



The New Agriculture

The University of Sydney Institute of Agriculture is at the forefront of research and outreach for agricultural innovation, business and policy and we are playing a leading role in the design, creation and integration of components required of the New Agriculture, for Australia and the world.

The New Agriculture is a high-tech, ecosystem-aware, value-added and consumer-connected food production system with benefits for consumers, producers and the environment.

We will be guided by five key concepts that drive the innovation:

Production Productivity and Profitability

To meet the rising demand, yield gaps in all sectors of agriculture must be closed, farm productivity must be improved, and innovative new ways of growing food and fibre will be developed (urban agriculture).

Provenance

The challenge is to develop transparent supply chains; improved standards of production, processing, delivery and marketing; and the linkages between food production, soil, animal and 'One Health'.

Resilience

We need to build capacity across a wide range of areas to ensure the ongoing, sustainable and smooth growth of the agriculture sector, to manage risks to the economy and profitability of agriculture and to withstand the shocks and disruption of weather and markets that often occur.

Digital Disruption

The transformative power of technology will be the major cross cutting, all pervading force of change in agriculture. This will impact the kind of research, education and outreach that is needed from Universities to realise this digital transformation, but it will also change the way that research, education and outreach are done.

Connectivity

Agriculture is about people. Connectivity recognises the need for connected vibrant producer communities and per more importantly the need for strong two-way connections between consumers and producers.

Order of Proceedings

Time	Activity
9am	<p>Registration Tea and coffee will be served on arrival</p>
9.30am	<p>Welcome and Official Ceremony to Launch the Sydney Institute of Agriculture</p> <ul style="list-style-type: none"> ▪ Dr Michael Spence AC, Vice-Chancellor and Principal, University of Sydney ▪ Professor Alex McBratney, Director, Sydney Institute of Agriculture, University of Sydney ▪ Tony Mahar, Chief Executive Officer, National Farmers' Federation
10.15am	<p>Morning Tea</p>
10.40am	<p>Research Showcase commences Professor Alex McBratney, Director, Sydney Institute of Agriculture, University of Sydney</p>
10.50am	<p>Plant Breeding and Production Facilitated by Professor Richard Trethowan, Professor of Plant Breeding, Director, IA Watson Grains Research Centre, Narrabri, Plant Breeding Institute - Cobbitty, University of Sydney</p> <p><i>Maintaining the pulse in agricultural resilience</i> Associate Professor Brent Kaiser, Director, ARC Industrial Transformation Research Program – Legumes for Sustainable Agriculture, University of Sydney</p> <p><i>The future of weed control in Australian cropping systems</i> Dr Michael Walsh, Director, Weed Research, Plant Breeding Institute, Narrabri, University of Sydney</p> <p><i>Saving wheat from rust diseases</i> Naeela Qureshi, PhD Candidate, Plant Breeding Institute, Narrabri, University of Sydney</p>
11.20am	<p>Carbon, Water and Soil Facilitated by Professor Margaret Barbour, ARC Future Fellow, Associate Dean (Research), School of Life and Environmental Sciences, University of Sydney</p> <p><i>Soil Carbon tackling food security and climate change</i> Professor Budiman Minasny, School of Life and Environmental Sciences, University of Sydney</p> <p><i>Sensing of farm scale soil moisture content using a mobile cosmic ray probe</i> Niranjan Manikku Acharige, PhD Candidate, School of Life and Environmental Sciences, University of Sydney</p> <p><i>Accounting for natural capital in agriculture</i> Associate Professor Tiho Ancev, School of Economics, University of Sydney</p>

11.50am	<p>Quality Food Facilitated by Professor Robyn McConchie, ARC Industrial Transformation Training Centre (ITTC) Food Safety in Fresh Produce, School of Life and Environmental Sciences, University of Sydney</p> <p>Food safety and quality for connected supply chains Dr Kim Phan-Thien, Degree Coordinator, Food and Agribusiness, School of Life and Environmental Sciences, University of Sydney</p> <p>Collaboration between Engineers and Agriculturalists in Food Processing Dr John Kavanagh, School of Chemical and Biomolecular Engineering, University of Sydney</p> <p>Sensors to monitor food safety and quality Dr Rona Chandrawati, School of Chemical and Biomolecular Engineering, University of Sydney</p>
12.20pm	<p>Lunch and poster session</p>
1.05pm	<p>Panel discussion</p> <p>The New Agriculture Facilitated by Andrea Koch</p> <p>Panel members:</p> <ul style="list-style-type: none"> ▪ Professor Peter Sharp, Director, Plant Breeding Institute, University of Sydney ▪ Professor Alex McBratney, Director, Sydney Institute of Agriculture, University of Sydney ▪ Professor Rosanne Taylor, Head of School and Dean, Sydney School of Veterinary Science, University of Sydney
1.50pm	<p>Animal Agriculture Facilitated by Professor Yani Garcia, Director, Dairy Research Foundation, Dairy Science Group Leader, School of Life and Environmental Sciences, University of Sydney</p> <p>A snapshot of research of the livestock in future landscapes group Associate Professor Luciano Gonzalez, McCaughey Associate Professor Livestock in Future Landscapes, School of Life and Environmental Sciences, University of Sydney</p> <p>Animal reproduction Associate Professor Roslyn Bathgate, Sydney School of Veterinary Science, University of Sydney</p> <p>Interpreting cattle vocalisations: A way to revolutionise cattle welfare and production Alexandra Green, PhD Candidate, School of Life and Environmental Sciences, University of Sydney</p>

2.20pm	<p>Development Agriculture Facilitated by Professor David Guest, Professor of Plant Pathology, School of Life and Environmental Sciences, University of Sydney</p> <p><i>Value chain development and rural livelihoods in the Indonesian specialty coffee sector</i> Dr Mark Vicol, Postdoctoral Research Associate, School of Geosciences, University of Sydney</p> <p><i>Strengthening food and nutrition security in resource-poor settings</i> Dr Julia de Bruyn, PhD candidate, Sydney School of Veterinary Science, University of Sydney</p> <p><i>Agroecosystems in Developing Countries – Crossing the discipline through an in-country field school</i> Associate Professor Damien Field, School of Life and Environmental Sciences, University of Sydney</p>
2.50pm	Afternoon Tea
3.10pm	<p>Digital Agriculture Facilitated by Associate Professor Brett Whelan, School of Life and Environmental Sciences, University of Sydney</p> <p><i>Robotics and digital agriculture</i> Professor Salah Sukkarieh, Australian Centre for Field Robotics, University of Sydney</p> <p><i>A big data approach to predicting grain crop yield</i> Liana Johnson, PhD Candidate, School of Life and Environmental Sciences, University of Sydney</p> <p><i>GPS technology in animal agriculture</i> Jaime Manning, PhD Candidate, School of Life and Environmental Sciences, University of Sydney</p>
3.40pm	<p>180-second Thesis Challenge</p> <p>Poster awards and Thesis Challenge awards</p>
4.20pm	Closing remarks
4.30pm	Cocktail reception
5.30pm	Event close

For more information

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