NEWSLETTER 57, DECEMBER 2025

The UWA Institute of Agriculture

The 2025 Winthrop Society High Tea celebrated agriculture by showcasing UWA's important contributions to agricultural research and honouring the enduring legacy of its benefactors.

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THE UNIVERSITY OF WESTERN AUSTRALIA

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Front cover photo: Hackett Professor Kadambot Siddique, UWA Chancellor Dr Diane Smith-Gander, Dr Kelsey Pool, UWA Vice-Chancellor Professor Amit Chakma and Miss Fiona Alan.
Picture by Ezra Alcantra Photography

From the Director

As the year draws to a close, it is a perfect time to celebrate the many achievements of 2025. It has been a remarkable year for our researchers and staff at The UWA Institute of Agriculture (IOA), marked by awards, international collaboration and outstanding contributions to the field.

Among the most remarkable achievements this year is the significant progress made in the CRC SAAFE program, led by Assoc/Prof Zakaria Solaiman (page 17). There is now a critical mass in this area of sustainable solutions to antimicrobial resistance in soil, with five PhD candidates supporting research in this critical area and opportunities to expand this research area more widely across UWA.

The 31st Hector and Andrew Stewart Memorial Lecture, delivered by Professor Salah Sukkarieh (page 11), was one of the highlights of the term. He provided an inspiring glimpse into the future of agriculture, demonstrating how digital technologies can enhance farm efficiency, sustainability, and resilience when integrated with traditional farming practices.

We were pleased to convene our second meeting of the year with the Industry Advisory Board (IAB), reaffirming the Board's pivotal role in guiding strategic decisions and supporting the organisation of the Industry Forum 2026. As part of the meeting, IAB members had the opportunity to see some of our research through a guided tour of the glasshouse and growth room experiments (see page 12).

It was an honour to deliver the keynote address at the 2025 Winthrop Society High Tea (see page 13), where agriculture and IOA's work were front and centre. The event underscored the essential role of philanthropy in advancing knowledge and research, strengthening UWA's capacity to remain at the forefront of sustainable and transformative practices in agriculture.

As we look ahead to 2026, I am excited to build on this momentum and continue making a meaningful impact in agriculture. Wishing you all a safe, restful, and joyful festive season.

Hackett Professor Kadambot Siddique
AM CitWA FTSE FAIA FNAAS FISPP FAAS FPAS
kadambot.siddique@uwa.edu.au

IOA strengthens Australia-Africa university partnerships **at AAUN Forum**

The UWA Institute of Agriculture (IOA) took part in the Australia Africa Universities Network (AAUN) Annual Forum and AGM 2025, held on 1–2 September in Perth.

The Forum's theme, "*Social License and Universities: Comparative Perspectives from Australia and Africa*" explored how universities build trust, engage communities, and demonstrate accountability beyond formal obligations.

IOA Director Hackett Professor Kadambot Siddique and IOA Associate Director Professor Wallace Cowling joined leading academics, government officials, diplomats, and industry representatives to share the work done along with African University partners.

Professor Siddique presented in Session 3 on Social License and University-Industry Engagement, highlighting how UWA fosters ethical partnerships and sustainable agricultural innovation through university–industry collaboration.

With nearly 100 participants, the event provided a rich platform for knowledge exchange, networking, and discussion of best practices in higher education collaboration across continents.

Participants during the 2025 ANNU Forum.

Hands-on learning at UWA Farm Ridgefield inspires future biotechnologists

Students Sanjida Fatima, Pavan Anil Kumar and Aleena Saju with Emerita Professor Lynn Abbot at UWA Farm Ridgefield.

Three students from the Master of Biotechnology program at UWA, specialising in Environmental and Agricultural Biotechnology, recently visited UWA Farm Ridgefield to explore sustainable farming practices and soil health research.

The field visit offered an opportunity to engage directly with ongoing experiments examining how integrating annual and perennial pasture species with soil treatments such as compost, digestate, and biochar can improve soil carbon sequestration and biodiversity in Western Australia's mixed farming systems.

Under the guidance of Emerita Professor Lyn Abbott and Yoshi Sawada, students Sanjida Fatima, Pavan Anil Kumar and Aleena Saju collected plant samples from 24 experimental plots for further processing and analysis. Students also counted perennial plants, maintained precise records, and learned to differentiate between crops, weeds, and control areas, essential skills for field-based ecological research.

They gained insights into how small-scale observations contribute to broader understanding of pasture management, soil biodiversity, and carbon capture. They also developed teamwork, communication, and leadership skills by coordinating responsibilities and collaborating effectively under field conditions.

By connecting classroom learning with hands-on research, the UWA Farm Ridgefield trip provided an engaging platform for students to experience real-world agricultural science while supporting The UWA Institute of Agriculture's mission to promote innovation and sustainability in farming systems.

Sanjida Fatima, Pavan Anil Kumar and Aleena Saju

Advances in sheep production presented at Livestock Matters Forum 2025

Dr Kelsey Pool conducting experimental research on sheep fertility and thermal stress.

On July 24, Dr Kelsey Pool was invited to present two talks at the Livestock Matters Forum to present her research on thermal stress, ram fertility, and an innovative crutching method, alongside industry insights and collaborative opportunities.

Both presentations were well received, generating thoughtful discussion and offers from commercial properties to support future research.

Her "biocrutching" project has attracted strong industry interest and earned an invitation to present at the MerinoLink 2026 forum. Supported by the UWA Pathfinder program and the Lefroy Bequest, the work demonstrates the value of embedding fundamental science within practical agricultural research and fostering collaboration with producers.

The forum also featured insights from Michael and Blair Humphrey on the future of sheep production, Associate Professor Serina Hancock from Murdoch University on heat stress and reproduction, PhD student Georgia Welsh on edible shelter to improve lamb survival, and Dr Hayley Norman from CSIRO on pasture strategies to fill feedbase gaps. Market updates from Andrew Whitelaw and discussions on feed-lotting with Merino producer Hamish Thompson rounded out the day.

Dr Kelsey Pool
kelsey.pool@uwa.edu.au

Professor Anna Nowak, Dr Monte Masarei, Associate Professor Andrew Guzzomi, Ms Kim Giddens MLA and Dr Todd Erickson.

Eco-tech spin-out to restore native biodiversity to degraded land

In September, UWA launched an innovative new spin-out company that aims to rehabilitate degraded landscapes with a key focus on reinstating biodiversity using native seeds.

Emergence Ecotech was founded on innovative technologies developed by researchers at UWA's Centre for Engineering Innovation: Agriculture & Ecological Restoration (CEI:AgER), in association with Kings Park Science, and includes the Seed Flamer, a tool that makes native seeds easier to handle and sow; and the Mega Sweeper, a precision seeding device designed for native seeds.

Associate Professor Andrew Guzzomi, Director of CEI:AgER, Dr Todd Erickson, CEI:AgER Eco-restoration Theme Lead, and Dr Monte Masarei, CEI:AgER Eco-tech Lead, are the founding inventors of the technology that provides restoration solutions for land disturbed by human activity such as mined or agricultural land.

The team will lead Emergence Ecotech in partnership with UWA and Biologic Seed – a local company focused on implementing native seed use at scale through a variety of direct seeding and biodiverse planting programs.

"We are combining our state-of-the-art seed enhancement technology with our purpose developed precision delivery systems," Associate Professor Guzzomi said.

Globally 20 to 40 per cent of land, or between 2.6 to 5.2 billion hectares, is degraded and in Australia at least 52 million hectares is degraded.

Existing methods of large-scale land restoration are insufficient – native land restoration has less than five per cent success rate of plant establishment and use of non-native plants fails to restore critical biodiversity.

"We can provide a complete land restoration solution that significantly improves native plant establishment from direct sown seed, increasing seedling emergence from less than five per cent to levels ranging between 40 and 80 per cent," Dr Erickson said.

Emergence Ecotech would like to see the technologies adopted by mining partners and rehabilitation practitioners across the State – especially in regions where many mines are rapidly approaching closure and have a major need for scaled efficient seed use.

"Our research will provide industry partners access to technology that can bring damaged and degraded land back to life," Dr Masarei said.

"With our company now formally up and running we are looking forward to working with industry to scale up biodiverse restoration."

Associate Professor Andrew Guzzomi
andrew.guzzomi@uwa.edu.au

UWA PhD students Whitney Payne, Jaime Phillips and Master student Luk Lam with WAARC Program Lead Jenny Crisp.

UWA to drive WA agriculture forward with WAARC scholarships

Three UWA PhD students are set to make their mark on WA's agricultural future after receiving Round 2 WA Agricultural Research Collaboration (WAARC) Postgraduate Research Top-Up Scholarships for 2025.

Whitney Payne is exploring how thermal stress affects livestock reproduction, while Jaime Phillips is designing natural capital markets to help farmers balance emerging challenges and opportunities across the continent. Luk Lam is harnessing satellite and drone imaging to develop innovative weed management strategies for precision agriculture in WA. "The WAARC top-up scholarship eases financial pressure and allows me to focus on building a career in agricultural research. This opportunity gives me confidence to pursue ambitious goals knowing I have the right support behind me," said Luk.

WAARC Director Kelly Pearce said these scholars join a dynamic network of researchers and industry partners, gaining hands-on experience, access to world-class facilities, and connections across the sector.

"It is encouraging to know my research will be supported by a network of researchers and industry partners committed to resilient farming systems in WA," said Whitney.

Each student will receive an annual top-up of around $25,000 for up to 3.5 years, providing vital support as they pursue groundbreaking research in agriculture.

Supported by $25 million in State Government funding, WAARC's scholarship program continues to build the next generation of agricultural leaders, ensuring Western Australia remains at the forefront of research, innovation, and sustainability.

Pioneering genomics research earns Professor Batley 2025 Scientist of the Year

Professor Jacqueline Batley has been awarded 2025 WA Scientist of the Year for her groundbreaking work on plant-pathogen interactions and the genome diversity that drives disease resistance.

Her research, now embedded in industry breeding programs, is strengthening crops, improving food security and supporting more reliable yields for growers worldwide.

As one of the most highly cited scientists in her field, Professor Batley has reshaped how researchers understand the genetic traits underpinning crop improvement. Her discoveries have enabled breeders to identify and select key genes linked to resilience and productivity, accelerating the development of hardier varieties.

A Laureate Fellow with the School of Biological Sciences and a Theme Leader at The UWA Institute of Agriculture, Professor Batley continues to influence global agriculture through innovative genomics research that delivers real-world impact. Her award highlights scientific excellence and a lasting contribution to sustainable food production.

Professor Jacqueline Batley with her family.

UWA researchers to lead national climate-smart agriculture project

UWA is leading a major new project aiming to improve the resilience and sustainability of Australia's pasture systems, supporting farmers and industry to adopt practices that reduce emissions, build climate resilience, and protect biodiversity.

Emerita Professor Lynn Abbot, Research Associate Hira Shaukat, Tammie Harold, Dr Bede Mickan, Dr James O'Connor, Dr Sasha Jenkins and Hackett Professor Kadambot Siddique.

The project started at the end of 2024 and will finalise in 2028. It is supported through the Australian Government's Department of Agriculture, Fisheries and Forestry, under the Natural Heritage Trust's Climate-Smart Agriculture Program, Partnerships and Innovation grants.

This national collaboration brings together farmers, local industry groups and leading expertise from The University of Adelaide, La Trobe University, Western Sydney University, Scolexia, The University of Queensland, and the Western Australian Department of Primary Industries and Regional Development (DPIRD). UWA is also working closely with its key collaborator, Agriculture Victoria Research, within the Department of Environment, Energy and Climate Action (DEECA).

The project will trial and demonstrate innovative approaches in pastures, soils, and fertiliser management. This includes testing diversified pasture species for improved climate resilience, applying soil amendments and biowaste-derived fertilisers to enhance productivity, and developing new technologies for manure and effluent management to reduce nutrient losses and greenhouse gas emissions. Advanced modelling and soil health indicator tools will be applied to assess both environmental and economic outcomes.

The UWA team consists of Dr Sasha Jenkins, Hackett Professor Kadambot Siddique, Emeritus Professor Lyn Abbott, Professor Nanthi Bolan, Dr Bede Mickan, Associate Professor Amin Mugera, and a team of researchers and support staff. A key focus of the project is engagement with stakeholders including farmers, agronomists, industry advisors, Indigenous groups, and policymakers. Through field trials, workshops, webinars, and industry forums, the project team will demonstrate the value of sustainable practices while building capacity across the sector. Importantly, the Project is embedding knowledge exchange opportunities between researchers and First Nations communities through partnerships and solutions.

CEI:AgER leads the way in ag innovation at FutureAg Expo 2025

The UWA Centre for Engineering Innovation: Agriculture & Ecological Restoration (CEI:AgER) team represented UWA at the 2025 FutureAg Expo in Melbourne from 5–7 June, showcasing their expertise in agricultural innovation as part of GRDC's "Grain Automate Alley."

They highlighted the Grain Automate project, which focuses on preparing Australia's agricultural systems for increasing technology and autonomy. The team comprised Centre Director Associate Professor Andrew Guzzomi, Dr Wesley Moss, Research Fellows Dr Stuart Watt and Mr Harrison Caddy, and PhD student Ms Ruby Wiese.

FutureAg's Grain Automate Alley provided the ideal platform for CEI:AgER to communicate progress on key initiatives, demonstrating how automation and engineering innovation can drive efficiency, resilience, and sustainability in the grain sector.

Visitors had the opportunity to see how UWA research is being translated into real-world applications, highlighting UWA's commitment to advancing innovation and preparing Australian producers for the opportunities and challenges of an increasingly autonomous farming future.

CEI:AgER team at FutureAg Expo 2025.

Connecting climate, data, and farmers behaviour in agricultural economics

Navigating modern agricultural challenges requires more than experience, it demands data, insight, and an understanding of human decision-making. At UWA School of Agriculture and Environment, Dr Sarah Whitnall and Dr Curtis Rollins are combining these elements to explore how farmers respond to climate change, market pressures, and environmental policies.

For Dr Whitnall, new Lecturer in Agricultural and Resource Economics at UWA School of Agriculture and Environment, understanding climate impacts is central. "Prior work on the effect of weather and climate change on agricultural production mostly focuses on staple crop yields," she explains. "I explore new channels, including product quality and postharvest losses, which are critical for determining prices and farm profitability."

Dr Whitnall's work extends beyond crops to the people who produce them. "Farmwork is physically demanding and outdoors," she says. "Agricultural workers are among the most vulnerable to heat stress, and climate change is fusing their physical and financial wellbeing with that of farm managers." By combining high-resolution farm-level data with applied econometrics, her work wants to translate complex trends into actionable strategies for the sector.

While Dr Whitnall focuses on climate and data, Dr Curtis Rollins, Lecturer and Deputy Director of Training at the Centre for Environmental Economics and Policy, examines the human side of agriculture. "I'm exploring how the public, experts, and landowners perceive ambitious new biodiversity goals and policies," he says.

> "The challenge is finding the right balance between improving environmental outcomes, maintaining food production, and supporting the wellbeing of farmers and rural communities."

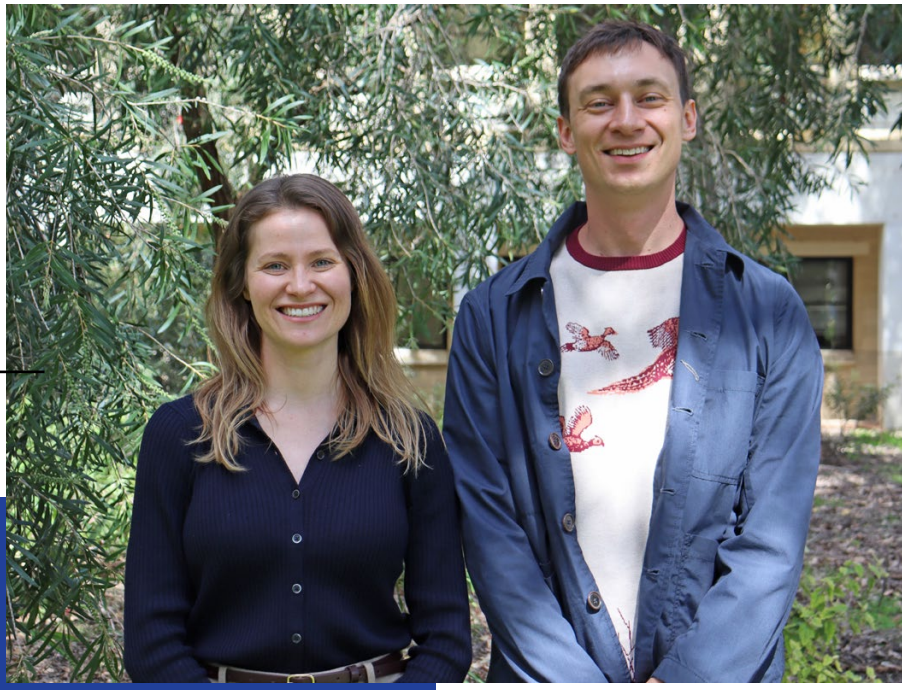
Dr Rollins integrates psychology and sociology into economic models to understand decision-making. "Interdisciplinary collaboration is essential," he notes. "I work with ecologists, agricultural scientists, sociologists, psychologists, and farmers themselves. Together, these perspectives help create richer, more accurate representations of how people make decisions around sustainability," he explains.

Dr Whitnall and Dr Rollins exemplify the interdisciplinary strength driving research at UWA's School of Agriculture and Environment. Their complementary work, rooted in data yet responsive to human behaviour, strengthens a vision of agricultural economics that connects evidence with empathy.

By reimagining the field not merely as the study of markets and yields, but as an exploration of resilience, they are helping UWA build a foundation for more adaptive, inclusive, and forward-thinking responses to the challenges facing agriculture and rural communities worldwide.

Dr Sarah Whitnall
sarah.whitnall@uwa.edu.au

Dr Curtis Rollins
curtis.rollins@uwa.edu.au



Dr Sarah Whitnall and Dr Curtis Rollins at UWA Crawley Campus.

Xiaolong Feng, Chuangwei Fang, Dr Renu Saradadevi, Professor Kadambot Siddique, Dr Sneha Priya Pappula Reddy, Dr Manish Sharma, and Huaikang Jing at the 8th International Food Legume Research and 5th Australian Pulse Conference.

UWA champions legume innovation on the world stage

From September 15–19, the 8th International Food Legume Research Conference and the 5th Australian Pulse Conference brought together global leaders in legume research in Perth.

The joint conference provided a platform to share new knowledge across the entire value chain, from pre-breeding and production to consumption, while advancing research in agriculture, human health, and environmental sustainability.

Representing UWA, Hackett Professor Kadambot Siddique, Senior Lecturer Dr Judith Lichtenzveig, Research Associate Dr Renu Saradadevi, and Adjunct Associate Professor Dr Vivienne Anthony showcased their expertise in wild chickpea reproductive phenology. They also presented innovations in common bean breeding in East Africa and highlighted legume improvement initiatives aimed at enhancing food security in West Africa. Six UWA researchers that attended the conference also presented their posters.

"UWA is proud to contribute cutting-edge research that not only supports Australian agriculture but also delivers benefits for communities around the world," said Professor Siddique.

In the guts of the microbiome

Professor Lianmin Chen visited UWA, supported by a visiting fellowship from The UWA Institute of Advanced Studies.

Professor Chen leads the Microbiome and Metabolism laboratory at Nanjing Medical University in China, and his research focuses on the role of the gut microbiome in cardiometabolic disorders.

Professor Chen has collaborated with Associate Professor Dominique Blache and Dr Luoyang Ding on the importance of the functionality and composition of the rumen microbiome on the expression of temperament in sheep.

Prof Chen delivered a workshop on "Methods of analysis of gut microbiome" during which he demonstrated the power of omics analysis of the gut microbiome in both human medicine and animal production. The workshop was hosted by Professor Jennifer Rodger at the Perron Institute and attracted 26 participants. In addition, he gave a public lecture at UWA on the human gut microbiome and cardiometabolic health, attended by more than 45 interested listeners.

Alongside these events, Professor Chen held meetings with key researchers and several research groups. His visit reflects the growing interest at UWA in microbiome research, both in humans and in animals.

Professor Dominique Blache
dominique.blache@uwa.edu.au

Professor Chen and Associate Professor Dominique Blache during the lecture.

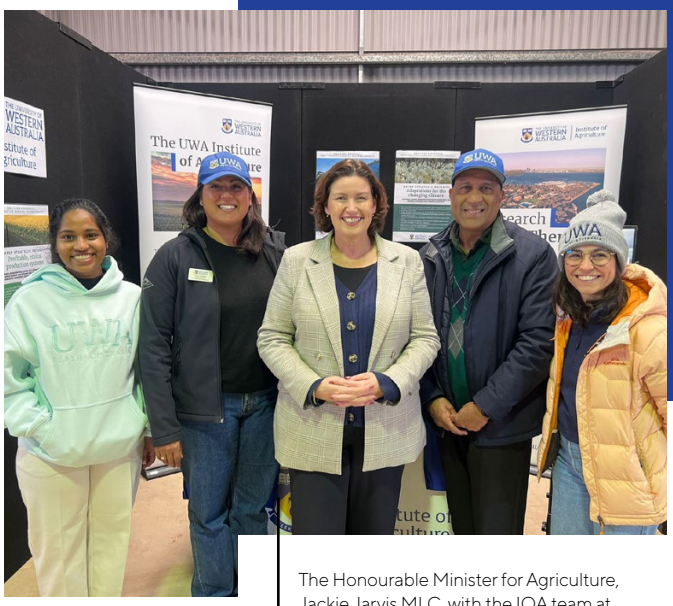
Growing research and connections at Dowerin Machinery Field Days 2025

The UWA Institute of Agriculture (IOA) proudly marked its 19th consecutive year at the flagship 2025 Dowerin Machinery Field Days, held on 27–28 August.

The event once again proved to be an outstanding platform to connect with farmers, researchers, industry partners and policymakers, while sharing our research with the wider agricultural community.

Housed within the Department of Primary Industries and Regional Development (DPIRD) shed, the IOA stall highlighted the latest agricultural research and key projects from UWA Farm Ridgefield. Visitors had the opportunity to explore innovative approaches to sustainable farming and discover how UWA research is contributing to practical, on-ground solutions for the agricultural sector.

A highlight of the first day was welcoming the Honourable Minister for Agriculture, Jackie Jarvis MLC. IOA Director Hackett Professor Kadambot Siddique and IOA Business Manager Diana Boykett shared insights into ongoing projects and the pioneering work being undertaken at UWA Farm Ridgefield. The stall also enjoyed the visit from SNAGS Dowering Agricultural Camp 2025 students.



The Honourable Minister for Agriculture, Jackie Jarvis MLC, with the IOA team at 2025 Dowerin Machinery Field Days.

The stall was managed by IOA Communications Officer Ana Mendigutxia Balil, PhD students Garima Garima and Pragya Poudel and agriculture sciences undergraduate student Feba Joshy, who engaged with visitors and highlighted the breadth of IOA's research activities.

A lasting tribute to late Professor Alan Robson

In September, colleagues, friends, and members of the UWA community gathered in the Alan Robson Agriculture Lecture Theatre to unveil a portrait honouring the late Professor Alan Robson.

The function was led by The UWA Institute of Agriculture Director Hackett Professor Kadambot Siddique, who reflected on Alan's remarkable career as a teacher, mentor, and leader. He highlighted Alan's lasting contributions to agriculture, higher education, and community service, and the profound influence he had on generations of students and colleagues.

Professor Siddique noted that his portrait now stands as a symbol of gratitude and remembrance, complementing other tributes across campus that recognise Alan's enduring legacy.

The unveiling was performed by Andrew Robson and Senior Deputy Vice-Chancellor Professor Tim Colmer. It was an opportunity for the UWA community to come together, to remember a man who shaped so much of what UWA is today, and to reaffirm a commitment to carrying forward his vision for the future.

Andrew Robson and Senior Deputy Vice-Chancellor Professor Tim Colmer pictured beside the portrait of the late Professor Alan Robson.

Year 10 students discover the realities of farming at UWA's Farm Ridgefield

Year 10 Byford Secondary College students during their visit to UWA Farm Ridgefield.

A group of Year 10 Byford Secondary College students were hosted at UWA's Ridgefield Farm, with many students experiencing a farm for the first time and observing surrounding paddocks of canola in full flower.

The school piloted a term-long Year 10 agricultural science elective after it received a high amount of interest from potential offerings. The course exposed students to a range of challenges faced by Australian agriculture including soil fertility, genetics, pest and water management, ag tech and environmental sustainability.

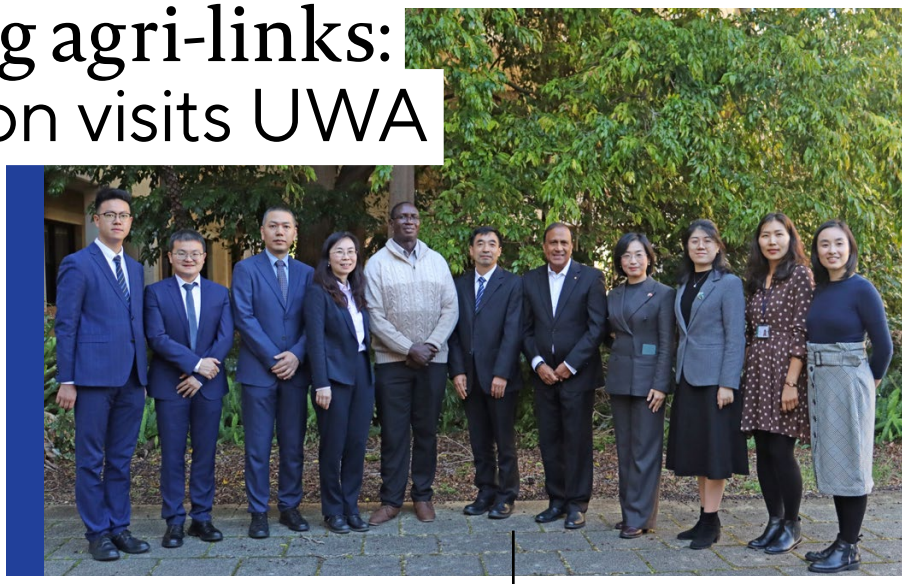
The tour was conducted by Alysia Kepert, Education Program Lead, Centre for Engineering Innovation and Janet Kok, UWA agricultural science student and SNAGS Vice President.

At the farm, students learnt about some of the research being undertaken at the farm, such as the livestock emissions project, soil health, plant biology, water management, biosecurity, technology- a perfect match to their classroom learning.

Natasha Johnstone, the schoolteacher, reinforced the value of the visit, with some students requesting a follow up visit. "I believe the visit was invaluable, especially from a career perspective. It was great to get the students outside of the classroom and to see them realise the potential of the day-to-day life of an agriculture student".

Natasha could see further potential in collecting data and other information on a farm visit that could extend the experience well after the visit itself. "There is potential to boost engagement particularly with academic students, and a real opportunity that they become some of the future students at university".

Strengthening agri-links: DRC delegation visits UWA



Hackett Professor Kadambot Siddique and Amin Mugera with Chinese DRC delegation.

The UWA Institute of Agriculture (IOA) hosted a high-level delegation from China's Development Research Centre (DRC) of the State Council, a leading government think tank and policy advisory body.

The visit, held by IOA, formed part of the delegation's two-day program in Western Australia focused on the grains industry.

Led by Vice-President Mr Zhang Shunxi, the group included senior officials from the DRC's Research Departments of Rural Economy and Social and Cultural Development, along with representatives from the Consulate General of China in Perth.

IOA Director Hackett Professor Kadambot Siddique, gave a short presentation highlighting UWA's research strengths in dryland agriculture, climate-smart farming, and innovation in grain production systems. Agribusiness Theme Leader Associate Professor Amin Mugera also joined the discussions.

Topics centred on climate change adaptation, land development potential, and opportunities to strengthen agricultural science and technology cooperation between China and Australia.

The dialogue offered new perspectives on how Australian experiences can inform China's agricultural transition, particularly in managing climate variability, balancing productivity with sustainability, and linking farmers to global markets.

Professor Sukkarieh during his 2025 Hector and Andrew Stewart Memorial Lecture.

Farming in two worlds: Professor Sukkarieh shows the future of digital agriculture

The 31st Hector and Andrew Stewart Memorial Lecture offered a glimpse into the present and future of agriculture, where digital innovation meets traditional farming.

On 25 September 2025, Dr Salah Sukkarieh, Professor of Robotics and Intelligent Systems at the University of Sydney, delivered the 31st Hector and Andrew Stewart Memorial Lecture titled "Farming in Two Worlds: Integrating Physical and Digital Agriculture" at Wilsmore Lecture Theatre. More than 50 attendees, including farmers, industry leaders, academics, students, and members of the Stewart family, joined the event.

"The farming industry and robotics are revolutionising each other. The innovations born from agriculture are redefining the future of technology," said Professor Sukkarieh.

Drawing on more than 20 years of experience in agricultural robotics, Professor Sukkarieh explored how combining real-world farming with advanced digital technologies can transform agricultural systems.

He highlighted the use of Digital Twins, AI, IoT networks, and robotics to improve soil and water management, crop and livestock monitoring, and farm labour efficiency. "There's no conflict — the farming industry is shaping robotics, and robotics is shaping farming. What we learn from agriculture directly influences how we develop technology," he explained. Case studies illustrated how these innovations are helping farms become more adaptive, sustainable, and resilient.

The lecture series, established in 1966, honours the late Hon. Hector J. Stewart, MLC, and his son Andrew M. Stewart, Wagin woolgrowers and influential UWA alumni. This year's presentation underscored the importance of bridging research and practice to drive the next generation of smart, data-driven agriculture.

As part of his visit to UWA, Professor Sukkarieh also engaged with UWA's agricultural engineering community. He met with Associate Professor Andrew Guzzomi and the ACEI:Ager team to tour around Shenton Park Field Station and discuss collaborative opportunities in precision agriculture and digital farming.

Watch the lecture recording on the Institute's YouTube channel.

Professor Sukkarieh with the Stewart family and UWA staff and academics.

IAB members during their visit to UWA glasshouse canola experiments with Research Fellow Dr Lukasz Kotula, Dr Sneha Priya Pappula Reddy, and Dr Jiayin Pang.

IOA Industry Advisory Board tours UWA's glasshouses

The UWA Institute of Agriculture's Industry Advisory Board (IAB) held its second meeting of the year on Friday 26, bringing together industry leaders and researchers.

As part of the agenda, IAB members toured UWA glasshouse facilities to see first-hand the innovative experiments currently underway.

During the visit, Dr Sneha Reddy and Dr Lukas Kotula presented their GRDC-funded research on nitrogen-use efficiency in canola, showcasing the potential of breeding strategies to improve crop performance (Breeding Canola NUE, GRDC UWA2504-004RTX).

PhD students Shuyan Li, Manika Debnath, Huyen Pham, Jaishankar Nagarajan, Kamrun Nahar Sheuly, and Mostarak Hossain Munshi also presented their research, covering topics such as nutrient use efficiency, soil health, crop resilience, and antimicrobial resistance in agricultural systems.

The visit gave industry representatives direct insight into UWA's agricultural research and allowed them to provide feedback, ensuring projects address real-world challenges.

UWA PhD student awarded SW WA Hub bursary to advance intercropping research

PhD student Chloe Rout in the field holding a DJI Mavic 3M Drone to collect imagery for NDVI analysis.

UWA PhD student Chloe Rout has been awarded a bursary from the South-West WA Drought Resilience Adoption and Innovation Hub (SW WA Hub). Chloe's research will investigate the agronomic potential of intercropping canola with legumes in Western Australia's dryland farming systems.

Intercropping is the practice of growing two or more crops in the same paddock and may offer benefits such as improved soil health, weed suppression, and reduced reliance on fertiliser. Her project will explore grower perceptions, barriers to adoption, and the productivity and profitability of intercropping through field trials and co-designed activities with grower groups across the Wheatbelt.

Chloe follows in the footsteps of fellow UWA PhD students Huyen Pham, Garima, Emanuel Gomez, Dan Keirath, and Jane Brownlee, who also received a bursary through this program. "I'm truly grateful to the WA SW Hub for awarding me this bursary. Working with growers is the part of my work I enjoy most, and this support gives me the chance to expand my research, connect with more of the WA agricultural community, and ensure my research outputs are relatable for growers", said Chloe.

The Hub's bursary program enables university students to collaborate with WA grower groups, present at workshops, and participate in field days and conferences. It builds student capacity in co-designed research while strengthening collaboration between the SW WA Hub, WA universities, and grower networks.

This program receives funding from the Australian Government's Future Drought Fund and is also supported by the WA Agricultural Research Collaboration.

PhD student Chloe Rout
chloe.rout@research.uwa.edu.au

Agriculture takes centre stage at 2025 Winthrop Society High Tea

The 2025 Winthrop Society High Tea, held on 12 November, celebrated agriculture and showcased the important contributions of UWA to agricultural research.

Formal proceedings began under the guidance of Fiona Allan, Chief Advancement Officer and Master of Ceremonies. UWA Chancellor Dr Diane Smith-Gander delivered the opening address, acknowledging the remarkable generosity of Winthrop Society members and the lasting impact of philanthropy across the University.

Director of The UWA Institute of Agriculture (IOA), Hackett Professor Kadambot Siddique, delivered the keynote address, reflecting on the influence of philanthropy on agricultural research. "Through the foresight of philanthropists, scholarships, infrastructure, and academic chairs are established, empowering students and researchers to pursue innovative solutions and shaping the next generation of agricultural leaders," Professor Siddique said. He highlighted IOA's work in developing climate-resilient crops, advancing sustainable farming practices, and supporting global food security.

Chancellor Dr Diane Smith-Gander and Dr Kelsey Pool during the fireside chat. Picture by Ezra Alcantra Photography

A fireside chat with Chancellor Dr Smith-Gander and Dr Kelsey Pool explored the role of philanthropy in advancing research, highlighting how it has supported new opportunities for growth and discovery. The discussion also reflected on the impact of current research and how it continues to evolve, as well as the key challenges faced by mid-career researchers and how these experiences have shaped their professional paths.

The High Tea celebrated the enduring legacy of benefactors and the transformative work of UWA. From UWA Farm Ridgefield's sustainable agriculture projects to scholarships nurturing future leaders, IOA's research continues to strengthen Western Australia's agricultural industry and extend its global impact.

Hackett Professor Kadambot Siddique during his keynote address at the 19th Yangling International Agri-Science Forum in China.

UWA presents advances in artificial intelligence and sustainable agriculture at the 19th Yangling International Agri-Science Forum

Hackett Professor Kadambot Siddique represented UWA at the 19th Yangling International Agri-Science Forum, held at Northwest A&F University in Shaanxi Province, China.

The forum, themed *New Agricultural Productivity: Innovation, Integration, and Green Development*, brought together more than 80 delegates from 12 countries.

As an invited guest, Professor Siddique delivered the keynote on *Sustainable Food Systems and Artificial Intelligence*, emphasising the challenges and opportunities in dryland agricultural systems and UWA's long-standing collaboration with Northwest A&F University since 2005.

He discussed how artificial intelligence and machine learning are transforming crop breeding, enabling stress-tolerant, high-yielding cultivars, and supporting smart agronomic practices and improved land and water management.

Hackett Professor Kadambot Siddique
kadambot.siddique@uwa.edu.au

CSBP leadership team tours UWA's glasshouse experiments

On 15 September, more than 40 members of CSBP senior management team gathered at UWA for their leadership meeting.

During their visit, they took the opportunity to tour the UWA glasshouses, where The UWA Institute of Agriculture hosted them for an inside look at the innovative research driving sustainable crop production at UWA.

The visit began with Mr Rob Creasy, Manager of UWA's Plant Growth Facility, who gave an overview of the growing facilities and introduced the newly opened Australian Plan Phenomics Network UWA Node facilities.

Dr Sneha Reddy and Dr Lukasz Kotula presented their GRDC funded work on improving nitrogen-use efficiency in canola, aiming to identify varieties that make better use of nutrients and reduce environmental losses.

PhD student Shuyan Li shared her research on enhancing phosphorus-use efficiency in wheat by lowering seed phosphorus and phytate levels to improve grain nutrition and sustainability. PhD student Manika Debnath discussed her research comparing slow-release nitrogen fertilisers with conventional urea in wheat and canola, exploring pathways to more efficient nutrient delivery and lower environmental impact.

CSBP Leadership Team during their visit at UWA Glasshouses.

The group remained actively engaged throughout the visit, asking questions, sharing ideas, and exploring the science behind sustainable farming. The tour highlighted the importance of the research being carried out at UWA and the value of collaboration between industry and academia in shaping the future of agriculture.

Exploring sustainable rice production in Bali

On 29 October, The UWA Institute of Agriculture (IOA) hosted a lecture by Professor Ida Ayu Astarini on sustainable rice production using local land races.

Titled *Sustainable rice production using local land races: A case study – Subak system, Bali Indonesia*, the lecture took place at the Alan Robson Agriculture Lecture Theatre.

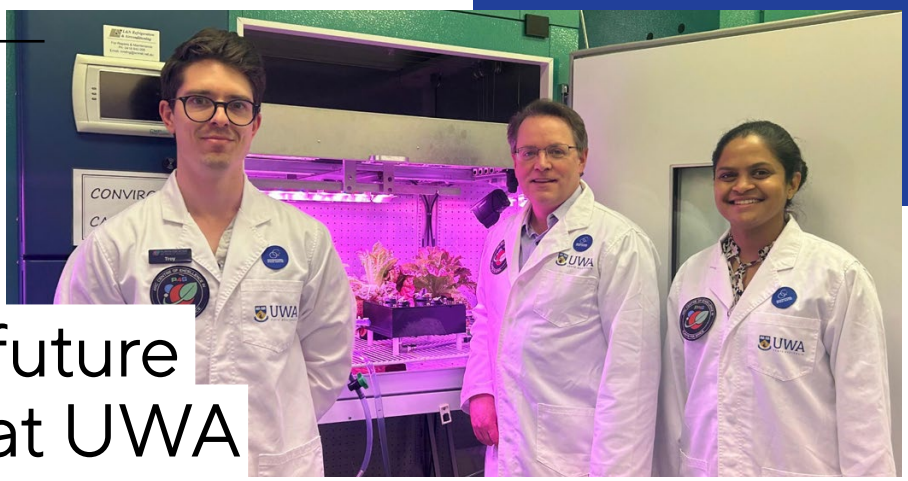
Professor Astarini shared insights into the Subak system, a traditional Balinese irrigation and social organisation recognised by UNESCO. This system integrates centuries of agricultural knowledge, local rice varieties, and cultural practices, coordinating water sharing, planting schedules, and ceremonies dedicated to Dewi Sri, the rice goddess. Beyond rice cultivation, the Subak exemplifies *Tri Hita Karana*, the Balinese principle of harmony between people, nature, and the divine, offering a model for sustainable rice production under changing climate conditions in the region.

Professor Astarini is a distinguished researcher in plant biotechnology at Udayana University, Bali, Indonesia and holds a Masters and PhD from UWA. Her expertise in crop improvement, sustainability, and biodiversity conservation has driven impactful international collaborations and numerous awards, reflecting her leadership in applying scientific innovation to environmental and agricultural challenges.

This lecture was part of Professor Astarini's visit to UWA, where she also engaged with faculty members from IOA to discuss research collaboration and sustainable agriculture initiatives.

Dr Ir.Ida Ayu Astarini
iaastarini@unud.ac.id

Professor Ida Ayu Astarini during her lecture at the Alan Robson Agriculture Lecture Theatre.



Dr Troy Miller, Professor Harvey Millar, and Dr Samalka Wijeweera with the Controlled Environment Agriculture experiment.

Space science advances the future of agriculture at UWA

UWA researchers join global team reimagining crop growth and plant-derived bioproducts under controlled conditions.

Dr Samalka Wijeweera, Dr Troy Miller, and Professor Harvey Millar have contributed to research exploring how food and plant-derived bioproducts could be produced by removing the stresses of variable environments. The international study is led by The University of Adelaide and involves the University of Cambridge and NASA.

Published in *Trends in Plant Science* as part of the ARC Centre of Excellence in Plants for Space, the research explores how Controlled Environment Agriculture (CEA) can supplement traditional farming and strengthen food security. The research is part of the journal's 30th anniversary special issue, *Big Concepts – Shaping the Future of Plant Science*.

CEA involves growing crops indoors under precise conditions of light, temperature, humidity, carbon dioxide, and nutrients. These systems can produce food year-round, anywhere in the world, with yields up to 20 times higher than conventional agriculture while using far less water and land.

The research highlights how indoor growing allows new types of genetic engineering to optimise photosynthesis and metabolism, making CEA more efficient and expand its potential beyond small salad crops to include staple foods and high value bioproducts.

In Australia, container farms could bring fresh produce to remote communities, reduce food miles, and help farmers adapt during drought. This blueprint for producing food indoors away from challenging environments here on Earth is also inspiring experiments designed to feed astronauts beyond Earth.

"This work shows how UWA science is helping develop future solutions to food security challenges while also expanding the boundaries of what's possible in agriculture," Professor Millar said.

Professor Harvey Millar
harvey.millar@uwa.edu.au

UWA research showcase advances in plant breeding analytics at EUCARPIA 2025

The UWA Institute of Agriculture (IOA) Associate Director Professor Wallace Cowling attended the 19th EUCARPIA Biometrics in Plant Breeding Conference in Edinburgh from 17–19 September 2025.

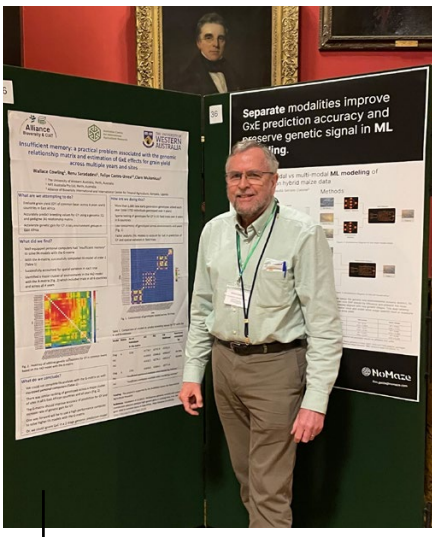
The conference drew a record 270 delegates and included 36 talks, 68 posters and nine invited speakers, reflecting growing international interest in plant breeding analytics.

Professor Cowling presented a poster on behalf of colleagues in the Australian Centre for International Agricultural Research (ACIAR)-funded project breeding common bean in East Africa, including Dr Renu Saradadevi and Dr Felipe Castro in IOA, and Dr Clare Mukankusi, Global Breeding Lead-Common Bean in the Alliance-CIAT in Uganda. The title of the poster was "Insufficient memory: a practical problem associated with the genomic relationship matrix and estimation of GxE effects for grain yield across multiple years and sites."

The poster drew considerable attention, as many researchers face challenges handling large datasets and complex computations in plant breeding. UWA team is developing practical solutions that enable these analyses to be performed on standard, well-equipped personal computers, providing valuable support to both African and Australian plant breeders involved in this ACIAR project.

Professor Cowling also attended a pre-conference workshop 15th – 16th September on simulation of selective plant breeding at the Roslin Institute, The University of Edinburgh, run by Gregor Gorjanc, Daniel Tolhurst and Dominic Waters in the Highlander Lab at Roslin Institute, and Chris Gaynor from Bayer.

Professor Wallace Cowling
wallace.cowling@uwa.edu.au



Professor Wallace Cowling with UWA posters at EUCARPIA 2025 in Edinburgh, UK.

UWA attends the 120th anniversary of China Agricultural University

In October, The UWA Institute of Agriculture Director Hackett Professor Kadambot Siddique travelled to Beijing to attend the 120th anniversary of China Agricultural University (CAU), recognised as the world's leading institution in Agricultural Science.

The milestone celebrated CAU's enduring contributions to agricultural research, education, and food systems in China and globally.

UWA has maintained a collaboration with CAU for more than 25 years, encompassing joint research projects, capacity-building initiatives, and knowledge exchange programs. This partnership has advanced innovation in agricultural science and contributed to addressing critical challenges in global food security and sustainable agriculture. During his visit, Professor Siddique also participated in the World Agricultural University Presidents Forum, speaking at the Round Table Forum on "Driving Change: Innovation in Agricultural Education and Research Paradigms for Global Agricultural Green Transformation". Professor Siddique also interacted with several PhD students on their research.

Professor Carolien Kroeze and Professor Oene Oenema from Wageningen University and Research with Hackett Professor Kadambot Siddique during the panel the 120th anniversary of CAU event.

The visit strengthened UWA's ongoing partnership with CAU and its dedication to advancing excellence in agricultural research, education, and global food security.

Advancing capacity in agribusiness education between UWA and Indonesia

At the invitation of Universitas Brawijaya, Adjunct Professor Peter J. Batt participated in a 3-in-1 program for visiting scholars held over one week in late September.

The program combined teaching, workshops, and collaboration with industry and academic leaders.

Professor Batt delivered four lectures on Agribusiness Management to first-year students, introducing them to the many career opportunities available in the field. He also led a seminar and workshop for postgraduate students and lecturers on developing effective research questions and designing appropriate methodologies. This support is especially valuable at Universitas Brawijaya, where Master's and PhD students must publish in peer-reviewed journals before graduating.

Professor Batt joined a half-day workshop with industry partners to review and refine the competencies required of graduates. He emphasised the importance of understanding value chains, sustainability, and innovation in responding to market and technological change.

The postgraduate workshop was very well received. "This discussion opened our eyes to the fact that research can have a real impact, not only academically, but also for the community and farmers in the field," said one of the workshop student.

Universitas Brawijaya is now exploring co-supervision mechanisms with UWA to further internationalise its agribusiness program and strengthen sustainable agricultural development in Indonesia.

Professor Peter Batt during his workshop at Universitas Brawijaya.

Professor Peter Batt
peter.batt@uwa.edu.au

UWA showcases growing momentum in AMR research at the CRC SAAFE Research Roadshow 2025

Leaders from the CRC for Solving Antimicrobial Resistance in Agribusiness, Food and the Environment (SAAFE) came to Perth on 30 October 2025 to connect with partners, researchers, and emerging collaborators.

The CRC SAAFE's AMR Research Roadshow was held at Curtin University and convened researchers, postgraduate students, and industry partners to explore collaborative opportunities within the CRC, as well as establish a shared One Health AMR understanding amongst the research community.

As a major partner in the CRC, UWA is contributing to the growing momentum in AMR research under the supervision of SAAFE CRC Foundation Fellow Associate Professor Zakaria Solaiman and other UWA researchers.

During the event, Assoc/Prof Solaiman gave an overview of his group's research activities at UWA, followed by presentations from PhD Candidates Mostarak Hossain Munshi, Gokhan Karadeli, and Kamrun Nahar Sheuly, who shared insights into their respective research projects addressing critical aspects of AMR.

Students then participated in an interactive training session led by the SAAFE CRC Education and Training Program Manager, Dr Lisa Kirkland, and SAAFE CRC Foundation Fellows, Dr Noorul Amin, Dr Nijoy John, Dr Veronica Jarocki and Dr Claire Hayward and research project lead Dr Jake O'Brien, from across Australia that explored key research methodologies, including field epidemiology study design, sampling strategies and sample size estimation, data collection and quality assurance, genomic surveillance in environmental epidemiology, chemical residue analysis, and systems thinking in a One Health AMR context.

UWA CRC SAAFE team at the MR Research Roadshow 2025 at Curtin University.

The Roadshow also provided an opportunity for Hackett Professor Kadambot Siddique, Director of the UWA Institute of Agriculture, and Diana Boykett, IOA Business Manager, to connect face-to-face with the SAAFE CRC team to discuss opportunities for UWA to expand its involvement in the CRC.

SAAFE CRC Research Director Professor Erica Donner said there was a real sense of energy and collaboration in every session which will help strengthen SAAFE's research outcomes.

"The roadshows are a powerful reminder of the SAAFE community's focus on collaboration, capability-building and dedication to turning research into real-world impact," Professor Donner said.

Agricultural science students engage with research at UWA Farm Ridgefield

In September students from AGRI4409 Fundamentals of Agricultural Science and AGRI2201 Pasture and Livestock Systems had the opportunity to experience UWA Farm Ridgefield and see real-world examples of production in the Wheatbelt.

The fieldtrip welcomed both domestic and international students from Crawley and Albany Campus, offering a diverse and collaborative learning environment.

Alongside their unit teachers including Professor Megan Ryan, Dr Wesley Moss, and PhD student Ruby Wiese, students gained valuable insights from UWA guest speakers.

Agricultural Science students during their visit to UWA Farm Ridgefield.

Highlights included UWA's work with perennial shrubs and research on animal heat stress, providing students with a clearer understanding of how research informs sustainable farm management. Dr Kelsey Pool demonstrated sheep pregnancy scanning, Professor Dominique Blache discussed animal heat stress and related research projects, Associate Professor Phil Nichols presented advances in pasture breeding, and PhD student Chloe Rout shared expertise on weed management and agronomy.

The fieldtrip gave students the chance to observe animal production and cropping system in practice, linking classroom learning with applied research.

Associate Professor Sally Thompson wins prestigious Henry Darcy Medal

Associate Professor Sally Thompson, Co-Director of the UWA Centre for Water and Spatial Science has been awarded the 2026 Henry Darcy Medal by the European Geosciences Union (EGU) for her outstanding contributions to hydrological science.

Associate Professor Sally Thompson at UWA Crawley campus.

The Henry Darcy Medal recognises world-leading research in water resources and management. Associate Professor Thompson's work integrates vegetation, climate, and water processes using advanced mathematical models and field studies. She has led major projects including the Australian Critical Zone Observatory Network, Recharge in a Changing Climate, and the Canopy Resilience Project. She will receive her medal and deliver a plenary lecture at the EGU General Assembly in Vienna, May 2026.

Dr James O'Connor, Zahra Nizbat, Emerita Professor Lyn Abbot, Linda Ernawati Lindongi and Hira Shaukat during the conference.

Shifting sands to sustainable solutions: UWA at GCSS2025

UWA was strongly represented at the 2nd Global Conference on Sandy Soils (GCSS2025), held in Perth from 20–24 July 2025.

The conference brought together international experts to address the challenges and opportunities of managing sandy soils, an issue of particular importance to Australia, which is home to more than 22 million hectares of arable sandy soils.

UWA was strongly represented, with a delegation including Dr James O'Connor, Hira Shaukat, Zahra Nizbat, Linda Ernawati Lindongi, Emerita Professor Lyn Abbott, Professor Yinglong Chen, Manish Sharma, Professor Louise Barton, and PhD student Manika Rani Debnath.

UWA researchers contributed to presentations, posters, and discussions across the diverse program, showcasing research on phosphorus fertiliser use in sandy soils, nitrous oxide emissions, and soil health indicators for economic efficiency.

Professor Hans Lambers delivered a keynote address titled "*Dirt-Poor Soils, Pesky Parasites and Friendly Fungi Shape Plant Diversity in South-Western Australia*".

A highlight of the conference was the achievement of PhD student Manika Rani Debnath, who received the Best Poster Award for her outstanding research contribution.

Associate professor Andrew Guzzomi during ISSS conference. Picture by Eugenie Au.

UWA's innovation grows strong at 2025 International Seed Science Conference

UWA proudly joined the 2025 International Society for Seed Science conference as the Innovation Partner, bringing its expertise and passion for seed science to a global audience.

The director of UWA's Centre for Engineering Innovation: Agriculture & Ecological Restoration (CEI:AgER) Associate Professor Andrew Guzzomi, and researchers Dr Todd Erickson, and Dr Alison Ritchie shared their insights through presentations, with Associate Professor Guzzomi addressing the conference during the Opening Ceremony.

PhD students Stephanie Lye and Ruby Wiese highlighted the next generation of seed science talent with their research posters – with Stephanie Lye winning the Marc Cohn Best Student Poster Award. Throughout the duration of ISSS, UWA's exhibition stall showcased the University's and CEI:AgER's latest innovations.

Conference attendees also got a firsthand look at UWA's work during a field trip to the Shenton Park Field Station, exploring CEI:AgER facilities, learning about annual pasture legume breeding from Associate Professor Phillip Nichols and Mr Brad Wintle, and celebrating the launch of Emergence Ecotech Pty Ltd.

From cutting-edge research to hands-on experiences, the conference offered a vibrant stage for UWA to share its leadership in seed science, ecological restoration, innovation, and collaboration.

Associate Professor Andrew Guzzomi
andrew.guzzomi@uwa.edu.au

UWA Farm Ridgefield contributes to Global Farm Platform's FAO recognition for Sustainable Livestock Transformation

The Global Farm Platform (GFP), a global network of 19 research farms and 28 institutions, has been awarded the FAO Technical Recognition for Sustainable Livestock Transformation, One Health, Animal Health, and Reference Centres.

The award, presented at FAO Headquarters on 15 October 2025 during the organisation's 80th anniversary and World Food Forum, celebrates GFP's innovative hub-and-spoke model, which links research hubs to commercial and smallholder farms worldwide.

UWA Farm Ridgefield, a key GFP hub, demonstrates the platform's impact in temperate mixed farming. Ridgefield's integration of deep-rooted perennial shrubs supports sheep grazing, sequesters carbon, improves pasture productivity, and enhances biodiversity. Its work shows how locally adapted solutions contribute to global sustainability goals while maintaining economic viability for farmers.

Since 2014, GFP has delivered over 15 international projects, conducted 35 workshops, published nearly 200 scientific articles, and trained early-career researchers across continents. This FAO recognition underscores the platform's leadership in transforming ruminant farming, with UWA Farm Ridgefield exemplifying practical, scalable solutions for sustainable agriculture.

Awards and industry recognition

Name	Award
Associate Professor Sally Thompson	European Geosciences Union Henry Darcy Medal
The Global Farm Platform / UWA Farm Ridgefield	FAO Technical Recognition for Sustainable Livestock Transformation
Manika Rani Debnath	Best Poster Award at the 2nd Global Conference on Sandy Soils 2025
Professor Jacquelin Batley	2025 Scientist of the Year

Visitors to IOA

Name of visitor	Visitor's organisation and country	Host details	Dates of visit
Prof. Xingguo Zhang & Prof. Guangwei Li	Henan Agricultural University, China	Dr Sheng Chen	6 Aug 2025
Prof. Pei Xu, Dr. Min Xu & Dr. Yang Su	China Jiliang University, China	Dr Sheng Chen	18 Sept 2025
Dr. Raymond Cowley & Ms Emily Blyton	Corteva Agriscience, Australia	Dr Sheng Chen	9 Oct 2025
Prof. Ir. Ida Ayu Astarini	Udayana University, Bali, Indonesia	Prof Kadambot Siddique	28 Oct 2025
I Gusti Agung Ayu Rai Asmiwyati	Udayana University, Bali, Indonesia	Prof Kadambot Siddique	29 Sep 2025
Dr Anca Awal Sembada	Bandung Institute of Technology, Indonesia	Prof Kadambot Siddique	3 Nov 2025

New postgraduate research students (PhD)

Student	Topic	School	Supervisor(s)	Funding body
Jaime Phillips	Designing natural capital markets on agricultural land: How do the experiences of southern Australian farmers across the continent help to balance emerging challenges and opportunities in Western Australia?	SAgE	Marit Kragt	UWA and WAARC

Research grants

Title	Funding period	Funding body	Investigators
AcceleTrait Plus: Predicting physiological traits for breeding programs with UAV hyper spectral imagery	2025-2026	GRDC	Assoc/Prof Nic Taylor
Towards precision farm-management using drone-based near-infrared spectroscopy	2025-2026	Department of Education (Australia)	Assoc/Prof Dilusha Silva, Prof Lorenzo Faraone, Assoc/Prof Gilberto Umana, Charles Musca
WA State Government NCRIS co-investment Plant SynBio	2025-2028	Dept of Job, Tourism, Science and Innovation	Prof Ryan Lister
WA Plant SynBio Innovation Centre	2025-2027	Dept of Education	Prof Ryan Lister
Accelerating Genetic Gain: Utilising the B genome diversity in canola	2025-2029	GRDC	Dr Mathew Nelson, Chris Helliwell, Prof Wallace Cowling, Dr Sheng Chen, Prof Dave Edwards, Prof Jacqui Batley, Mr Junrey Amas, Dr Thomas Bergmann, Thomas McGoram, Ryan Whitford, Matthew Hayden

Title	Funding period	Funding body	Investigators
ARC Training Centre for Smart and Sustainable Horticulture	2025-2029	ARC	Prof Sergey Shabala
ZNE-Ag CRC WMS and milk MIR as proxies for ruminant methane emissions	2025-2027	ZNE-AG-CRC Limited	Dr Zoey Durmic
ZNE CRC Project 1010: Northern Australia low methane feed base program – Phase 1 Discovery	2025-2029	ZNE-AG-CRC Limited	Dr Zoey Durmic
ZNE-Ag CRC Project 3020 LCA for low emissions	2025-2028	ZNE-AG-CRC Limited	Brendan Cullen, Dr Warwick Badgery, Martin Amidy, Dr Caitlin Moore, Dr Ben Biddulph.
Scoping Characteristics of Successful Technology Stacks for Emission Reduction	2025 – 2026	ZNE-AG-CRC Limited	Dr Sarah Whitnall, Prof Marit Kragt
Characteristics for successful technology stacks	2025	ZNE-AG-CRC Limited	Dr Zoey Durmic
ZNE-Ag CRC Project 4030 Insetting Model	2025 – 2027	ZNE-AG-CRC Limited	Prof Marit Kragt, Dr German Puga, Prof Richard Eckard, Dr Bradd Witt, Aaron Wakeley
ZNE CRC Project 1020 (Southern AM Pastures)	2025 - 2028	ZNE-AG-CRC Limited	Dr Zoey Durmic, Dr Joy Vadhanabhuti, Dr Warwick Badgery, Suzanne Boschma.
A Satellite and Aerial Imagery-informed Deep Learning Approach for Enhancing Dwelling Yield Forecasting	2025 - 2026	iMove CRC	Prof Sharon Biermann, Assoc Prof Bryan Boruff, Dr John Duncan, Alex Saunders.

UWA IOA 2025 December Publications

Peer Reviewed Journals

Previously unreported

Wang C, Fan J, Zeng Y, Li H, Bu C, Chen X, Wang H, Mo Q, and Zhang Z (2025). Key factors for the rapid cultivation of lithophytic moss crusts and preliminary trials in the ecological restoration of rocky slopes. *Land Degradation & Development* **0**:1–12 doi:10.1002/ldr.70059

Cui N, Qi T, Chen Z, Wang J, Ma J, Liu E, Meruyert M, Jia Z, Siddique K H M, and Zhang P (2025). Legume rotation with optimal nitrogen management enhances subsequent winter wheat productivity and soil ecosystem multifunctionality: a case study in semi-humid regions. *Plant and Soil* doi:10.1007/s11104-025-07711-0

Jha U C, Naik Y D, Priya M, Nayyar H, Sofi P A, Beena R, Kudapa H, Atta K, Thudi M, Prasad P V V, and Siddique K H M (2025). Chickpea (Cicer arietinum L.) battling against heat stress: plant breeding and genomics advances. *Plant Molecular Biology* **115**(1) doi:10.1007/s11103-025-01628-z

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Mohamedikbal S, Al-Mamun H A, Bestry M S, Batley J, and Edwards D (2025). Integrating multi-omics and machine learning for disease resistance prediction in legumes. *Theoretical and Applied Genetics* **138** doi:10.1007/s00122-025-04948-2

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UPCOMING EVENTS

Mike Carrol Travelling Fellowship Presentations
5 March

Brian Carlin Memorial Lecture
18 March

Postgraduate Showcase 2026
20 May

Industry Forum 2026
July (day TBC)

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11 September

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Editor: Ana Mendigutxia Balil
ana.mendigutxiabalil@uwa.edu.au
The UWA Institute of Agriculture
Phone: +61 8 6488 4717
The University of Western Australia M082
35 Stirling Hwy, Crawley
WA 6009 Australia

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