallibacterium elongation factor-Tu possesses amyloid-like protein characteristics and forms filaments that participate in cell adhesion and biofilm formation
-
- P114 **Andrew Borrell**, Barbara George-Jaeggli, Erik van Oosterom, Graeme Hammer, Emma Mace, Vincent Vadez, Jana Kholova, Harvinder Talwar, Santosh Deshpande, Sidi Coulibaly, Niaba Teme, Clarisse Barro-



Kondombo, Soumana Souley, Alemu Tirfessa, Asfaw Adugna, Clement Kamau, Abdalla Mohamed, David Jordan | The stay-green drought adaptation trait enhances sorghum production in subtropical Australia, central-western India and sub-saharan Africa

-
- P115 **Suzanne Boschma**, Carol Harris, Cathy Waters, Ian Toole, Mark Brennan, Karen Lowien | Establishment and spring vigour of leucaena (*Leucaena leucocephala* ssp. *glabrata*) cultivars in northern inland New South Wales, Australia
-
- P116 **Marie Bouteille-Pallas**, Barbara George-Jaeggli, Colleen Hunt, Adrian Hathorn, Emma Mace, David Jordan | Using genome-wide association study for improving sorghum photosynthesis
-
- P117 **Marie Bouteille-Pallas**, Barbara George-Jaeggli, Emma Mace, David Jordan | Using comparative genomics for improving sorghum photosynthesis
-
- P118 **Marta Brozyska**, Agnelo Furtado, Robert Henry | Reference genomes of novel wild rice populations from Australia
-
- P119 **Bradley Campbell**, Jaquie Mitchell, Ian Godwin, Peter Snell, Shu Fukai | Leaving the rice paddy behind; identification of mechanisms of cold tolerance and the pursuit of water use efficiency
-
- P120 **Mridusmita Chaliha**, Panagiotis Chrysanthopoulos, Mark Hodson, David Williams, Heather Smyth, Sharon Pun, David Edwards, Yasmina Sultanbawa | Exploring the metabolomic constituents and bioactive potential of Kakadu plum (*Terminalia ferdinandiana*) a native plant of Australia
-
- P121 **Jose Chaparro** | Modification of temperate fruit tree species for growth in the subtropics: Peach as a model
-
- P122 **Scott Chapman**, Torsten Merz, Andries Potgieter, Prakash Lakshmanan, Jaya Basnayake, Phillip Jackson, Paul Hutchinson, David Deery, David Jordan | Phenotyping canopy characteristics of sugarcane and sorghum
-
- P123 **Bhagirath Chauhan** | Possible strategies for weed management in Australian grain cropping systems
-
- P124 **Yash Chauhan**, Rex Williams, Brett Williams, Sagadevan Mundree | Characterisation of spatial and temporal patterns of water and thermal regimes to assist chickpea improvement for variable production environments
-
- P125 **Andy Chen**, Elizabeth Czislowksi, Sam F Smith, Jessica Dalton-Morgan, Pradeep Ruperao, David Edwards, Sharon Hamill, Mike K Smith, Jacqueline Batley, Elizabeth Aitken | Targeting a resistance gene associated with Fusarium wilt in Banana
-
- P126 **Beibei Chen**, Manuel Rodriguez-Valle, Alicja Lew-Tabor | Development of monoclonal antibody as a therapeutic tool for tick paralysis
-
- P127 **Bing Cheng**, Heather Smyth, Agnelo Furtado, Stephen Richard, Robert Henry | Effect of environment on expression of genes controlling coffee quality
-
- P128 **Karine Chenu**, Bangyou Zheng, James Watson, Scott Chapman | Breeding for the future: How to adapt to frost, drought and heat impacts in Australian wheat?
-
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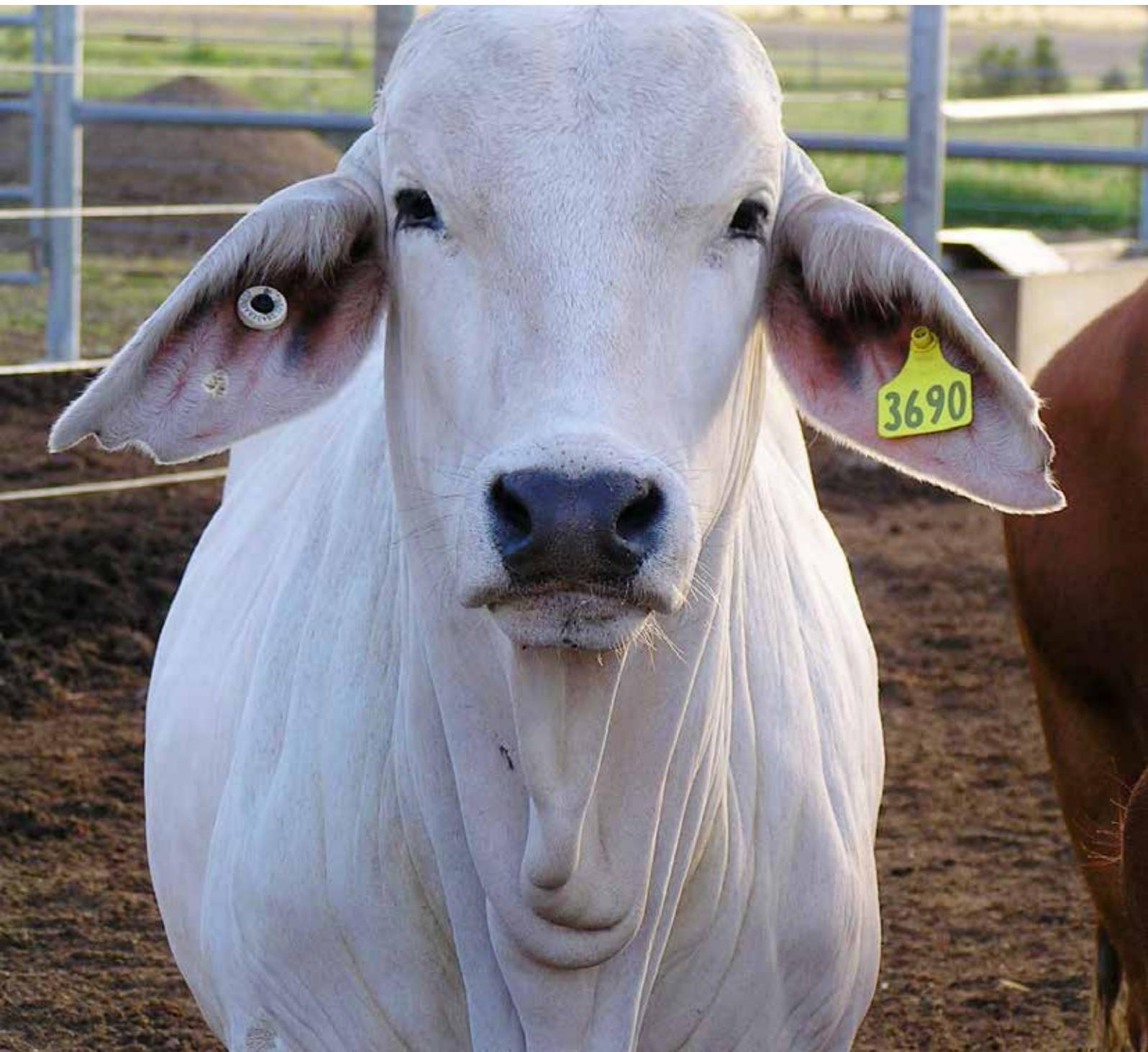
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- P229 **Megan Sullivan**, Gene Wijffels, Joseph Olm, Judy Cawdell-Smith, John Gaughan | Diurnal variation of rumen temperature proxy for body temperature

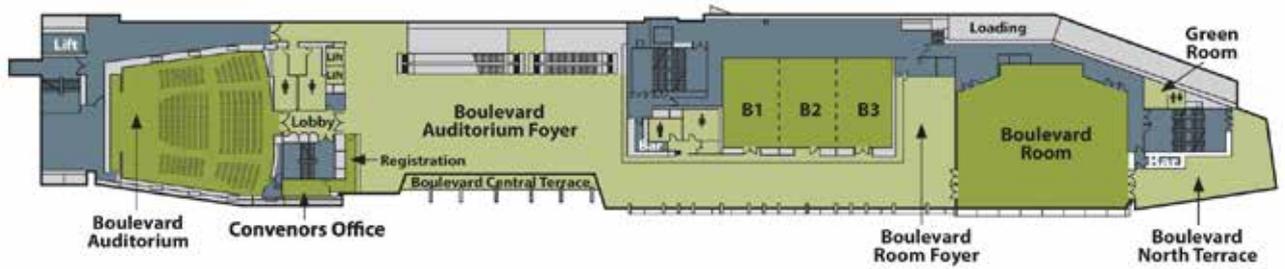
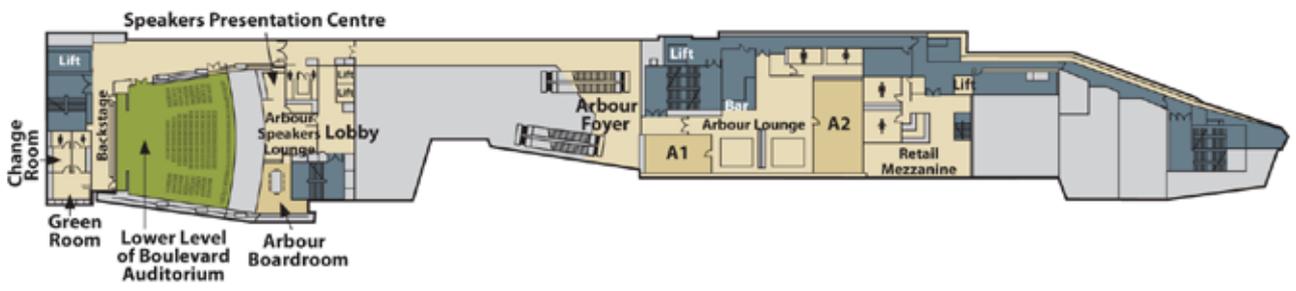
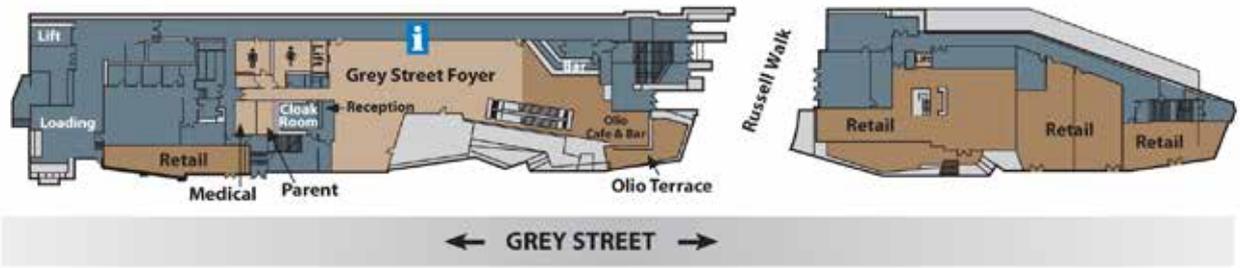
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- P251 **VS Gangadhararao Sunnam** | Varietal development in sesame
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Social Program

Welcome Reception

Monday 16 November 2015, 5:30pm

Boulevard Foyer, Brisbane Convention & Exhibition Centre

Dress: Smart casual



TropAg Conference Dinner

Tuesday 17 November 2015, 7.00pm

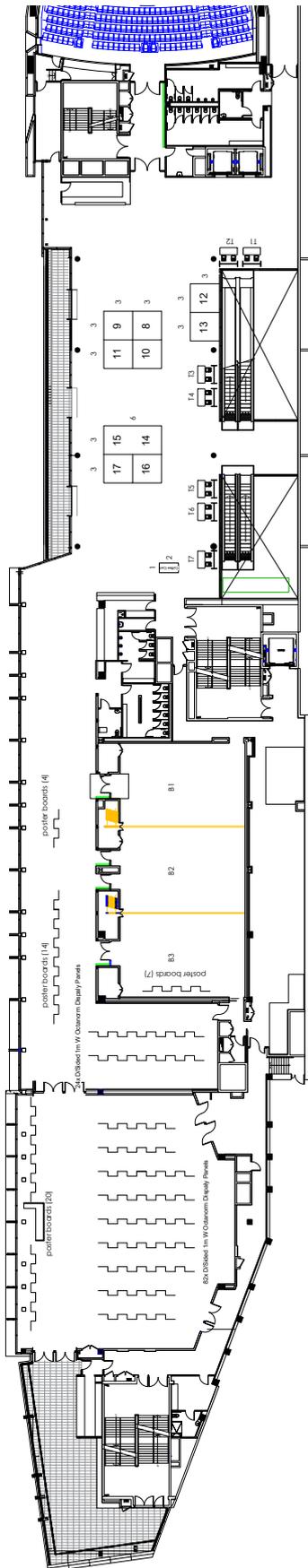
Sky room, Sky Level, Brisbane Convention & Exhibition Centre

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Tickets may be purchased in advance for \$125 each.



Exhibition Floor Plan



Exhibitor List

- TT01 AgSight Pty Ltd
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