PROGRAM
SU MCCLUSKEY, SPECIAL REPRESENTATIVE FOR AUSTRALIAN AGRICULTURE, DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY

As the inaugural Special Representative for Australian Agriculture, Ms McCluskey is a prominent voice to promote Australia’s commitment to sustainable agriculture, to the multilateral system and to the principles that underpin global trade in agricultural goods and products. As a beef cattle producer on a property just outside of Canberra, Ms McCluskey is able to bring her experiences in farming, in regulatory and risk management regimes, as well as agricultural research, to the debates and considerations that underpin not just international market access but also the shared challenges of global food security, climate change and biodiversity loss. Ms McCluskey is a Director of Australian Unity, LiveCorp, Foundation for Young Australians, Australasian Pork Research Institute and Energy Renaissance. She is also a Commissioner for the Australian Centre for International Agricultural Research, a government body supporting sustainable livelihoods and food security in the Indo-Pacific region and Africa. Previously, Ms McCluskey has been the CEO of the Regional Australia Institute and the Council of Rural Research and Development Corporations and the Executive Director of the Office of Best Practice Regulation.

Presentation: Agricultural sustainability and trade – opportunities and challenges

The role of the Special Representative for Australian Agriculture was created to carry the message that the multilateral system – its institutions, its rules, and its relationships – is vital for global food security and for driving climate-smart, sustainable food production. While an element of my role is to promote Australia’s agriculture interests and achievements, the larger part of my work concerns the role that the multilateral system can play in meeting current and future global challenges. A multilateral system that draws on science and risk when setting global standards, that works through consensus, giving voice to both large and small economies, and that ultimately supports free and open trade, will help address the challenges we face. This is as true for the least developed and emerging economies in the tropics as it is for higher income economies. I will reflect on the conversations I’ve had with government and industry officials from around the world on the role of trade in supporting sustainable productivity growth in agriculture.

To feed a growing population, the agriculture sector, across the globe, must lift its production and its productivity – producing more food and fibre while at the same time reducing inputs, reducing environmental impacts, including greenhouse gas emissions, while adapting to a changing climate. This will be even more challenging for the tropics. Forecast to carry over half of the world’s population by 2050, the tropics are also likely at the frontline of changing climate, with greater exposure and vulnerability to changes in temperature, rainfall regimes and extreme weather events.

I will also reflect on the ‘one-size-fits-all’ approach to sustainable production currently being followed through trade settings. Such an approach will only undermine progress towards sustainable productivity growth. The innovation, investment and adoption of better ways of producing food has to be tailored to the ecological, cultural and economic conditions. A one-size-fits-all approach has no place. As Australia’s Special Representative for Australian Agriculture, I’ve had the privilege over the last year of promoting some of the great research and extension work, and innovation efforts within Australia and within our region. I’ve also heard about the great work being done by Australian farmers and farming sectors as well as government to move to more sustainable production methods and systems. I am confident that agriculture production can contribute to healthier soils and water and biodiversity. And I am convinced that it is innovation – tailored to the real-world challenges, and not prescriptions – that will help drive the transformation needed in agriculture production. This innovation is best supported by a healthy multilateral trading system.

07:00 – 20:00
REGISTRATION DESK OPEN

08:00 – 10:00
Presentation: Plant-based solutions for a healthier world
Fewer than one in 10 Americans consume the recommended daily amounts of fresh fruits and vegetables. Diet-related diseases are on the rise globally. What’s more, the impacts of climate change are creating more supply volatility and are predicted to lessen the nutritional value of our crops. While food insecurity affects over 768 million people globally, nutritional insecurity affects many more – globally, 45% of the deaths of children under five are undernutrition related. Pairwise is a purpose-driven startup applying the tools of gene editing to build a healthier world through better fruits and vegetables. Encouraged by an increasingly positive global regulatory environment and enthusiasm from consumers eager for more options in produce, we are rolling out our consumer brand, Conscious TM Foods, with our first edited product hit supermarket shelves in the USA in mid-2023. In this talk, I’ll introduce CRISPR technology and share how Pairwise is using gene editing to deliver crop solutions and consumer-focused innovations in fresh produce. Our inaugural product, Conscious Greens, will be among the first gene-edited whole foods to become available to consumers. In addition, I’ll share updates on how we are using our leading CRISPR technology platform to improve other crops for sustainability attributes that will enable us to grow more with less, helping us work toward the UN Sustainable Development Goals while achieving a viable business.

It is our hope that our work will pave the way for crop innovation through gene editing globally to address the grand challenge of creating a healthier and more sustainable global food system.

DR HAVEN BAKER, PAIRWISE, CO-FOUNDER & CHIEF BUSINESS OFFICER

Dr Haven Baker co-founded Pairwise and serves as Chief Business Officer. Haven is the former Senior Vice President/General Manager of Simplot Plant Sciences, where he led the team that launched the innovative, non-browning Innate® potato. He holds a PhD in chemistry from Northeastern University, an MBA from Harvard University, and a BS in biomedical engineering from Yale University.

Presentation: Agricultural sustainability and trade – opportunities and challenges

The role of the Special Representative for Australian Agriculture was created to carry the message that the multilateral system – its institutions, its rules, and its relationships – is vital for global food security and for driving climate-smart, sustainable food production. While an element of my role is to promote Australia’s agriculture interests and achievements, the larger part of my work concerns the role that the multilateral system can play in meeting current and future global challenges. A multilateral system that draws on science and risk when setting global standards, that works through consensus, giving voice to both large and small economies, and that ultimately supports free and open trade, will help address the challenges we face. This is as true for the least developed and emerging economies in the tropics as it is for higher income economies. I will reflect on the conversations I’ve had with government and industry officials from around the world on the role of trade in supporting sustainable productivity growth in agriculture.

To feed a growing population, the agriculture sector, across the globe, must lift its production and its productivity – producing more food and fibre while at the same time reducing inputs, reducing environmental impacts, including greenhouse gas emissions, while adapting to a changing climate. This will be even more challenging for the tropics. Forecast to carry over half of the world’s population by 2050, the tropics are also likely at the frontline of changing climate, with greater exposure and vulnerability to changes in temperature, rainfall regimes and extreme weather events.

I will also reflect on the ‘one-size-fits-all’ approach to sustainable production currently being followed through trade settings. Such an approach will only undermine progress towards sustainable productivity growth. The innovation, investment and adoption of better ways of producing food has to be tailored to the ecological, cultural and economic conditions. A one-size-fits-all approach has no place. As Australia’s Special Representative for Australian Agriculture, I’ve had the privilege over the last year of promoting some of the great research and extension work, and innovation efforts within Australia and within our region. I’ve also heard about the great work being done by Australian farmers and farming sectors as well as government to move to more sustainable production methods and systems. I am confident that agriculture production can contribute to healthier soils and water and biodiversity. And I am convinced that it is innovation – tailored to the real-world challenges, and not prescriptions – that will help drive the transformation needed in agriculture production. This innovation is best supported by a healthy multilateral trading system.

07:00 – 20:00
REGISTRATION DESK OPEN

08:00 – 10:00
Conference official opening
Professor Matthew Morrill, Institute Director, Queensland Alliance for Agriculture and Food Innovation (QAAFI), The University of Queensland
Professor Deborah Terry AO, Vice-Chancellor and President, The University of Queensland
The Hon Mark Furner, Minister for Agricultural Industry Development and Fisheries and Minister for Rural Communities
Chair: Mr Robert (Bob) Gee APM, Director-General, Queensland Government, Department of Agriculture and Fisheries, Australia

Plenary speaker 1: 100. Agricultural sustainability and trade – opportunities and challenges
Ms Su Mccluskey, Special Representative for Australian Agriculture, Department of Agriculture, Fisheries and Forestry, Australia

Plenary speaker 2: 101. Plant-based solutions for a healthier world
Dr Haven Baker, Co-Founder and Chief Business Officer, Pairwise, USA

10:00 – 10:25
Morning tea, sponsored by
### 10.30 - 12.30

#### CONCURRENT SYMPOSIUM SESSION 1

<table>
<thead>
<tr>
<th>Panel ID</th>
<th>Title</th>
<th>Chairpersons</th>
<th>Theme Sponsor</th>
<th>Symposium Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>The AgriFood and Internet of Farms Traction Program: Insights from the Netherlands and Denmark – to and beyond $100 billion</td>
<td>B. van Delden, Partner, Head of AgTech and Digital Economy, KPMG and R. Hogarth-Scott, Partner, Head of Digital AgriFood, KPMG</td>
<td>Gold Sponsor</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Application of digital technologies in agriculture: Plant-Canopy-Field-Region</td>
<td>P. Zerou-Tejeda, The University of Melbourne, Prof. A. Poletti, The University of Queensland</td>
<td>GRC</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Tropical beef systems: Reproductive efficiency and carbon neutrality</td>
<td>M. Phelps, Tropical North Queensland Drought Resilience Adoption and Innovation Hub, Australia</td>
<td>MIA</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Emerging foods for health</td>
<td>M. Nettel and M. Kodagoda, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td>MIA</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Carbon and bio-sequestration in agricultural production systems</td>
<td>T. Smith, Director of CSIRO, Food Agility CRC, P. Hogarth-Scott, Partner, Head of Digital AgriFood, KPMG</td>
<td>KPMG</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>Investigating traditional food production systems in Mithaka country</td>
<td>T. Smith, Director of CSIRO, Food Agility CRC, P. Hogarth-Scott, Partner, Head of Digital AgriFood, KPMG</td>
<td>KPMG</td>
<td></td>
</tr>
</tbody>
</table>

#### Panelists:
- Dr Michael Netzel, Program and speakers correct at time of printing. Program is subject to change.

### TopAg conference incorporating HarlanIV and AgFutures

**Panel session**
- **Overview:** Gathering of the Traction Toun delegates to the Netherlands and how this relates to what is happening in Australia, the Circularity and Data Exchanges amongst other things.

**Panelists:**
- Dr Michelle Allan, Chair, Food and Agribusiness Growth Centre (FAGC), Queensland Department of Agriculture and Fisheries, Australia
- Dr Tim Smith, Director of CSIRO, Food Agility CRC, P. Hogarth-Scott, Partner, Head of Digital AgriFood, KPMG
- Dr Anne Astin AM PSM, Chair of Food Agility CRC
- Dr John Gaughan, The University of Queensland, School of Agriculture and Food Sciences, Australia
- Dr Dianne Mayberry, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
- Dr Jennifer Silcock, The University of Queensland, School of Agriculture and Food Sciences, Australia
- Dr Carlos Camino, JRC – European Commission, Italy
- Dr Naomi Wilson, Environment and Sustainability, ARCo, Australia
- Ms Teresa Fox, Australian Farm Institute, Australia
- Dr Bradley Campbell, The University of Queensland, School of Agriculture and Food Sciences (SAFS), Australia
- Ms Sophie Ader, ARC Industrial Transformation Training Centre for Sustainable Crop protection, The University of Queensland, Australia
- Dr John Gaughan, The University of Queensland, School of Agriculture and Food Sciences (SAFS), Australia
- Dr Dianne Mayberry, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
- Dr Bradley Campbell, The University of Queensland, School of Agriculture and Food Sciences (SAFS), Australia

**Principal sponsors:**
- Queensland Government
- KPMG
- Piers Hogarth-Scott, Partner, Head of Digital AgriFood, KPMG

**Theme sponsors:**
- Queensland Government
- HarlanIV

**Program and speakers correct at time of printing. Program is subject to change.**
12.30 - 13.25
Lunch and poster session, sponsored by

13.30 - 15.30
CONCURRENT SYMPOSIUM SESSION 2

Please refer to page 43 and 44 for symposium overview.

Agribusiness, value chains, and the bioeconomy
Predictive agriculture
Sustainable agri-food systems
Healthy agriculture and food for healthy communities
AgFutures
Harlan IV

<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Creating value from food waste</td>
<td>2.1</td>
<td>Plaza room P7-8</td>
</tr>
<tr>
<td>Chairperson: Mr Francesca Goodman-Smith, Right Food Waste CRC, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Mr Tom McCue, Hort Innovation, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Peter Leach, Department of Agriculture and Fisheries, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms Melissa Smith, Stop Food Waste Australia, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Nicole Robinson, The University of Queensland, School of Agriculture and Food Sciences (SAFS), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Artificial Intelligence and machine learning applications in agriculture</td>
<td>2.2</td>
<td>Plaza room P11</td>
</tr>
<tr>
<td>Chairperson: Dr Ben Hayes, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Prof Helen Huang, The University of Queensland, School of Information Technology and Electrical Engineering (ITEE), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms Kira Vibert, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Improved soil fertility for healthier environments and reduced agricultural production risks</td>
<td>2.3</td>
<td>Plaza Auditorium</td>
</tr>
<tr>
<td>Chairperson: Dr Nicola Robinson, The University of Queensland, School of Agriculture and Food Sciences (SAFS), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Dr Sinead Boylan, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Ya-Ping Lin, World Vegetable Center, Taiwan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4 Partnerships for Food System Transformation - diverse knowledge systems, capacity and approaches driving equitable, healthy, sustainable futures</td>
<td>2.4</td>
<td>Plaza Ballroom</td>
</tr>
<tr>
<td>Chairperson: Mr Frank Sterling, Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Dr Sallye Akers, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5 Growing horticultural exports</td>
<td>2.5</td>
<td>Plaza room P10</td>
</tr>
<tr>
<td>Chairperson: Stuart Burgess, National Fruit Fly Council, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.6 Tropical crop domestication</td>
<td>2.6</td>
<td>Plaza room P9</td>
</tr>
<tr>
<td>Chairperson: Dr Sally Norton, Australian Grains Genebank Agriculture Victoria, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Ms Francesca Goodman-Smith, Right Food Waste CRC, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms Larelle McMillan, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Millicent Smith, The University of Queensland, Queensland Alliance for Agriculture and Water Resources, Queensland, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Volant Wills, GoTerra, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Acacio Guterres, Charles Darwin University, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Ya-Ping Lin, World Vegetable Center, Taiwan</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Program and speakers correct at time of printing. Program is subject to change.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:00 – 18:00</td>
<td><strong>CONCURRENT SYMPOSIUM SESSION 3</strong></td>
</tr>
<tr>
<td></td>
<td>TropAg conference incorporating HarlanIV and AgFutures</td>
</tr>
<tr>
<td></td>
<td>Please refer to page 44 and 45 for symposium overview</td>
</tr>
</tbody>
</table>

### Agribusiness, value chains, and the bioeconomy
- **Plaza room P7-8**
  - **3.1 Market-led innovation – driving agricultural entrepreneurship in Africa and Australia**
    - Chairperson: Dr Vivienne Anthony, Syngenta Foundation for Sustainable Agriculture, Switzerland
    - Symposium Sponsor: HarlanIV
  - **3.2 ARC Centre of Excellence for Plant Success in Nature and Agriculture: Enabling a step change for predictive agriculture**
    - Chairperson: Prof Christine Beveridge, ARC Centre of Excellence for Plant Success in Nature and Agriculture, The University of Queensland, Australia
  - **3.3 Effective regional biosecurity for a changing world**
    - Chairperson: Dr Anna Ollieto, Australian Centre for International Agricultural Research (ACIAR), Australia
  - **3.4 Pacific food environments – transformations for better nutrition and sustainable food systems**
    - Chairperson: Mrs Jessica Renet, Australian Centre for International Agricultural Research (ACIAR); Department of Foreign Affairs and Trade, Australia
  - **3.5 Managing agricultural runoff – beyond practise change**
    - Chairperson: Mr Timothy Moseley, Department of Agriculture and Fisheries, Australia
  - **3.6 Genomic signatures of animal domestication and implications for modern agriculture**
    - Chairpersons: Prof Ben Hayes and Prof Andrew Fairbairn, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAF), Australia
- **Plaza room P11**
  - **16. Innovation systems in legumes**
    - Dr Jean-Claude Rubigabo, PanAfrica Bean Research Alliance (PABRA), Kenya
  - **17. African women in agribusiness – users and creators of technologies/market-led innovations**
    - Dr Eileen Nchiru, International Center for Tropical Agriculture (CIAT), Kenya

### Predictive agriculture
- **Plaza Auditorium**
  - **18. Managing plant biosecurity in the Pacific region**
    - Dr Andrew Goering, The University of Queensland, Queensland Alliance for Agriculture and Food, Innovation (QAAF), Australia
  - **19. Food markets in Solomon Islands – availability, price, and opportunities for improving nutrition**
    - Dr Jillian Tutuo, World Fish, Solomon Islands
  - **20. Could the zooarchaeological record help shape the future of modern livestock improvement?**
    - Prof Kelvin Chemining, The University of Sydney, Australia
  - **21. Atmospheric systems genetics of plant success**
    - Assoc Prof Daniel Ortiz-Barrera, The University of Queensland, Australia
  - **22. Forest biosecurity: How can we mitigate risk?**
    - Dr Madalina Healey, The University of Sunshine Coast, Australia
  - **23. Using wetland processes to enhance nitrogen removal in farming catchments**
    - Ms Carla Wegscheidl, Department of Agriculture and Fisheries, Australia

### Sustainable agrifood systems
- **Plaza Ballroom**
  - **24. Market-Led approaches to cocoa, palm oil and cassava variety breeding at the National Research Centre in Côte d’Ivoire**
    - Prof Sangare Abdourahimé, National Centre for Agricultural Research (CNRA), Republic of Côte d’Ivoire
  - **25. Accro-lensing plant success: From phylogenetics to agriculture**
    - Prof Barbara Holland, University of Tasmania, Australia
  - **26. Forest carbon: The value of regional biosecurity**
    - Prof Tom Kompas, The University of Melbourne, Australia
  - **27. Pacific Island Food Revolution: Innovating local solutions to combat a health epidemic**
    - Ms Yoana Maclean-de-Rour, Pacific Island Food Revolution, Vanuatu
  - **28. Can insurance help farmers mitigate nitrogen impacts on the Great Barrier Reef?**
    - Dr Mehrnush Forutan, The University of Queensland, Australia

### Healthy agriculture and food for healthy communities
- **Plaza room P10**
  - **29. Advances in demand-led breeding of dry grain and vegetable runner beans**
    - Prof Paul Kimera, University of Nairobi, Kenya
  - **30. Crop improvement for climate change**
    - Prof Charlie Messina, The University of Florida, USA
  - **31. Understanding the value of regional biosecurity**
    - Prof Tom Kompas, The University of Melbourne, Australia
  - **32. Pacific Island Food Revolution: Innovating local solutions to combat a health epidemic**
    - Ms Yoana Maclean-de-Rour, Pacific Island Food Revolution, Vanuatu
  - **33. Participatory approaches to improve food environments and consumption of fish**
    - Ms Agustinha Duarte, World Fish, Timor-Leste

### AgFutures
- **Plaza room P9**
  - **34. Sydney Island Food Revolution: Innovating local solutions to combat a health epidemic**
    - Ms Yoana Maclean-de-Rour, Pacific Island Food Revolution, Vanuatu
  - **35. Pacific Island Food Revolution: Innovating local solutions to combat a health epidemic**
    - Ms Yoana Maclean-de-Rour, Pacific Island Food Revolution, Vanuatu

### Harlan IV
- **Plaza room P12**
  - **36. Genomic architecture for complex traits in hybrid populations**
    - Mrs Christine Warburton, The University of Queensland, Australia

### Panel discussion
- **Panel discussion**
  - **18:00 – 20:00**
    - Welcome reception and poster viewing

---

Program and speakers correct at time of printing. Program is subject to change.
TUESDAY 1 NOVEMBER

PROFESSOR PAUL PG GAUTHIER, PROFESSOR IN PROTECTED CROPPING, QUEENSLAND ALLIANCE FOR AGRICULTURE AND FOOD INNOVATION (QAAFI), THE UNIVERSITY OF QUEENSLAND

Professor Gauthier is one of the world’s leading experts in vertical farming and protected cropping. He has many years of experience in academia and the industry managing research teams. After more than 10 years in academia studying plant physiology from cells to ecosystems, he has been leading the R4D New Product and System Innovation Group at Bowery Farming for the past three years, delivering new products to the market, including the first strawberry grown at scale indoors. His previous research at Princeton University focused on understanding the sustainability of vertical farms, both economically and environmentally. In July 2022, Professor Gauthier took up a position as Professor of Protected Cropping at Queensland Alliance for Agriculture and Food Innovation (QAAFI), where he is building a research team. He plans to focus on tropical and subtropical crops, an emerging industry with a high growth rate. The project will look at high-value pharmaceutical and nutraceutical crops that can be grown indoors.

- Presentation: Farming in the 21st Century: Protected cropping as a solution to mitigate the impact of climate change and supply chain disruption

Building a sustainable and reliable food production system represents one of the biggest challenges of the 21st century. While the global population is increasing and expected to reach nine billion by 2050, climate change and turmoil threaten the resilience of our global food supply chain and solutions must be found. Failing to address these issues may lead to dramatic consequences, both globally and locally. To tackle these challenges, farming needs to adapt to be more resilient to climate-driven extreme events such as drought, floods, fires, or pests. Protected cropping offers solutions to sustainably produce more nutritious crops all year round, independently of weather or climate. Current advancements in protected cropping technologies and research will be presented as well as its potential application for tropical and subtropical crops.

07:30 – 17:00
REGISTRATION DESK OPEN

08:00 – 09:30
Chair: Prof Neena Mitter, The University of Queensland, Centre for Horticultural Science, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia

- Plenary speaker 3: 204. Farming in the 21st Century: Protected Cropping as a solution to mitigate the impact of climate change and supply chain disruption

Prof Paul Gauthier, Professor of Protected Cropping, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia - USA

Chair: Prof Yasmina Sultanbawa, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia

- Plenary speaker 4: 205. Future of First Nations food systems and emerging trends

Hon Prof Henrietta Marrie AM - Australian Research Council - Training Centre for Uniquely Australian Foods, The University of Queensland, Australia

09:30 – 09:55
Morning tea, sponsored by

HONORARY PROFESSOR HENRIETTA MARRIE AM, FIRST NATIONS ADVISORY GROUP CHAIR, AUSTRALIAN RESEARCH COUNCIL (ARC) TRAINING CENTRE FOR UNIQUELY AUSTRALIAN FOODS, THE UNIVERSITY OF QUEENSLAND

Henrietta is an Honorary Professor with the Australian Research Council (ARC) Training Centre for Uniquely Australian Foods. The University of Queensland. She provides advice on the strategic direction of Uniquely Australian Foods research and best practice protocols to protect the rights and interests of Indigenous project participants playing a critical role in driving the Australian native foods industry. She is an Aboriginal Australian from the Yidinji tribe, directly descended from Ye-ri-ne, an Aboriginal leader in the Cairns region. In 1905, the Queensland Government awarded Ye-ri-ne a king plate in recognition of his local status as a significant Walubara Yidinji leader. Professor Marrie has produced over 100 papers and reports in academic journals and has chapters in many edited books. She has a Master of Environmental and Local Government Law at Macquarie University and is a Member of the Order of Australia for her significant service to the community as an advocate for Indigenous cultural heritage and intellectual property rights, and to education. Professor Marrie was the first Aboriginal person from Australia to be selected for a full-time professional position with the United Nations agency, the Secretariat of the Convention on Biological Diversity of the United Nations Environment Programme based in Montreal, Canada. In 2018, Profess Henrietta Marrie was named as one of the Queensland Greats by Queensland Premier Annastacia Palaszczuk.

- Presentation: Future of First Nations food systems and emerging trends

Henrietta will share her decades of experience working with Indigenous groups both nationally and internationally, from grass roots to global policy levels, to talk about the future of First Nations food systems and emerging trends.

She will discuss the criticality of maintaining strong cultural connections while advancing traditional foods and food systems into mainstream current and future global food systems, highlighting how partnering science with traditional knowledge systems can lead to innovative approaches that can better address social and ecological challenges.

Henrietta will outline that, underpinning these approaches, there must be the protection and advancement of First Nations people’s rights and traditional knowledge, and that a range of diverse and innovative mechanisms are required.
### 10:00 – 12:00

**CONCURRENT SYMPOSIUM SESSION 4**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Location</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Protected cropping in the tropics: How it stacks up for sustainability and supply chains?</td>
<td>Plaza room P7-8</td>
<td>Chairperson: Prof Paul Gauthier, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td>Dr Alian Anderson, Hort Innovation Australia</td>
</tr>
<tr>
<td>4.2 New and emerging methods and technologies to improve phenotypic predictions in live stock agriculture</td>
<td>Plaza room P11</td>
<td>Chairperson: Dr Elizabeth Ross, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>4.3 On-farm biodiversity to increase climate resilience and sustainability</td>
<td>Plaza Auditorium</td>
<td>Chairperson: Dr Nora Devoe, Australian Centre for International Agricultural Research (ACIAR), Australia</td>
<td></td>
</tr>
<tr>
<td>4.4 One health from a livestock view</td>
<td>Plaza Ballroom</td>
<td>Chairperson: Dr Connor Tunyi, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>4.5 Provenance: Challenges and opportunities in adding value to food crops</td>
<td>Plaza room P10</td>
<td>Chairperson: Dr Daniel Cozzolino, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>4.6 The archaeobotany of domestication of vegetatively-propagated field and tree crops</td>
<td>Plaza room P9</td>
<td>Chairperson: Prof Tim Denham, Australian National University, Australia</td>
<td></td>
</tr>
<tr>
<td>206. Opportunities for developing protected cropping in Australia — National R&amp;D Strategy overview</td>
<td>Plaza room P7-8</td>
<td>Dr Elijo Jovicich, Department of Agriculture, Fisheries, Australia</td>
<td></td>
</tr>
<tr>
<td>207. National Vegetable Protected Cropping Centre: glasshouse films to reduce energy use</td>
<td>Plaza room P11</td>
<td>Prof David Tissieu, Western Sydney University, Australia</td>
<td></td>
</tr>
<tr>
<td>208. Data driven growing - current and future trends for protected cropping</td>
<td>Plaza Auditorium</td>
<td>Mr Marcus van Heijst, Priva, Australia</td>
<td></td>
</tr>
<tr>
<td>209. The future of protected cropping in Australia</td>
<td>Plaza Ballroom</td>
<td>Dr Sam Turner, Protected Cropping Australia, Australia</td>
<td></td>
</tr>
<tr>
<td>210. The Bree ‘E’s’ of vertical farming success</td>
<td>Plaza Auditorium</td>
<td>Mr Douglas Ether, Intelligent Growth Solutions, Australia</td>
<td></td>
</tr>
<tr>
<td>211. Medical Harvest - indoor multi tiered medical cannabis facility</td>
<td>Plaza Ballroom</td>
<td>Dr Andrew Ollier, Medical Harvest, Australia</td>
<td></td>
</tr>
<tr>
<td>212. Recent advances in genomic prediction in dairy using multi-omics resources</td>
<td>Plaza room P11</td>
<td>Prof Helen Wallace, Griffith University, Victoria, Australia</td>
<td></td>
</tr>
<tr>
<td>213. Predicting nitrogen use efficiency in cattle using nitrogen isotope fractionation in tail hair</td>
<td>Plaza Auditorium</td>
<td>Dr Karen Elye, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>214. Recent innovations in the use of Nanopore sequence in predictive livestock agriculture</td>
<td>Plaza room P7-8</td>
<td>Dr Loon Nguyen, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>215. Genetic control of longitudinal trait change in human populations</td>
<td>Plaza room P11</td>
<td>Dr Kathryn Kemper, IME, Australia</td>
<td></td>
</tr>
<tr>
<td>216. On-farm genotyping as a management and selection tool of the future</td>
<td>Plaza Auditorium</td>
<td>Dr Harrison Lamb, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>217. Agroforestry reduces erosion and increases income over maize monoculture in Northwest Vietnam</td>
<td>Plaza Ballroom</td>
<td>Dr Nguyen Lu, Soils and Fertilizer Research Institute, Vietnam</td>
<td></td>
</tr>
<tr>
<td>218. Diversity in agricultural landscapes for pollinator diets</td>
<td>Plaza room P11</td>
<td>Prof Helen Wallace, Griffith University, Victoria, Australia</td>
<td></td>
</tr>
<tr>
<td>219. On-farm diversity increases productivity and carbon sequestration opportunities in smallholder-farming systems</td>
<td>Plaza Auditorium</td>
<td>Dr Joel Buyinza, World Agroforestry Centre (ICRAF), Kenya</td>
<td></td>
</tr>
<tr>
<td>220. Data and digital solutions for managing natural capital on farm</td>
<td>Plaza room P7-8</td>
<td>Dr Madeline Mitchell, Food Agility CRC, Australia</td>
<td></td>
</tr>
<tr>
<td>221. Agroforestry reduces erosion and increases income over maize monoculture in Northwest Vietnam</td>
<td>Plaza Ballroom</td>
<td>Dr Nguyen Lu, Soils and Fertilizer Research Institute, Vietnam</td>
<td></td>
</tr>
<tr>
<td>222. AgCarE – helping landowners measure and capitalise on improving natural capital condition</td>
<td>Plaza room P11</td>
<td>Dr Greg Leech, AgForce Queensland, Australia</td>
<td></td>
</tr>
<tr>
<td>223. Impact of dung beetle body size on greenhouse gas (GHGs) emission</td>
<td>Plaza room P7-8</td>
<td>Dr Maja Sule, Griffith University, Australia</td>
<td></td>
</tr>
<tr>
<td>224. Perspectives on livestock and One Health</td>
<td>Plaza Ballroom</td>
<td>Dr Jimmy Smith, International Livestock Research Institute (ILRI), Kenya</td>
<td></td>
</tr>
<tr>
<td>225. Global challenges and solutions for implementation of antimicrobial stewardship in veterinary medicine</td>
<td>Plaza room P11</td>
<td>Prof Glenn Browning, The University of Melbourne, Faculty of Veterinary and Agricultural Sciences, Australia</td>
<td></td>
</tr>
<tr>
<td>226. Collaborating on Queensland’s One Health Response to Japanese Encephalitis</td>
<td>Plaza room P7-8</td>
<td>Dr Joanne Mollinger, Biosecurity Queensland, Department of Agriculture and Fisheries, Australia</td>
<td></td>
</tr>
<tr>
<td>227. One Health at work: A systems dynamics model of Brucellosis in Jordan</td>
<td>Plaza room P11</td>
<td>Assoc Prof Simon Reid, The University of Queensland, School of Public Health, Australia</td>
<td></td>
</tr>
<tr>
<td>228. Pig apocalypse, chicken nirvana</td>
<td>Plaza room P11</td>
<td>Dr Kathryn Kemper, IME, Australia</td>
<td></td>
</tr>
<tr>
<td>229. Knowledge on antibiotic use and resistance among poultry farmers in Fiji</td>
<td>Plaza Ballroom</td>
<td>Mrs Jakia Sultana, University of New England, Australia</td>
<td></td>
</tr>
<tr>
<td>230. Imposter fish: Uncovering fraud and obscure trade in global seafood supply chains</td>
<td>Plaza room P11</td>
<td>Dr Donna Cawthorn, Department of Agriculture and Fisheries, Australia</td>
<td></td>
</tr>
<tr>
<td>231. Provenance of food proteins</td>
<td>Plaza room P11</td>
<td>Dr Natasha Hungerford, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>232. Honey authenticity and provenance</td>
<td>Plaza room P11</td>
<td>Prof Loretta Hoffman, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>233. Open challenges in agriculture remote auditing and cyber security</td>
<td>Plaza room P11</td>
<td>Prof Ryan Ko, The University of Queensland, School of Information Technology and Electrical Engineering (TEE), Australia</td>
<td></td>
</tr>
<tr>
<td>234. What is the next level sensing provenance?</td>
<td>Plaza room P11</td>
<td>Assoc Prof Daniel Cozzolino, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
</tr>
<tr>
<td>235. Establishing a virtual, online database of archaeological parenthyma for Indo-Pacific root crops</td>
<td>Plaza room P11</td>
<td>Dr Meaghen Bilton, Maritime Cultures Research Institute (MARI) – VUB, Department of Art Studies and Architecture, Belgium</td>
<td></td>
</tr>
<tr>
<td>236. Tracing tropical plant domestication using microfossils</td>
<td>Plaza room P11</td>
<td>Assoc Prof Alison Cranher, The University of Queensland, School of Social Science, Australia</td>
<td></td>
</tr>
<tr>
<td>237. The identification of tropical arboriculture in Oenaea using wood charcoal</td>
<td>Plaza room P11</td>
<td>Ms Alexandra Ribney, Australian National University, School of Archaeology and Anthropology, Australia</td>
<td></td>
</tr>
<tr>
<td>238. The identification of tropical arboriculture in Oenaea using wood charcoal</td>
<td>Plaza room P11</td>
<td>Ms Alexandra Ribney, Australian National University, School of Archaeology and Anthropology, Australia</td>
<td></td>
</tr>
<tr>
<td>239. Historical dynamics of enset archaeobotany, ethnobotany and genomics</td>
<td>Plaza room P11</td>
<td>Dr Philippa Ryan, Royal Botanic Gardens Kew, UK</td>
<td></td>
</tr>
<tr>
<td>240. The archaeobotany of vegetative domestication in the tropics</td>
<td>Plaza room P11</td>
<td>Prof Tim Denham, Australian National University, Australia</td>
<td></td>
</tr>
</tbody>
</table>

Program and speakers correct at time of printing. Program is subject to change.
CONCURRENT SYMPOSIUM SESSION 5

<table>
<thead>
<tr>
<th>Topic</th>
<th>Agribusiness, value chains, and the bioeconomy</th>
<th>Predictive agriculture</th>
<th>Sustainable agrifood systems</th>
<th>Healthy agriculture and food for healthy communities</th>
<th>AgFutures</th>
<th>Harlan IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Manufacturing plants – key to sustainable supply chain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Dr Jayati Hil Bandaragala, Prof Neena Mitter and Dr Alice Haywood, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2</td>
<td>Breeding tools for predicting fruit quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Assoc Prof Heather Smyth, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3</td>
<td>Building inclusive innovation in international development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Dr Holger Meinke, University of Tasmania, CGIA/ Independent Science for Development Council, Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.4</td>
<td>Disease sentinels: Farm animals and wildlife as sentinels to better predict and prevent human disease pandemics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Prof Gabrielle Penley, The University of Queensland, School of Agriculture and Food Sciences (SAFS), Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5</td>
<td>Improving food safety and traceability in the agriculture sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Mr Jim Dodds, Safe Food Production Queensland, Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.6</td>
<td>Tree translocation, cultivation and domestication in Australia and the Asia-Pacific</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairperson: Prof Andrew Fairbairn, The University of Queensland, School of Social Science, Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel discussion</th>
<th>202. Banana gene editing technology</th>
<th>248. Molecula r work on developing citrus varieties with preferred flavor profiles</th>
<th>254. The role of inclusivity in technologically-driven innovation processes against foodborne illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs Susan Hill</td>
<td>Dr Leane Tsimpis, International Institute of Tropical Agriculture, Tanzania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>249. The importance of fruit sensory quality – an industry perspective</td>
<td>Prof Juan Xu, Huazhong Agricultural University, China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>255. View from the field: Co-innovation with small-scale farmers</td>
<td>Dr Simon Relfe, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>256. Coconut: Innovation in the fresh produce industry</td>
<td>Dr Simon Relfe, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>257. The efficiency of inclusive partnerships for a agriculture international development innovation in technologically-driven innovation processes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assoc Prof Heather Smyth, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>258. Inclusive partnerships for One CGIA</td>
<td>Dr Nonupemutelo Obokho, CGIA/ Independent Science for Development Council, South Africa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>259. Surveillance of emerging infectious disease</td>
<td>Dr Steve Kemp, International Livestock Research Institute (ILRI), Kenya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>260. Preventing foodborne illness outbreaks linked to fresh produce</td>
<td>Dr Craig Shadbolt, NSW Food Authority, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>261. Protection of export markets against foodborne illness outbreaks linked to fresh produce</td>
<td>Dr Craig Shadbolt, NSW Food Authority, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>262. Improving food safety through enhanced digital traceability in the agriculture sector</td>
<td>Mr Greg Calvert, FreshChain Systems, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>263. Morphological characterisation of coconut in conserved ex-situ germplasm in Papua New Guinea</td>
<td>Dr Robert Bertram, United States Agency for International Development (USAID), Australia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Program and speakers correct at time of printing. Program is subject to change.
### 15:00–15:25

**Afternoon Tea**, sponsored by

### 15:30–17:30

**ACIAR AND CGIAR PLENARY SESSION**

*Food security and food systems transformation in the Indo-Pacific – the role for science*

In the next 15 years, it’s predicted that 4 out of 5 of the largest economies will be in the Indo-Pacific region. However, this region is exposed to a suite of social, political and environmental challenges that erode food systems and food security, with flow-on effects for the rest of the globe. Join our panel of international agricultural, research-for-development and policy experts as they discuss the push for food systems transformation, and the unique strengths Australia has to offer.

#### INTRODUCTION AND OPENING REMARKS

- **Prof Deborah Terry AO**, Vice-Chancellor and President, The University of Queensland
- **Dr Beth Woods OAM FTSE**, Commissioner, Commission for International Agricultural Research

#### PANELLISTS

- **Dr Andrew Ash**, Member, Independent Science for Development Council (ISDC), CGIAR
- **Prof Ramesh Chand**, Member, Australia’s Policy Advisory Council
- **Dr Ruben Echeverria**, Senior Advisor, Agricultural Development, Bill and Melinda Gates Foundation
- **Dr Segenet Kelemu**, Member, Australia’s Policy Advisory Council
- **Dr Claudia Sadoff**, Executive Managing Director, CGIAR
- **Mrs Fiona Simson GAICD**, Commissioner (Chair), Commission for International Agricultural Research
- **Mr Sunny Verghese**, Member, Australia’s Policy Advisory Council

#### Summary and closing remarks

- **Prof Andrew Campbell FTSE FAICD**, CEO, Australian Centre for International Agricultural Research

### 19:00 – 23:00

**TropAg Conference Dinner**

19:00 Doors open and guests seated
19:30 Formalities commence
Program and speakers correct at time of printing. Program is subject to change.
10:00 - 10:25  Morning Tea, sponsored by 

10:30 - 12:30  CONCURRENT SYMPOSIUM SESSION 7

Please refer to page 48 and 49 for symposium overview.

<table>
<thead>
<tr>
<th>Agribusiness, value chains, and the bioeconomy</th>
<th>Predictive agriculture</th>
<th>Sustainable agrifood systems</th>
<th>Healthy agriculture and food for healthy communities</th>
<th>AgFutures</th>
<th>Harlan IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaza room P7-8</td>
<td>Plaza room P11</td>
<td>Plaza Auditorium</td>
<td>Plaza Ballroom</td>
<td>Plaza room P10</td>
<td>Plaza room P9</td>
</tr>
</tbody>
</table>

**Themes:***

- 6.1 Genetic characterisation of tropical utility
- 6.2 Beaming out paddock secrets: The new era of beef cattle research
- 6.3 Sustainable pork, chicken meat,
- 6.4 Growing our AgTech future—
- 6.5 Plant genetic resources - initiatives

**Chairpersons:**

- 6.1 Genetic characterisation of tropical utility: Chairperson: Dr Natalie Dillon, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia
- 6.2 Beaming out paddock secrets: The new era of beef cattle research: Chairperson: Prof Rebecca Ford, Griffith University, Australia
- 6.3 Sustainable pork, chicken meat: Chairperson: Dr Alex Wu, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia
- 6.4 Growing our AgTech future—: Chairperson: Dr Alistair McTaggart, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia
- 6.5 Plant genetic resources - initiatives: Chairperson: Mr Michael Beer, AgriFutures, Australia

**Abstracts:**

- 309. Trajectory of the gourmet mushroom industry Mr McLay Pascue, Little Acre Gourmet Mushrooms, Australia
- 310. Fable Food Co – ending industrial animal agriculture with mushrooms Katine Fox, Fable Food, Australia
- 311. Production of polysaccharide in mushrooms Mr Shaun Duffy, RESET Mind Science, Australia
- 312. Multi-Omic characterisation and therapeutic potential of a native Australian mushroom, Hericium coralloides Dr Kyle Agnew-Francis, The University of Queensland, Australia
- 313. Innovation of Australian native magic mushrooms for the polysaccharide industry Dr Alastair McTaggart, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia
- 314. Increasing the production yield of mushrooms with pulsed electric field technology Mr Faraz Zare, The University of Queensland, Australia

**Theme Sponsor:**

- Queensland Government

Program and speakers correct at time of printing. Program is subject to change.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 – 13:10</td>
<td>Lunch and Poster Session, sponsored by Conference Organisers</td>
<td>Plaza P10</td>
</tr>
<tr>
<td>13:15 – 15:15</td>
<td>Concurrent Symposium Session 8</td>
<td>Plaza Ballroom, Plaza room P7-8</td>
</tr>
<tr>
<td>12:30 – 13:10</td>
<td>Agribusiness, value chains, and the bioeconomy</td>
<td>Plaza room P7-8</td>
</tr>
<tr>
<td>13:15 – 15:15</td>
<td>Sustainable Supply Systems</td>
<td>Plaza room P11</td>
</tr>
<tr>
<td>12:30 – 13:10</td>
<td>Predictive agriculture</td>
<td>Plaza room P10</td>
</tr>
<tr>
<td>13:15 – 15:15</td>
<td>Health, agriculture, and food for healthy communities</td>
<td>Plaza room P10</td>
</tr>
</tbody>
</table>

**Program and speakers correct at time of printing. Program is subject to change.**

**Agribusiness, value chains, and the bioeconomy**
8.1 A new protein paradigm for agriculture and nutrition: from field to fork
Chairperson: Dr Liz Ricketts, Director of Science, Grains Research and Development Corporation (GRDC) Australia
8.2 Innovation in tropical pulse production
Chairperson: Dr Paul Michael Jackson, The University of Queensland, Australia
8.3 Designing and modelling crops for a hotter and drier world
Chairperson: Dr Inigo Auzmendi, Dr Clare Tekla Mukankusi, Alliance for Agriculture and Food Innovation (QAAFI), Australia
8.4 RNA for plant health
Chairperson: Mr Duncan Ferguson, Sugar Research Australia, Australia
8.5 Enhanced efficiency fertilisers
Chairperson: Dr Michael Hargreaves, Alliance for Agriculture and Food Innovation (QAAFI), Australia
8.6 RNA for, for plant health
Chairperson: Prof Henrietta Marrie, The University of Queensland, Australia
8.7 Value added food products from Terminalia
Chairperson: Mr Oladipupo Adiamo, The University of Queensland, Australia
8.8 Enhancing efficiency fertilisers
Chairperson: Dr Stefan Strickland, General Manager, Norco, Australia
8.9 RNA for plant health
Chairperson: Prof Rajeev Varshney, The University of Queensland, Australia

**Sustainable supply systems**
9.1 Designing plantarchitecture for future climates
Chairperson: Dr Jonathan Ojeda, RegrowAg, Australia
9.2 Crop hydraulic engineering using Aquaporins
Chairperson: Dr Julia Bally, Queensland University of Technology, Australia
9.3 Quantifying physiological adaptation to future climates
Chairperson: Dr Geetika Geetika, The University of Queensland, Australia
9.4 Novel nutraceuticals from native foods
Chairperson: Mr Arineh Tahmasian, Cowan University, Australia
9.5 Sustainability of farming systems
Chairperson: Dr Selina Fyfe, The University of Queensland, Australia
9.6 Organic fertilisers and farming systems
Chairperson: Dr Weijin Wang, Department of Agriculture and Food Innovation (QAAFI), Australia
9.7 Nutrient use efficiency and supply systems
Chairperson: Dr Kirsten Verburg, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
9.8 Exogenous RNA to control rust
Chairperson: Dr Anna Florin, St John's College; University of Cambridge, UK
9.9 Genomics and proteomics
Chairperson: Dr Janik Olejas, Mackay Sugar Limited, Australia

**Predictive agriculture**
10.1 Proteomics for designer pulse protein
Chairpersons: Prof Andrew Borrell, The University of Queensland, Australia, and Ms Anna Tao, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
10.2 Physiological insight to improve mungbean productivity
Chairpersons: Dr Ramakrishnan Madhavan Nair, World Scientific and Industrial Research Organisation (CSIRO), Australia, and Dr Anna Florin, St John's College; University of Cambridge, UK
10.3 Sensory analysis of Australian native foods
Chairpersons: Dr Michelle On, Kiril Park Wild Harvest Ingredients, Australia, and Prof Ben Hayes, The University of Queensland, Australia
10.4 Future flavours from the past: Sensory analysis of Australian native foods
Chairperson: Dr Clare Tekla Mukankusi, Alliance of Tropical Agriculture (CIAT), Australia
10.5 Application of artificial intelligence breeding
Chairpersons: Prof Peter Grace, Queensland University of Technology, Australia, and Dr Jonathan Ojeda, RegrowAg, Australia
10.6 Breeding and breeding systems
Chairperson: Prof Yasmina Sultanbawa, The University of Queensland, Australia
10.7 Why? Insights from modelling regional scales
Chairperson: Dr Anthony Vickers, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
10.8 Meeting the growing global demand for high quality proteins cannot be met by the current agrifood paradigm. The panel members are engaged with the approach to global science, investment and agrifood business models and value chains that is required to address the protein challenge sustainability.
Chairpersons: Dr Anne Sawyer, The University of Queensland, Australia, and Prof Andrew Borrell, The University of Queensland, Australia

*Please refer to page 50 for symposium overview*
PLENARY SESSION
Chair: Professor Robert Henry, The University of Queensland, Queensland Alliance for Agriculture and Food Innovation (QAAFI), Australia

Plenary speaker 5: 375. Banana genome diversity is shaped by admixture and large structural variations
Dr Angélique D'Hont, Team Manager and Researcher, CIRAD French Agricultural Research Centre for International Development, France

Plenary speaker 6: 376. Science-fiction or science-fact? Research for sustainable livestock agri-food systems
Dr Jimmy Smith, Director General, International Livestock Research Institute (ILRI), Kenya

17:15 – 17:30
Student Poster Award Presentation & Conference Close. Best Poster Award sponsored by

DR ANGÉLIQUE D'HONT, TEAM MANAGER AND RESEARCHER, CIRAD FRENCH AGRICULTURAL RESEARCH CENTRE FOR INTERNATIONAL DEVELOPMENT, FRANCE

Angélique D’Hont’s research interests are focused on understanding the structure and evolution of complex genomes involving polyploidy, interspecific hybridity and structural heterozygosity. She is leading a research team ‘Genome structure and evolution’ at CIRAD, Montpellier, France. Current activities are focused mainly on banana and sugarcane, two polyploid complexes, making use of comparative genomics, molecular marker diversity, genetic mapping and molecular cytogenetics. These studies are closely connected with genetic improvement programs. She coordinated the production and analysis of the first reference genome assembly for banana and sugarcane. Currently, she is working with her team in deciphering banana and sugarcane genome diversity through re-sequencing approaches.

Presentation: Banana genome diversity is shaped by admixture and large structural variations

Banana is a major crop that derives from hybridisations between Musa species and subspecies that diverged in Southeast Asian regions and archipelagos. Diploid and triploid hybrids with seedless parthenocarpic fruits were selected by humans and thereafter dispersed through vegetative propagation. We sequenced 162 accessions, including banana cultivars and representatives of Musa diversity, in Illumina WGS. Several ancestral groups were identified as contributors to these cultivars, including one species not previously shown to be largely involved, and two uncharacterised genetic pools that have yet to be identified. Representative alleles from these genetic pools revealed complex genome mosaics involving three to seven contributors in diploid and triploid cultivars. These results shed new light on the origin and domestication of banana cultivars. In addition, using the sequence data and genotyping-by-sequencing data from 11 properties, we characterised seven large reciprocal chromosome translocations and showed that they emerged in different ancestral groups of Musa. Most diploid and triploid cultivars analysed were structurally heterogeneous for one to four translocations. All translocations induced a recombination reduction of variable intensity and extent. The translocated chromosomes were found to be preferentially transmitted in many cases, which may have favoured their colonisation. Impact of genome architecture on genetic analysis of agronomic traits will be illustrated.

DR JIMMY SMITH, DIRECTOR GENERAL OF THE INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE (ILRI)

Jimmy W Smith, a Guyanese and Canadian citizen, is Director General of the International Livestock Research Institute (ILRI). ILRI is a CGIAR research centre, working towards a food-secure world. Jimmy is CGIAR’s Senior Director of Livestock-Based Systems. ILRI’s work focuses on livestock research for sustainable development. Before joining ILRI, Jimmy led the livestock portfolio at the World Bank. Working at corporate level, he anchored the bank’s investments on sustainable livestock development and mitigating the threat of zoonoses with pandemic potential. Before his tenure at the World Bank, he held senior positions at the Canadian International Development Agency (CIDA). Earlier, he worked at ILRI and its predecessor, the International Livestock Centre for Africa (ILCA), where he served as the institute’s regional representative for West Africa and later as director of its global program on crop-livestock systems. Before his decade of work at ILCA/ILRI, he held senior positions in the Caribbean Agricultural Research and Development Institute (CARDI-Trinidad) and the Livestock Development Company (LIDCO-Guyana). Jimmy is a graduate of the University of Illinois at Urban-Champaign, USA, where he completed MSc and PhD degrees in animal sciences. He is widely published, with more than 100 publications, including papers in refereed journals, book chapters, policy papers and edited proceedings.

Presentation: Science fiction or science-fact? Research for sustainable livestock agri-food systems

In the face of increasingly polarised discourse about the place of livestock in sustainable food systems, this presentation will unpack factors behind this dissonance, which tends to coarsen livestock debates and prevent livestock solutions from arising. While livestock discussions must not shy from uncomfortable truths, they should avoid the binary worlds of absolutes. The great diversity of livestock production, processing and consumption patterns across the world underpin many of today’s apparently conflicting views of the sector. Science-based evidence spanning livestock and the environment, human health and broader livelihood dimensions will be explored to highlight this diversity and how it leads to such conflicting perspectives. A more nuanced understanding of the different roles livestock play in development is essential if future food systems are to meet the immense challenges of the food, nutritional, health and livelihood needs of the world’s growing population, especially those in low and lower middle income (LMIC) nations, where such growth is fastest. Addressing these challenges requires considerable new science — and science connected through new alliances — to deliver practical, equitable and enduring solutions. Examples of science-based solutions for more sustainable animal agriculture in LMICs – addressing production efficiencies, environmental protection, healthy and nutritional diets and equitable and inclusive growth – will illustrate the big opportunities livestock systems present to help bring about a positive transformation of the world’s food systems.