$18.95 AUS

SPRING 2025 ISSUE #42

THE AUSTRALIAN AGRONOMIST MAGAZINE

ADAMA ADDS UNIQUE STUBBLE MANAGEMENT SOLUTION FOR MULTIPLE CROPPING BENEFITS

NATIONAL BLUEPRINT TO STANDARDISE SOIL HEALTH ACROSS AUSTRALIAN AGRICULTURE

TIME OF SOWING TRIALS EQUIP WA GROWERS TO ADAPT TO VARIABLE SEASONS


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THE AUSTRALIAN AGRONOMIST

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Flowering pigeon pea at UQ Gatton (c)-Megan-Pope

Angus Woods and Dr Mahen Sambampillai in a trial field of pigeon pea at UQ Gatton (c)-Megan-Pope

PIONEER VARIETIES OF LEGUME FOR AUSTRALIAN GROWERS

THE UNIVERSITY OF QUEENSLAND HAS DEVELOPED 5 NEW VARIETIES OF PIGEONPEA AS A STEP TOWARDS THE LEGUME BEING GROWN MORE WIDELY IN AUSTRALIA.

A program at UQ's Queensland Alliance for Agriculture and Food Innovation has achieved a major milestone with the drought-resistant pigeonpea varieties custom made for tropical conditions.

Project lead Dr Mahen Sabampillai says the Woods Group-funded project could be the trigger for a new industry in Australia.

"These pigeonpea varieties released by Woods Group will be the first commercial varieties registered for human consumption in Australia," Dr Mahen said.

"While maintaining yield potential, these varieties have a significantly shorter crop cycle, maturing in 100 to 120 days compared to the traditional 150 to 200 days.

"We have also reduced the height of these varieties to 80 to 120 centimetres tall to enable machine harvesting of the crop.

"Our seeds are the optimum size of 10 to 12 grams per hundred seeds, and the seeds are easy to split."

Woods Group co-owner Angus Woods said the company had big plans for an Australian pigeonpea industry.

"About 10 years ago we recognised an opportunity to develop a pulse crop based on demand from growers looking for an alternative rotational option for their summer cropping program," Mr Woods said.

"Pigeonpea has traditionally been grown as an insect refuge crop in cotton, but what we are looking at now is very different.

"The industry is in its infancy, but we're buoyed by the fact that outside Australia there are some very large production areas – India alone produces around 5 million hectares each year and Africa more than 1 million hectares a year.

"Our research with UQ has sought to meet targets of what Australian farmers need in terms of flowering time, maturity, plant height and seed size.

"As well as the Australian industry, there is a really good opportunity for our growers to supply high quality pigeonpea for toor dahl in India where there is a shortage, and to the Indian diaspora across the globe."

Dr Mahen said the varieties developed so far were the beginning for the breeding program.

"Our latest varieties are very diverse in terms of their characteristics, yield, phenology, morphology and usage," he said.

"But breeding is a continuous process, so we'll make further improvements after input from farmers.

"We have big trials underway in places like Condamine, Billa Billa, Warra and Jondaryan in Queensland.

"Moving forward, now that we've tackled the big issues of maturity period, height, yield and seed size, we want to think about further optimisation of the growth cycle, protein content and other improvements."

The breeding program was launched and initially led by Honorary Associate Professor RCN Rachaputi, and taken over by Dr Mahen in 2022.

The Queensland Alliance for Agriculture and Food Innovation is a research institute at The University of Queensland established with and supported by the Department of Primary Industries.

MORE INFORMATION

Visit: **www.uq.edu.au**

Dual Herbicide Power
Built for Yield Confidence

As herbicide resistance and rotational pressure intensify across Australian canola systems, agronomists require hybrids that deliver flexible, effective weed control without compromising yield potential. Nufarm's dual herbicide tolerant portfolio is designed precisely to meet this challenge.

Each Nufarm hybrid undergoes rigorous multi-year, multi-location testing under Australian conditions to ensure it performs where it matters most — in growers' paddocks.

> *"Yield performance is non-negotiable. We only release hybrids proven across multiple seasons, regions, and real-world farming environments."*
>
> Chris Roberts, Market Development Manager - Nufarm, Seeds Australia.

The newest additions to the Nufarm canola portfolio, **New Chronos TFI (TruFlex® and IMI)** and **Griffon TTI (TT and IMI)**, equip agronomists with hybrids that combine proven herbicide flexibility with strong, reliable yield performance.

New Nufarm Chronos TFI

Trusted TruFlex® performance now with IMI flexibility.

New Chronos TFI is Nufarm's newest hybrid and the first in its range to offer both TruFlex® and IMI tolerance. This dual herbicide tolerance allows growers to manage glyphosate-resistant weeds and IMI herbicide residues with greater flexibility throughout the season.

Agronomic features include:

- Early-mid maturity (4 series) aligns with common sowing windows, helping growers optimise crop scheduling and fit into existing rotations.
- Consistent performance across low to medium rainfall zones supports reliable yields without compromising crop health.
- Strong weed control and disease resistance contribute to cleaner paddocks and improved long-term productivity.

Chronos TFI is a dependable choice for growers aiming to tackle resistance challenges or herbicide carryovers without sacrificing yield.

Download the full Chronos TFI tech sheet to explore detailed agronomy and trial data.

Nufarm Griffon TTI

Dual tolerance. Flexible control. Reliable results.

Nufarm Griffon TTI combines Triazine and IMI tolerance, providing agronomists with a reliable option in rotations requiring more flexibility. Its early to mid-maturity and rapid pod development make it well suited to regions with variable rainfall or tighter growing windows.

Agronomic features include:

- Optimised for 0.5–3 t/ha yield zones, making it a dependable choice for low to medium rainfall regions.
- Enhanced standability compared to TT varieties ensures more reliable and easier harvests.
- Early–mid maturity (4 series) with fast pod development provides a confident finish in shorter or variable growing seasons.

Griffon TTI is built for performance in variable conditions, with agronomic strength and strong finish potential.

Download the full Griffon TTI tech sheet to explore detailed agronomy and trial data.

With both TruFlex® and IMI and Triazine and IMI tolerant hybrids in the portfolio, Nufarm offers agronomists greater flexibility to recommend hybrids that align with a wide range of cropping systems. Supported by trusted Nufarm genetics and proven paddock performance, these dual-tolerance varieties are ready to meet modern farming demands.

Contact your local Nufarm Seeds representative or call 1800 993 573 to find out more.

ADAMA ADDS UNIQUE STUBBLE MANAGEMENT SOLUTION **FOR MULTIPLE CROPPING BENEFITS**

GROWING CROP PROTECTION FORMULATION SPECIALIST AND SUPPLIER, ADAMA AUSTRALIA, IS EXCITED TO STRENGTHEN ITS EARLY SEASON PORTFOLIO WITH A NEW PRODUCT ADDRESSING A KEY CHALLENGE MANY GROWERS FACE PRIOR TO PLANTING – CROP STUBBLE MANAGEMENT.

Andrew Newall, ADAMA Australia's General Manager - Portfolio and Innovation, says the enzyme-based RES+ stubble digester allows breakdown to happen with very low moisture and its humectant helps keep the enzyme active

In an extension of its partnership with leading US life sciences company, Elemental Enzymes, ADAMA will now exclusively offer RES+, a powerful residue management tool, to the country's growers.

Looking ahead, ADAMA and Elemental Enzymes plan to launch several new products including a ground-breaking biological fungicide to target the growing foliar disease threat in broadacre crops. Powered by Elemental Enzymes' patented peptide technology, the new biofungicide will deliver a novel mode of action for disease control.

Unlike conventional or live microbial stubble digesters, RES+ features a residue-degrading enzyme (cellulase), chelated nutrients to boost microbial activity, and a humectant to retain moisture – accelerating residue breakdown even under low-moisture conditions

Elemental Enzymes Technical Development Manager Chad Sayer said RES+ was a breakthrough that was especially well-suited to Australian conditions.

> *"Enzymes are more robust and efficient – this is a world first approach for residue management," Chad said.*

Andrew Newall, ADAMA Australia's General Manager - Portfolio and Innovation, said RES+ would bring a distinct advantage to the market segment and reflected the company's ongoing collaboration with Elemental Enzymes.

"With the development of no-till farming and stubble retention increasing over the past two decades, and particularly the higher stubble loads in recent seasons, residue management is high on the agenda for the industry and growers," Andrew said.

"RES+ can be applied well before planting – during summer or with fallow herbicide applications – kick-starting residue breakdown and easing stubble handling at sowing.

"Stubble management is front-of-mind with seeding recently completed and the beauty of this product is you can apply it well before seeding with summer and fallow sprays. You can add RES+ with these sprays to start the stubble breakdown, allowing for improved stubble handling at planting.

Harvest at Burra, Australia

> *"Rather than relying on high humidity and moisture for high microbial activity with other digesters, the enzyme base with RES+ allows the breakdown to happen with very low moisture and the humectant helps keep the enzyme active."*

He said demonstrations and sales for this season were very positive in Western Australia, Victoria and Queensland, and while some early activity had been queried, the excellent breakdown was well recognised prior to seeding.

Elemental Enzymes Australia Director Guy Perriman said RES+ was a great alternative to stubble burning, providing enhanced productivity through nutrient cycling, in addition to allowing easier sowing conditions.

"Growers can get the nutritional benefits of the stubble breakdown whilst making it easier for planting, and also still achieve protection for emerging seedlings," Guy said.

Applied following harvest up until planting, RES+ has achieved excellent results on winter cereal, canola and legume stubbles, as well as ahead of cotton, sorghum and cane plantings.

In a long-term wheat-on-wheat site at Katanning in Western Australia, applications before sowing consistently achieved 5-7pc yield gains annually over four years.

"One of the best results also was on the Darling Downs in Queensland on a sorghum stubble cover crop. The following broccoli crop recorded an extra $5400 per hectare yield increase," Guy said.

He said ADAMA Australia had a strong track record of local development and bringing new technologies to Australian growers, and Elemental Enzymes was excited to work with the business and its well-respected team across the country.

Chad said ADAMA Australia had great reach into broadacre farming regions and the two organisations were closely aligned on the wider benefits and future potential with RES+.

> *"It will help growers to maintain their stubbles and, importantly, allow them to get through seeding programs with their machinery in an improved manner."*

> *"There are nutrient benefits from the stubble that also flow through to subsequent crops and there are implications for disease control by helping mitigate it in stubbles," he said.*

MORE INFORMATION

For further information on the RES+ stubble digester, growers and agronomists can contact their local ADAMA Australia representative or visit **ADAMA.com**.

An aerial view of a cocoa plantation including shade trees with a rainforest in the background. (Photo credit: Dr Blaser-Hart)

GROWING SHADE TREES CAN CUT CHOCOLATE'S ENVIRONMENTAL IMPACT

UNIVERSITY OF QUEENSLAND RESEARCH SHOWS EMISSIONS FROM THE GLOBAL CHOCOLATE INDUSTRY COULD BE REDUCED BY GROWING MORE SHADE TREES OVER FARMS IN THE REGION THAT SUPPLIES 60 PER CENT OF THE WORLD'S COCOA.

Dr Wilma Blaser-Hart and Dr Simon Hart from UQ's School of the Environment and Centre for Biodiversity and Conservation Science led a study which used satellite images and machine learning to examine farms in West Africa.

"Cocoa is naturally an understory tree in rainforests, but in monoculture farming systems it's grown in the open," Dr Blaser-Hart said.

"Shade trees growing in cocoa farms can sequester substantial amounts of carbon in both aboveground and belowground biomass.

"Our analysis found shade-tree cover in cocoa production in Ghana and Côte d'Ivoire was relatively low at around 13 per cent, well below what it could be.

"Cocoa can be grown without significant yield losses under shade levels of 30-50 per cent, so there is huge unrealised potential to increase carbon sequestration through tree planting."

The study found increasing tree cover on cocoa farms across the 2 countries to a minimum of 30 per cent would sequester up to 10.2 million tonnes of carbon dioxide equivalent (CO_2e) each year over the next few decades.

CO_2e is a standard measure used to compare emissions from different greenhouse gases based on their global warming potential.

Dr Blaser-Hart said increasing shade would bring environmental and ecosystem benefits to the regions where forests have been removed for cocoa plantations.

"The amount of carbon sequestration we have calculated is about 9 per cent of the total annual emissions and about 167 per cent of current cocoa-related emissions across both countries," she said.

"But when emissions from past land-use change and deforestation are included, the potential offset falls to about 15 per cent of the sector's annual greenhouse gas emissions.

"As well as carbon storage, planting a variety of trees in plantations will support biodiversity, improve soil fertility and temperature regulation, and reduce pest and disease pressure."

While significant, the researchers noted that even widespread tree planting would only store carbon roughly equivalent to that found in the small areas of remaining intact forests in Ghana and Côte d'Ivoire.

"Agroforestry can deliver meaningful mitigation, but it is not a substitute for protecting natural forests and this must remain a priority," Dr Blaser-Hart said.

Dr Hart said the team's method could be applied to other cocoa producing regions in South America and South-East Asia and extended to other perennial shade-tolerant crops such as coffee.

"For cocoa, tree planting on farms is a win-win situation – a clear environmental benefit for the chocolate industry through growing a carbon sink with no loss of crop production," he said.

The research has been published in *Nature Sustainability*.

COLLABORATION AND ACKNOWLEDGEMENTS

The project was supported by the Lindt Cocoa Foundation, the Joint Cocoa Research Fund of CAOBISCO and ECA, the BiodivClim ERA-Net COFUND programme, and the Queensland Government Women's Research Assistance Program.

MORE INFORMATION

Visit: **www.uq.edu.au**

CELEBRATING PATHWAYS TO PARTICIPATION IN AGRICULTURE STEM RESEARCH

HANDS-ON SCIENCE WORKSHOPS FOR VICTORIAN SCHOOL STUDENTS ARE SHINING A SPOTLIGHT ON THE WIDE RANGE OF CAREERS IN AGRICULTURAL RESEARCH.

In celebration of National Science Week (11-19 August), Agriculture Victoria's *Get into AgSTEM* program will launch a new workshop exploring on-farm energy generation and cultivation of plants under solar panels.

Get into AgSTEM is a free curriculum-linked education program delivered by Agriculture Victoria and offered to secondary school students.

Agriculture Victoria Community Education Manager Anna Vietz said *the new Energy Ag – Agrivoltaics* workshop gives students the chance to use laboratory-scale solar panels and circuitry to generate power.

'The workshop offers students the opportunity to get hands-on experience while exploring how global climate change is altering climate variables in Victoria and how this can impact farming.'

'We are looking forward to rolling out this workshop and welcome any interested school teachers to get in touch with us to find out more,' Anna said.

The Energy Ag – Agrivoltaics workshop was funded through the Agriculture Energy Investment Program and will be delivered to students across the state.

The innovative *Get into AgSTEM* program opens the doors to Agriculture Victoria's state-of-the-art research facilities at AgriBio in Bundoora and the Hamilton, Horsham, Tatura, Mildura and Ellinbank SmartFarms.

Students work to complete practical activities based on current research projects run by scientists at Agriculture Victoria, learning molecular analytical techniques for on-farm efficiency improvements, through to digital data collection for precision agriculture.

By showcasing research and innovation, *Get into AgSTEM* links studying STEM at school, with high-tech, cross-disciplinary skills that are relevant to future careers in agriculture.

MORE INFORMATION

Teachers interested in the program can visit the Agriculture Victoria website for more information: **agriculture.vic.gov.au/get-into-agstem**

NEW AUSTRALIAN CHICKPEA PAN-GENOME POISED TO BOOST NATIONAL CHICKPEA PRODUCTION

CCFI Director Professor Rajeev Varshney and GRDC Senior Manager, Oilseeds and Pulses, Dr Francis Ogbonnaya, inspect Australian chickpeas

RESEARCHERS FROM THE CENTRE FOR CROP AND FOOD INNOVATION (CCFI) AT MURDOCH UNIVERSITY HAVE LED THE GENERATION OF A PAN-GENOME TAILORED SPECIFICALLY TO AUSTRALIAN CHICKPEA VARIETIES, PAVING THE WAY FOR IMPROVED CHICKPEA PRODUCTION ACROSS THE COUNTRY.

The comprehensive genetic resource, composed of high-quality assemblies of the 15 most popular chickpea varieties grown by Australian farmers, uncovered previously uncharacterised genetic diversity that will prove essential in understanding and improving desirable agronomic traits that underpin the success of the nation's Chickpea production, including yield, flowering time, acid soil tolerance and drought tolerance.

The pangenome analysis, published in Plant Biotechnology Journal and conducted in collaboration with Chickpea Breeding Australia (a Grains Research and Development Corporation and New South Wales Department of Primary Industries and Regional Development joint initiative), Agriculture Victoria Research, the WA Department of Primary Industries and Regional Development, the UWA Institute of Agriculture, and BGI Research, identified 34 345 gene families, including 13 986 dispensable families enriched for genes associated with key agronomic traits.

The research pinpointed structural variations that influence flowering time, seed weight, disease resistance, drought resilience and acid toil resilience, highlighting a major opportunity to expand the genetic base of Australian chickpeas and ultimately support the long-term sustainability of chickpea production in Australia.

The researchers also discovered that Australian varieties could be further improved through the introduction of the "QTL hotspot" region for drought tolerance that has already demonstrated a 15- 22% yield advantage after its introgression in elite cultivars in India, Ethiopia, Kenya and Tanzania. CCFI is now working with industry partners to introgress the "QTL-hotspot" for drought tolerance into Australian varieties and deliver them to chickpea growers.

Reporting on the findings, Professor Rajeev Varshney, CCFI Director and corresponding author of the study, explained that:

"The Australian chickpea pangenome marks a significant step in safeguarding future production, as it enables us to accelerate the development of chickpea varieties tailored to each region. That could mean varieties that are more drought-resilient and acid soil-tolerant in Western Australia and nationally, and more resistant to diseases like Ascochyta Blight. We look forward to working with breeding organisations to get new and improved varieties into the hands of Australian farmers.

"I would like to thank all of our collaborators on this important piece of research, which we hope will ultimately boost farmer profitability and secure Australia's position as a globally leading chickpea producer."

GRDC Senior Manager for Oilseeds and Pulses, Dr Francis Ogbonnaya, added that:

"GRDC is proud to have invested on behalf of Australian grain growers in this ground-breaking research. It is fantastic to see the country's leading chickpea researchers unite to develop a significant genetic resource critical towards securing the future productivity and sustainability of chickpeas in increasingly challenging growing conditions.

"This landmark GRDC investment in the development of an Australian chickpea pan-genome represents a major leap forward in our understanding of chickpea genetics that underpins Australia's unique growing conditions. By unlocking the genetic diversity within the crop, this research provides a powerful foundation for breeding chickpea varieties with improved drought resilience and abiotic stresses, directly addressing some of the most pressing challenges for Australian grain growers. It exemplifies GRDC's commitment to delivering world-class science that drives real on-farm impact."

Summarising the findings, Dr Kristy Hobson, Chickpea Breeder at Chickpea Breeding Australia, said:

"Since the release of Australia's first commercial chickpea variety in the 1970s, our industry has flourished into a billion-dollar sector that produced over 2 million tonnes of chickpea last season, and one of the world's major chickpea exporters. However, there are significant challenges, including changes in agricultural practices, shifts in market demands, soil constraints, and significant disease pressures.

"These findings fill in some much-needed knowledge gaps regarding the genetic makeup of Australian chickpea varieties, which will be essential for further improvement through identifying the genes responsible for yields, stress tolerance and disease resistance."

MORE INFORMATION

The full study and its implications can be found at: **https://onlinelibrary.wiley.com/doi/10.1111/pbi.70192**

NEW ENERGY BEHIND OLD PROMISES

THE QUEENSLAND GOVERNMENT RECENTLY ANNOUNCED A PARLIAMENTARY INQUIRY INTO THE ROLE SUGARCANE CAN PLAY IN PRODUCING CLEAN ENERGY AND FUEL - AND WHAT THAT COULD MEAN FOR JOBS AND INVESTMENT IN THE REGIONS.

It's something CANEGROWERS has been pushing for, and it's encouraging to finally see some real movement.

Cane has long been the backbone of many regional towns, contributing billions the Queensland economy every year and supporting more than 20,000 jobs.

But there's a lot more we can get from the crop than just raw sugar. The leftover fibre from milling – bagasse – can generate enough electricity to power hundreds of thousands of homes.

And the juice and molasses? They can be turned into biofuels, including the sort of sustainable aviation fuel the world is crying out for right now.

That's not pie in the sky – it's real, proven technology. What's been missing is the policy and investment needed to scale it up.

Of course, many growers and locals will be thinking, "We've heard all this before." And they're not wrong. Biofuels have been talked about for decades, with very little to show for it.

But the world has changed. Emissions targets aren't just talk anymore. Power prices are biting. Airlines need cleaner fuels now. And every level of government is looking for practical solutions that won't hurt regional economies.

Sugarcane fits the bill.

> *What we need is a clear direction – strategies and policies that give investors the confidence to get projects off the ground, protect good cane land, and build the necessary infrastructure.*

If we get that right, this inquiry could be the spark that helps future-proof our industry – and the communities that depend on it.

MORE INFORMATION

Visit: **www.canegrowers.com.au**

AUSTRALIAN AVOCADO GROWERS **SUPPLYING AVOCADOS ALL YEAR ROUND**

FOR MANY YEARS, AUSTRALIAN AVOCADO GROWERS HAVE BEEN SUPPLYING AVOCADOS ALL YEAR ROUND BOTH IN AUSTRALIA AND GLOBALLY.

We have established a reputation for being consistent and premium avocado suppliers with strong in-market presence and we offer long-term commitments with our partners. In eight main growing regions across Australia from far north Queensland to the southwest of Western Australia our growers pride themselves on their growing practices and our clean, green growing conditions.

Australia's avocado industry has seen significant export growth in recent years.

In the 2023/24 season, Australia, known for its focus on producing high quality avocados, exported almost 22,000 tonnes, or 14.6 per cent of its 150,913 tonne-crop* – a seven-fold increase in just three years. This growth in current markets is expected to continue, year-on-year. We are also committed to opening up new markets.

Australian avocados are well known for their excellent quality both in Australia and in our international markets. The great flavour of Australian avocados is a key point of difference, as well as the reliable quality and freshness of Australian avocados supplied into our nearby international markets.

Our ability to supply avocados all year round comes from our wide range of climates from subtropical in the north to temperate in the south.

Kym Thiel, an Australian avocado grower/packer and exporter based in the Tristate growing region and Brad Rodgers, a grower based in Western Australia (WA) are both expecting excellent up-coming seasons.

"Despite the recent dry conditions trees are healthy, and the fruit is of excellent quality," said Kym Thiel.

Brad Rodgers agrees.

"I have a very positive outlook on the season and I'm expecting excellent quality fruit," said Brad.

Australian avocados' award winning B2B and B2C international marketing teams are delivering a comprehensive program to support Australian avocado exports throughout the year. They are emphasising Australia's commitment to our overseas partners particularly through retail and food service campaigns in key markets such as Hong Kong, Singapore, Malaysia, and the Middle East.

In FY2025-26 you will see Australian avocados represented at key trade events. We invite importers, retailers, and stakeholders to connect with us in-market at:

- China International Fruit Expo (CIFE), Shanghai – 27-29 August 2025
- Asia Fruit Logistica (AFL), Hong Kong – 3-5 September 2025
- SMTS Supermarket Trade Show, Tokyo, Japan – 18-20 February 2026

Avocados Australia's CEO, John Tyas, believes the FY2025-26 season will see growth in Australian's market share in overseas markets.

"We will be delivering marketing and trade engagement programs with an always-on approach to support our overseas partners to help us increase Australian avocados' market share, and we will be working closely with our export partners," he said.

KEY FACTS:

- For many years, Australian avocado growers have been supplying avocados all year round both in Australia and globally.
- We have established a reputation for being consistent and premium avocado suppliers with strong in-market presence and we offer long-term commitments with our partners.

ABOUT AVOCADOS AUSTRALIA

www.avocado.org.au

Avocados Australia (AAL) is the representative industry body for the Australian avocado industry. We support Australian growers in their efforts to become world leading sustainable producers. Our vision is for the Australian avocado industry to be recognised as a globally competitive and trusted industry. Avocados Australia is working to increase demand in both our domestic and international markets, working with all parts of the chain, from production through to the consumer. By working together, we seek to continually improve the ability of growers to provide a healthy, profitable and safe product for all consumers.

For more information about Australian avocados & recipes go online here: **australianavocados.com.au**

MAKE TRACKS TO ADELAIDE TO HEAR LATEST NUFFIELD RESEARCH

FROM CARBON FARMING AND REGENERATIVE AGRICULTURE TO DROUGHT RESILIENCE AND EXPORT MARKETS, THE BIGGEST ISSUES AND OPPORTUNITIES FACING AUSTRALIAN AGRICULTURE WILL BE EXPLORED AT NUFFIELD AUSTRALIA'S NATIONAL CONFERENCE IN ADELAIDE THIS SEPTEMBER.

The conference will be held at the Adelaide Oval from September 9-10, with more than 30 Nuffield scholars presenting their latest research from across the globe.

Nuffield Australia CEO Jodie Redcliffe said it's a particularly timely conference, with the first crop of scholars sponsored by the Australian Government's Future Drought Fund presenting their research as much of southern Australia grapples with drought conditions.

> *"I encourage people from across the agricultural industry to register so they can hear the latest research and innovations straight from the horse's mouth and participate in robust conversations about what they mean for Australian agriculture," Ms Redcliffe said.*

"The National Conference is always a chance for Nuffield – an organisation anchored in tradition while being driven by new ideas – to embrace and propel the sustainability and profitability of our industry into the future."

Ms Redcliffe noted the conference is about more than just the latest Nuffield research, with presentations and involvement by industry leaders often starting thought-provoking conversations.

Another key element of the conference is the announcement of the 2026 Nuffield scholars at a presentation dinner on Monday, September 8. Selections are currently underway for the coveted scholarships, with the September 8 presentation a career-defining moment for the lucky awardees.

ABOUT NUFFIELD AUSTRALIA

About Nuffield Australia For 75 years, Nuffield Australia has connected agricultural leaders through its flagship experiential learning program – enabling the sharing of knowledge that creates a sustainable and profitable food and fibre industry. Steeped in tradition but driven by new ideas, our mission is to build capacity. We equip our scholars with the tools, insights, and global networks they need to adapt to changing climatic and market conditions in agriculture.

MORE INFORMATION

For more information and to register, visit: **https://www.nuffield.com.au/conference/2025-conference**

TOGETHER
WE GROW STRONGER

WE ARE THRILLED TO ANNOUNCE THAT SEASOL HORT & AG, ORGANIC CROP PROTECTANTS, AND YATES COMMERCIAL ARE COMING TOGETHER TO FORM YATES HORT & AG.

With a combined industry presence of over **220 years** and a very proud Australian history of supporting our reseller customers and growers, this move marks a new chapter in delivering unmatched service and innovation to the agricultural sector.

SERVICE: UNLOCK THE STRENGTH OF LOCAL MANUFACTURING AND DISTRIBUTION NETWORK, WITH THE BACKED BY OUR CUSTOMER SERVICE AND SALES TEAMS.

As part of DuluxGroup, we will leverage our vast sourcing, manufacturing and distribution network to ensure our customers have greater access to the highest-quality biological, organic, and regenerative farming solutions. By combining our deep expertise in soil health, Integrated Pest Management (IPM) and sustainable farming, we will be better equipped to support growers in an increasingly complex and evolving market.

PRODUCTS: INVESTMENT IN STRONG BRANDS AND INNOVATION

This strategic integration will also bring together our innovation, marketing, and sales teams, strengthening our ability to provide cutting-edge solutions and expert support to Australian farmers. The integration will also deliver stronger support in the market of our existing brands from the Seasol, OCP, Yates and our innovative technology partners including JCAM (Nutricote), Acadian Seaplants (STIMPLEX), ISCA Tech (APIS BLOOM), Andermatt Biocontrol (Helicovex, Spodovir Plus) and Coromandel (AzaMax).

At Yates Hort & Ag, our mission remains clear to help growers thrive by delivering innovative, science-backed solutions for a more resilient and productive future. We look forward to continuing to serve our customers with the same dedication and passion that has defined our legacy.

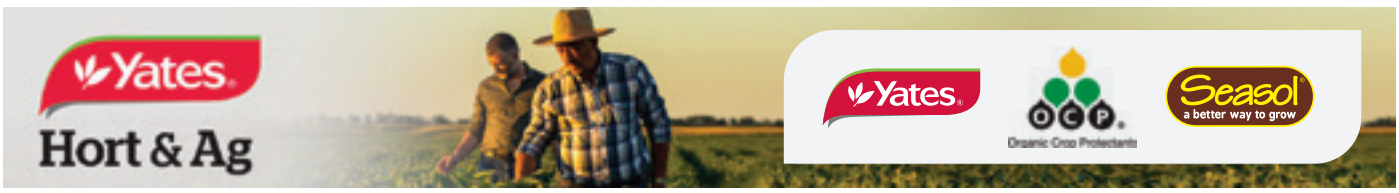
MORE INFORMATION

Visit: **hortag.com.au**

Our mission is to empower growers with innovative growing solutions,supporting the industry's shift towards more regenerative production systems to ensure a resilient and profitable future for the agricultural and horticultural Industries.

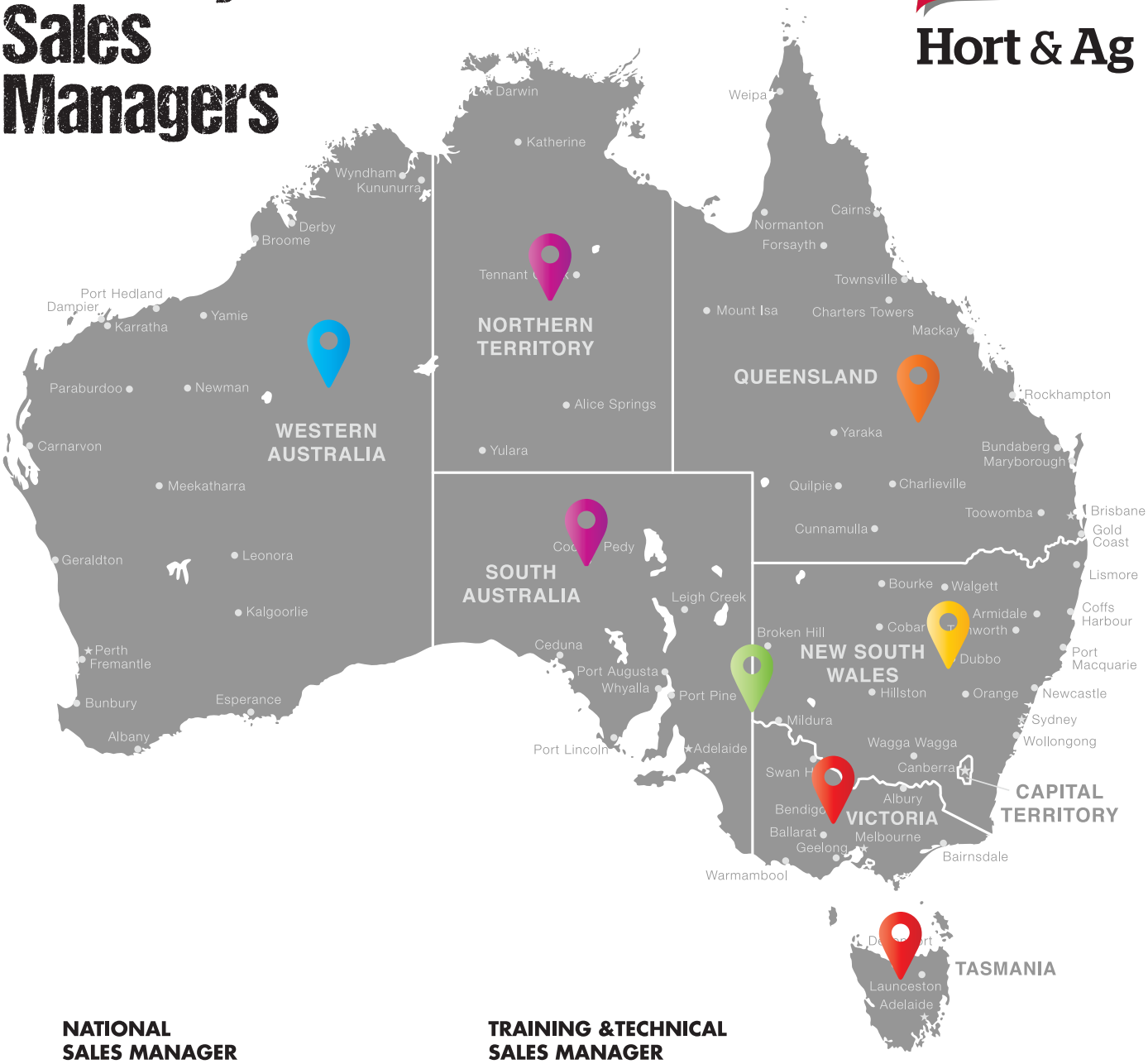
Our strategic collaboration unites over 220 years of horticultural expertise and skills,forming a business unit within Yates that offers unparalleled knowledge, products, and services in our industry.

For more information visit: hortag.com.au



Territory Sales Managers

Yates Hort & Ag



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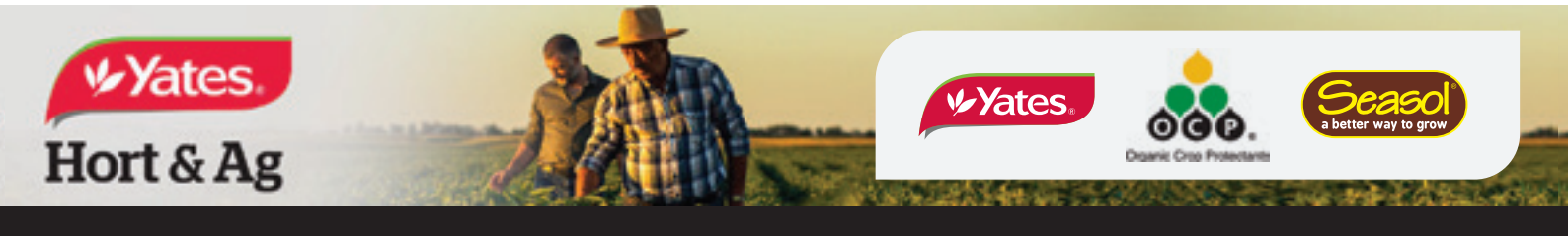


SAFEGUARDING CITRUS: INTERNATIONAL COLLABORATION BETWEEN AUSTRALIA AND INDONESIA, TARGETS HUÁNGLÓNGBÌNG THREAT

HORT INNOVATION AND NSW DEPARTMENT OF PRIMARY INDUSTRIES AND REGIONAL DEVELOPMENT (NSW DPIRD) HAVE REAFFIRMED A COMMITMENT TO PROTECTING AUSTRALIA'S CITRUS INDUSTRY THROUGH INTERNATIONAL COLLABORATION AGAINST HUÁNGLÓNGBÌNG (HLB), ALSO KNOWN AS CITRUS GREENING DISEASE.

In May 2025, NSW DPIRD led a team from NSW DPIRD on a trip to Indonesia, where an end of project review of a major biosecurity project conducted in Indonesia took place.

This collaborative, Hort Innovation funded, research project, titled Preparedness and Management of HLB, aims to leverage global knowledge and investigate effective and efficient options to manage citrus.

Brett Fifield, CEO at Hort Innovation said on the project: "Safeguarding Australia's citrus production is critical. Our recent Australian Horticulture Statistics Handbook highlights how fast the citrus industry in Australia is growing, reaching more than $1 billion in value for the first time," Mr Fifield said.

"To continue this growth trajectory, it is essential that we continue to protect against disease and educate growers on what may cause a threat. This project is just one example of the important role we play in safeguarding and protecting the Australian horticulture industry."

Myles Parker, NSW DPIRD Leader Southern Horticulture Systems, said the NSW Government has partnered with the Australian Centre for International Agricultural Research (ACIAR) and Hort Innovation to prepare the citrus industry against the significant threat of an incurable citrus tree disease known as HLB.

"HLB is caused by a bacterium carried by a small plant-feeding insect, the Asian citrus psyllid (ACP), and is found in North and South America, Middle East (moving down to East Africa) and is widespread in Asia, including Australia's northern neighbours," Mr Parker said.

"In May 2025, we conducted an end of project review focusing on the ACIAR-funded project, Preparedness and Management of HLB."

"The initiative is a key part of Australia's strategy to safeguard citrus production from the devastating citrus greening disease. Diseases like HLB are amongst the biggest threats to the viability of the Australian citrus industry."

"This project is critical to safeguarding our production base and protecting a vital horticultural industry."

Since its commencement in 2022, the project has made significant progress, including importing Australian and US rootstocks for trialling their resistance to HLB in Indonesia, where the disease is present.

Mr Parker said an incursion of HLB would have a significant economic impact on the NSW and Australian agricultural economy.

"The project has already delivered key outcomes for the citrus sector over the course of three years, including: strengthened preparedness and detection capabilities for HLB, promoted efficient production systems, including high-density plantings and dwarfing rootstocks, and enhancement of industry sustainability to support a resilient food supply."

During this most recent visit to Indonesia, the project team met for project review and planning workshops with their Indonesian colleagues, including catching up with PhD students they are supervising, delivery of a workshop on citrus biosecurity at the University of Bengkulu and site visit to citrus production regions in Sumatra and Java.

"Site visits included field trials of HLB-tolerant rootstocks and inspections of citrus germplasm at the Pusat Inovasi Agroteknologi (PIAT), Universitas Gadjah Mada (UGM)," Mr Parker said.

"Knowledge and positive control material gained during this trip has increased our ability to detect and manage significant biosecurity risks.

"By prioritising biosecurity measures now, we can protect our growers and consumers from the devastating effects of HLB and safeguard the supply of fresh Australian citrus into the future."

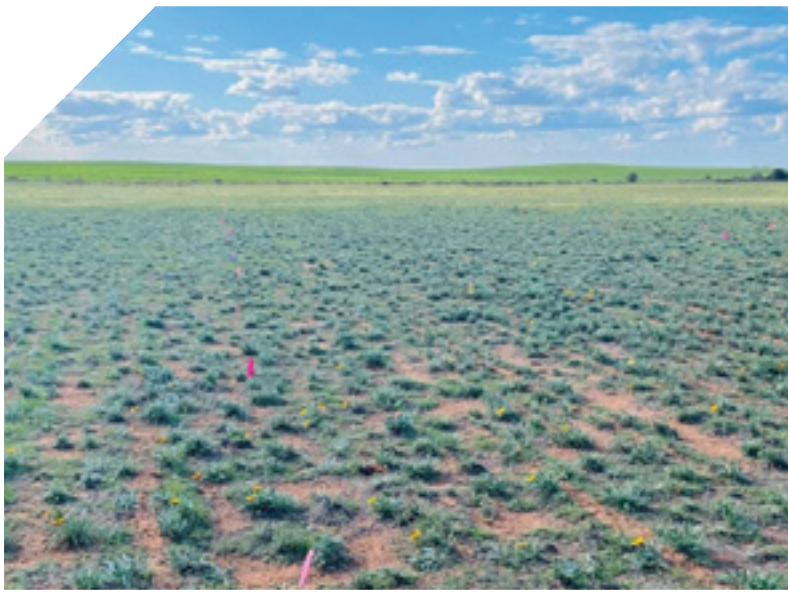
The presence of HLB and its psyllid vector in nearby regions such as Indonesia and Papua New Guinea highlights the urgency of robust biosecurity systems to protect Australia's borders.

This project is funded by the Australian Government through ACIAR, with co-investment from NSW DPIRD and Hort Innovation (Citrus R&D Fund).

MORE INFORMATION

Visit: **www.horticulture.com.au/**

A WEED OF TROUBLE: **IMPORTED FLOWER POSES HUGE RISK**



A LA TROBE UNIVERSITY STUDY HAS FOUND THE INVASIVE SOUTH AFRICAN FLOWER GAZANIA IS MORE RESILIENT THAN PREVIOUSLY UNDERSTOOD, WITH ITS ABILITY TO ADAPT TO DIFFERENT ENVIRONMENTS MAKING IT ONE OF THE BIGGEST WEED THREATS TO AUSTRALIAN NATIVE GRASSLANDS AND GRAIN PRODUCTION.

Weeds and invasive plant species, such as Gazania, are responsible for considerable economic losses in agriculture, estimated to cost Australia over $5 billion annually.

Due to its flexible growth requirements, Gazania is now widespread in a variety of habitats including coastal sand dunes, stream banks, wastelands, open grasslands, along roadsides and on cultivated and irrigated sites in southern Australia and parts of Western Australia.

Two varieties of Gazania were first brought to Australia as ornamental flowering plants in the 1950s and 1970s, however ended up in garden waste as lawn clippings, seeds or other live plant material which helped them proliferate along roadsides and native vegetation.

While the flower has long been considered an environmental weed in Australia, it is now infesting grain crop production fields in low rainfall regions of South Australia, with farmers finding it difficult to control with common herbicides.

Marginal sandy lands with heavy infestations of Gazania are quickly becoming unproductive with crops quickly failing to compete with the drought hardy and vigorous weed.

Muhammad Adnan, a PhD student in Dr Ali Bajwa's Weed Science group at La Trobe Institute for Sustainable Agriculture and Food (LISAF) and the Department of Ecological, Plant and Animal Sciences collected thousands of seeds from environments across Australia and studied how they grew under various conditions.

The study, published in Frontiers in Agronomy, found the seeds had a high tolerance for a large range of environmental factors, including light levels, hot and cold temperatures, seed burial depth, salt and acidity levels in the soil, and moisture.

> ***Mr Adnan said this showed the seeds had adapted to germinate over a wide range of environmental conditions, suggesting they could become a problematic weed across all seasons in most parts of Australia, leading to potential high infestation levels.***

"While further populations should be compared for emergence response under field conditions, these preliminary findings suggest this weed has the potential to develop significant seedbank in Australian no-till grain production systems," Mr Adnan said.

Dr Bajwa said this knowledge of seed germination triggers and emergence dynamics should help to predict potential regions of spread of Gazania and help develop and apply management strategies with respect to different environmental conditions.

"While this information is crucial for managing this highly problematic weed at the establishment stage (germination and emergence), further research is needed on growth and reproductive response of Gazania to different environmental conditions. This will help understand the invasion ecology and develop long-term management strategies for different land-use scenarios for this weed, which is rapidly spreading across Australia." he said.

MORE INFORMATION

Visit: **www.latrobe.edu.au.** The full paper, Seeds of success: seed biology and germination response of Gazania weed in Australia, can be found at: ***www.frontiersin.org/journals/agronomy/articles/10.3389/fagro.2025.1596787/full***
DOI: **https://doi.org/10.3389/fagro.2025.1596787**

DODGING BANANA DISEASES IS VALUE FOR MONEY

A QUEENSLAND ALLIANCE FOR AGRICULTURE AND FOOD INNOVATION REPORT HAS FOUND A BANANA RESEARCH PROGRAM HAS THE POTENTIAL TO SAVE THE INDUSTRY MORE THAN $52.2 MILLION.

The University of Queensland program aimed to strengthen the capacity of the banana industry to diagnose disease outbreaks.

Project lead Professor Andre Drenth said the program was cost effective and had a 12 to 1 benefit-cost ratio.

"The Australian banana industry is largely based on the Cavendish variety, so protecting it from exotic diseases benefits all growers," Professor Drenth said.

"A high return on investment does not happen by luck but depends on industry insights and careful project planning.

"By working with a resource economist, we determined the exclusion benefits, which are the financial benefits of not having these disease problems.

"We looked at the banana industry to determine what would make the biggest difference to their profitability and worked backwards from that.

"If we can keep the exotic plant diseases causing major and costly problems overseas out of Australia, we can achieve major impacts, so that's where we put our focus.

"Using data from outbreaks of Black Sigatoka and Moko disease in Cavendish plantations in Latin America, we developed an accurate picture of how much time, effort, and cost are involved to control them."

Professor Drenth said QAAFI's program was focused on developing and maintaining the capability to quickly detect and identify emerging plant pathogens while also strengthening Australia's preparedness for banana disease incursions.

Australian Banana Growers' Council R&D manager Dr Rosie Godwin said the industry was committed to reducing the potential for incursions of any pest or disease that could adversely affect production, trade, marketability, and the environment.

Professor Andre Drenth (Photo credit: QAAFI)

"Over many years we have backed investments that improve industry biosecurity preparedness," Dr Godwin said.

"One major focus was the development of new diagnostic tools for high priority pathogens because quick and accurate diagnosis affords the industry a much greater chance of eradication and effective management.

"This is extremely important to our industry because the cost would be enormous should any new disease become established here.

"In terms of long-term sustainability, the banana industry sees this research as providing great value for money."

Hort Innovation CEO Brett Fifield said the research highlighted the immense value of strategic investment in biosecurity preparedness for the banana industry.

"Our latest Australian Horticulture Statistics Handbook revealed that banana growers produced more than 368 thousand tonnes of product in FY23/24," Mr Fifield said.

"With such high volumes being produced each year, this research underscores the importance of equipping growers with the tools to detect and respond to disease threats early.

"Hort Innovation is proud to support initiatives like this to ensure the long-term sustainability and profitability of the banana industry."

COLLABORATION AND ACKNOWLEDGEMENTS

The program has been funded by Hort Innovation using the banana research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, no-for-profit research and development corporation for Australian horticulture. The research was also funded by the Department of Primary Industries. The Queensland Alliance for Agriculture and Food Innovation is a research institute at The University of Queensland, established with and supported by the Department of Primary Industries.

MORE INFORMATION

Visit: **www.uq.edu.au**

FOOD SECURITY DISCUSSION PAPER WELCOMED AS VEGETABLE INDUSTRY ISSUES NEED URGENT ATTENTION

AUSVEG HAS WELCOMED THE GOVERNMENT'S RELEASE OF THE NATIONAL FOOD SECURITY STRATEGY DISCUSSION PAPER AND COMMENCEMENT OF A PROCESS TO ESTABLISH A NATIONAL FOOD COUNCIL AS STEPS TOWARDS A MORE FOOD-SECURE AUSTRALIA.

The peak industry body for Australia's vegetable, potato and onion industry has long called for a National Food Security Strategy and looks forward to continuing engagement with the Government to ensure the views, needs and key issues of Australian vegetable growers are considered, reflected and addressed.

The launch of the process for development of the National Food Security Strategy also follows the 2023 release of the Australian Food Story: Feeding the Nation and Beyond report, following a House of Representatives Standing Committee on Agriculture inquiry into food security – which in calling for adoption of the report's recommendations, AUSVEG wholly endorsed.

With Australian vegetable growers continuing to face a range of severe economic, operating and productivity-inhibiting challenges that are threatening their viability, AUSVEG CEO Michael Coote said it is crucial to ensure tangible measures that secure the industry's future are included in the strategy, and also adopted in the immediate term.

"Australian families depend on Australian growers for 98 percent of the fresh vegetables consumed in this country – so without a viable vegetable industry, Australia has no food security," said Mr Coote.

"Since 2023, surges in the cost of production, poor pricing, lack of profit to reinvest in productivity-enhancements, workforce shortages, and overwhelming compliance burden have contributed to upward of one in three growers consistently considering walking away from the sector.

"To achieve the intent of a National Food Security Strategy, it is critical that these issues are addressed, and that Australian vegetable growers have a seat at the table as this strategy is developed and implemented."

With the intended timeline for finalisation of the National Food Security Strategy being 2026-27, AUSVEG also emphasises the need for urgent action to improve vegetable grower viability.

"AUSVEG welcomes the Australian Government following through with its pre-election promise to develop and implement a National Food Security Strategy, as formal recognition of the importance of food security in the longer term," said Mr Coote.

> *"However, the severe challenges facing vegetable growers are happening now, and many may not be able to hang on much longer.*

"Through a range of forums, including our 2025 Federal election priorities and more recently our engagement with this week's Unlocking Productivity in Australian Agriculture Roundtable, AUSVEG has continued proposing practical and achievable solutions that are needed to secure the viability of Australia's vegetable industry, and the growers Australians depend on."

"We need to see those solutions embraced before it's too late."

ABOUT AUSVEG

AUSVEG is the national peak industry body for Australia's over 3,600 vegetable, potato and onion producers, who account for 3.8 million tonnes of vegetable production worth $5.7 billion in farmgate value annually. This accounts for one third of Australia's $17 billion horticulture industry.

BOLSTERED DROUGHT CASH
A STEP IN THE RIGHT DIRECTION

THE VFF SAYS AN ADDITIONAL $75M IN VICTORIAN GOVERNMENT DROUGHT SUPPORT FUNDING IS A STEP IN THE RIGHT DIRECTION AS PARTS OF THE STATE CONTINUE TO FACE RECORD DROUGHT CONDITIONS.

VFF President Brett Hosking said the continued support is sorely needed and testament to the sustained advocacy from VFF, farmers and the wider regional community.

"You can't overstate how devastating this drought has been to our regional communities and the only certainty we know is the recovery will take years."

"Genuine support is what's needed and this announcement is a step in the right direction," Mr Hosking said.

Highlights of the additional Victorian Government drought support include:

- $35.8m for 12 South West Victoria councils to administer targeted drought relief;
- $15m investment for the East Grampians Rural Pipeline;
- $2m for the Country Women's Association to roll out of food and grocery support of up to $1000 per household;
- $6.3m to cover the cost of farmer exemptions on government fees and charges, such as livestock transaction fees;
- $5.5m for standpipes, emergency and private bores;
- $3.5m towards a SouthWest water strategy;
- $1m for Catchment Management Authority employment programs;
- $5.9m to continue the Look over the Farm Gate program and continue funding of Agriculture Victoria's farm technical decision making program.

Mr Hosking added it's the VFF's expectation that the entirety of funding allocations to local councils is fully and promptly passed onto drought-hit communities without delay.

"Our communities are hurting right now and it's my expectation that this money goes directly to drought-hit farmers straight away and paid in full. Immediate rate relief is a good example of how that can be done and is something we've been calling for," Mr Hosking said.

Increased investment to complete the East Grampians Rural Pipeline is a welcome move and will help ensure the region is better placed to respond to future droughts.

"We've been calling for this for some time and have been working hard to make this key infrastructure a reality. We are now just waiting for the Federal Water Minister, Murray Watt, to confirm their co-contribution and work can commence on getting this done."

"Government support is vital to help the industry at this time. We've seen initial support from the Victorian Government and now we need the Federal Government to step in and do their bit."

"We're in this for the long haul and whilst we thank the Victorian Government for their support, by no means are we out of the woods just yet. VFF has employed a Drought Support Officer to be on the ground to speak with farmers and rural communities and we will continue to monitor conditions and ensure government is informed to provide further support to farmers as the season continues," Mr Hosking said.

MORE INFORMATION

Visit: **www.vff.org.au**

DATA KEY TO THE FUTURE OF AUSTRALIAN FARMS

ABARES IS CONDUCTING ITS ANNUAL FARM SURVEY PROGRAM, THE DATA FROM WHICH WILL BE USED TO INFORM RESPONSES TO CHALLENGES SUCH AS DROUGHT AND TRADE DISRUPTIONS.

This year's program is collecting data from farms across the country to provide the facts around how farms are performing.

ABARES officers will undertake face-to-face interviews with about 1900 pre-selected farmers throughout Australia from June to December.

ABARES Executive Director Dr Jared Greenville said the surveys are a core part of the evidence base that industries and governments across Australia use in making policy and responding to challenges.

"The interviews cover questions about farm structure and land use, production, costs and other economic factors of the farm business," Dr Greenville said.

"The continued success of the survey, and its value to industry and government, depends on the cooperation of those participants selected to represent their industry.

"I'd encourage any farms selected in our surveys, to participate, to help ensure we create the best dataset we can."

FAST FACTS:

- ABARES has been conducting agricultural industry surveys for the past 70 years. Two main surveys have been running since the 1970s.
- The Australian Agricultural and Grazing Industries Survey, covering broadacre farms, has been conducted since 1977. It provides our longest time series with 46 years of data. The sample size is about 1600 farms.
- The Australian Dairy Industry Survey began the next later, in 1978, so provides 45 years of data. Its sample is about 300 farms.

MORE INFORMATION

Farmers can contact ABARES Survey Collection team by telephone **1800 026 308** or email **surveysabares@aff.gov.au.**

NATIONAL BLUEPRINT TO STANDARDISE SOIL HEALTH **ACROSS AUSTRALIAN AGRICULTURE**

A $10 MILLION PROJECT IS SET TO TRANSFORM HOW AUSTRALIAN AGRICULTURE UNDERSTANDS AND ADDRESSES SOIL HEALTH – CREATING A STANDARDISED, CROSS-SECTOR APPROACH.

CSIRO Principal Research Scientist Dr Mark Farrell will lead the development of a Soil Health Framework tailored to Australian production systems. Photo: CSIRO

The Grains Research and Development Corporation (GRDC) will invest $6.8 million in a five-year initiative, which will see Australia's national science agency CSIRO lead the development of a Soil Health Framework tailored to Australian production systems.

The framework will define soil health and function, outlining how it is measured, monitored, managed and reported within Australian agricultural systems, including regionally relevant reference datasets that can be used as benchmarks.

GRDC Sustainable Cropping Systems Manager Cristina Martinez said healthy soils underpin high-performing farming systems.

"No matter what kind of crop you plant or stock you run, the soil beneath your feet is a key determinant of how profitable and sustainable a farm business will be," Dr Martinez said.

> ***"As well as dealing with well-known issues such as erosion, acidification and salinisation, farmers across all agricultural sectors must make key decisions related to soil resilience and productivity across a suite of soil types, each potentially requiring a unique approach for optimal outcomes."***

Dr Martinez said that in addition to soil health being a long-standing issue for grain growers and other agricultural sectors, there has been growing national and international attention on the topic.

"Nationally, soil health is a key focus of the National Soil Strategy, and the Australian Agricultural Sustainability Framework specifically calls out the protection and enhancement of soil health as a key principle," she said.

"Internationally, several approaches have recently been developed or proposed, with potential implications for future market access and sustainability credentialing schemes.

The framework will define soil health and function, outlining how it is measured, monitored, managed and reported within Australian agricultural systems.

> *"Now is the time for a standardised approach across the Australian agricultural sector that is practical, cost-effective and appropriate to Australian conditions. It's about equipping producers with the tools and evidence they need to make informed decisions, demonstrate their sustainability credentials and remain competitive in a changing global market."*

CSIRO Principal Research Scientist Dr Mark Farrell will lead the development of a Soil Health Framework tailored to Australian production systems. Photo: CSIRO

Project lead Dr Mark Farrell, Principal Research Scientist at CSIRO, said major overseas players such as the EU and USA have been working hard to develop frameworks to protect soil health, with the potential to reward proven beneficial practices.

"However some of the major contrasts in soil and environmental conditions that drive best practice on Australian farms can differ markedly from agricultural systems overseas," he said.

"It is paramount that a fit-for-purpose Australian Soil Health Framework is developed that not only enables soil health to be effectively benchmarked, but that also provides a scientifically robust evidence base to ensure continued access to overseas markets."

A cross-commodity collaboration has been established to ensure a consistent sector-wide approach including, to date, the Cotton Research and Development Corporation (CRDC), Dairy Australia, Australian Wool Innovation (AWI), Wine Australia, Meat & Livestock Australia (MLA), and AgriFutures.

The framework will be co-designed with input from key industry stakeholders across the supply chain, including growers, advisors, finance sector/banks, markets/traders/buyers, government and industry bodies/ representative organisations, ensuring it is practical, credible and widely adopted.

Project research partners include CSIRO, University of Sydney, Primary Industries and Regions SA (PIRSA)'s South Australian Research and Development Institute (SARDI) and in collaboration with the University of Adelaide, University of Western Australia, Eurofins-APAL and ViridisAg.

MORE INFORMATION

Visit: **www.grdc.com.au**

ELDERS RURAL SERVICES, NEW BRANCH BY RKL BUILDING SETS NEW STANDARD FOR AGRICULTURAL RETAIL EXCELLENCE

STRATEGIC PARTNERSHIP WITH *STOREPLAN* DELIVERS ENHANCED SAFETY, EFFICIENCY, AND CUSTOMER EXPERIENCE IN NEW ELDERS FACILITY.

Elders Rural Services has successfully completed a comprehensive relocation of its Toowoomba branch, working in partnership with storage solutions specialist *Storeplan* to create a modern, efficient facility that sets a new bench-mark for agricultural retail operations.

The project represents the latest milestone in a partnership spanning nearly three decades, demonstrating Elders' ongoing commitment to providing exceptional service to the agricultural community while ensuring the highest standards of workplace safety and operational efficiency.

MODERNISING AGRICULTURAL RETAIL

The Toowoomba branch build relocation involved a complete design of storage systems, warehouse layout, and retail spaces to optimise workflow and enhance the customer experience. Key improvements include:

- Extensive Warehouse Storage: Installation of 99 Selective Pallet Racking frames creating multiple storage runs with capacities up to 3000kg per beam level, dramatically increasing storage eMiciency and organisation.
- Specialised Safety Compliance: Implementation of storage bays for dangerous goods (DG) with secure mesh caging and swing gate systems meeting strict AgSafe standards for chemical and hazardous material storage.
- Weather-Protected Storage: Addition of Galvanised Outdoor Pallet Racking providing 'built to last' outdoor storage.
- Enhanced Safety Infrastructure: Installation of comprehensive Safety Systems - Handrail Systems with Pedestrian Access Gates throughout the facility, including specialised access for safety equipment.
- Modernised Retail Display: Implementation of professional black Gondola Shelving Systems fully customised with pegboards creating organised, accessible product displays that enhance the customer shopping experience.
- Complete Integration: All systems designed for seamless workflow from receiving through to customer collection, reducing handling time and improving operational eMiciency.

PARTNERSHIP EXCELLENCE

"This project showcases the power of our long-standing partnership with Storeplan," said Laura Waddington, Elders Corporate Property Operations Lead. "Their comprehensive approach – from initial design through to installation and ongoing compliance support – allows us to focus on what we do best: serving our agricultural communities."

The transformation was completed with minimal disruption to branch operations, thanks to Storeplan's expertise in managing complex retail and property upgrades. The company's ability to operate efficiently in both urban and regional areas proved crucial to the project's success.

SETTING INDUSTRY STANDARDS

The new Toowoomba branch reflects broader trends in agricultural retail, where businesses are investing in modern infrastructure to meet evolving customer expectations and regulatory requirements. Features such as specialised storage for agricultural chemicals, improved product accessibility, and enhanced workplace safety measures position the branch as a model for rural retail excellence.

"We're seeing increasing demand for storage solutions that address the unique challenges of agricultural retail," said Luke Hillenberg, Storeplan. "This project demonstrates how thoughtful design and strategic partnership can deliver outcomes that benefit everyone – the business, its staff, and the customers they serve."

ABOUT THE PARTNERSHIP

Elders and Storeplan have maintained a strategic partnership since the mid-1990s, with collaboration intensifying significantly over the past decade. This relationship has enabled Elders to:

- Maintain consistent compliance across all depot locations
- Access specialised agricultural storage solutions
- Streamline supply chain management through single-supplier relationships
- Benefit from ongoing support and annual compliance reporting Community Impact

The enhanced Toowoomba facility strengthens Elders' ability to serve the agricultural community across the Darling Downs region. Improved efficiency and expanded capacity enable better stock management and faster service delivery, directly benefiting local farmers and rural businesses.

The branch serves as a vital link in the agricultural supply chain, providing everything from livestock feed and veterinary supplies to farming equipment and rural merchandise. The modernised facility ensures this critical service continues to meet the highest standards of reliability and professionalism.

LOOKING FORWARD

The successful completion of the new Elders Toowoomba branch reinforces both organisations' commitment to continuous improvement and innovation in agricultural retail. Plans are already underway for similar upgrades at additional Elders locations, leveraging the proven partnership model to deliver consistent results across the network.

SUB-SOIL SECRETS REVEALED IN ROBOT-DRIVEN FARM RESEARCH

A ROBOTIC ROOT-SENSING SYSTEM DEVELOPED AT THE UNIVERSITY OF QUEENSLAND IS OPENING UP NEW OPPORTUNITIES FOR MORE PRODUCTIVE AGRICULTURAL CROPS.

The root phenotyping system provides new information on the link between plant roots and yield to identify ways to boost productivity and improve drought resilience.

Dr Dongxue Zhao at the Queensland Alliance for Agriculture and Food Innovation said a purpose-built robot was propelling the Grains Research and Development Corporation (GRDC) invested phenotyping project into the future.

"Given the critical role of the root system to access water and nutrient resources, it is purplexing how little we know about the genotypic diversity of roots traits and their effect on crop yield and yield stability," Dr Zhao said.

“Most root phenotyping methods focus on 2D and 3D visualisations of root architecture traits, usually on young plants grown under controlled conditions in pots or root chambers.

“But because of environmental variables and how plants adapt and respond to them, such studies can’t untangle the whole relationship between root architecture, root function and yield.

“On the other hand, root studies in the field mostly rely on expensive, time-consuming and laborious excavations of the root system.

“Our approach doesn’t disturb the crop, and its measurements are non-invasive and rapid.

“Now, we can cheaply phenotype a 5-metre-long plot every 8 seconds, meaning that we can assess about 250 field plots per hour.

“The system senses the entire root system within the soil profile, reducing error and maximising our capacity to identify differences between genotypes or agronomic treatments.”

The team with the RootBot. Photo Credit: Megan-Pope

The system involves a range of technologies including an autonomous high-clearance robot called The RootBot, co-designed with AntRobotics in Germany.

It carries an electromagnetic induction (EMI) instrument and sensors for canopy and root phenotyping.

A data pipeline was developed in collaboration with a service provider of digital agriculture products, streamlining the translation of the technology to industry.

“The technology will allow researchers and providers of digital agriculture services to screen large numbers of genotypes for root traits which likely drive drought tolerance and yield stability,” Dr Zhao said.

“Agronomists could use it to map maximum crop rooting depth and plant available water across paddocks to inform precision agriculture practices.”

Research team member Dr Raul Gimenez said the possibilities of the system are enormous.

“This technology has the potential to be used not only in root phenotyping, but in combining information from above-ground traits as well to give us a better understanding of what is happening with our crops and how to improve them,” Dr Gimenez said.

“We’re in an era where machine learning and big data are very useful tools, but we need to feed them with information – this robot provides us the means to feed these very powerful models with the information that they need.”

The research program called ‘Root structure and function traits: Overcoming the root phenotyping bottleneck in cereals’ is an investment of the Grains Research and Development Corporation led by UQ in collaboration with the Western Australian Department of Primary Industries, Agriculture Victoria, IPK Leibniz Institute, digital agricultural provider services Airborn Insight and Data Farming, and seed companies AGT, Pioneer Seeds, Long Reach Plant Success and Pacific Seeds.

The research was published in *Plant and Soil.*

The Queensland Alliance for Agriculture and Food Innovation is a research institute at The University of Queensland established with and supported by the Department of Primary Industries.

MORE INFORMATION

Visit: www.qaafi.uq.edu.au

PRODUCTIVITY GROWTH FOR BROADACRE WEAKENS

BROADACRE PRODUCTIVITY GROWTH HAS SLOWED OVER THE LAST FINANCIAL YEAR, BUT THE SLOWDOWN IS INCONSISTENT, ACCORDING TO ABARES'S LATEST PRODUCTIVITY ESTIMATES FOR 2023-24.

ABARES Executive Director Dr Jared Greenville said while the headline productivity index for broadacre farming had decreased from 2022-23 to 2023 24, there was a 'multi-speed' effect.

"The drop in growth we've seen is mostly due to hot and dry conditions in 2023-24 impacting cropping output in Western Australia," Dr Greenville said.

"While broadacre productivity growth declined in the latest period for some states, it increased in Victoria as different areas and farm types experienced different seasonal conditions.

"We've seen a similar multi-speed effect before in our analysis of the dairy industry. Productivity for dairy farms, particularly in irrigated regions, has slowed considerably, whereas areas with higher natural rainfall and a lower reliance on purchased fodder remain strong.

"That said, it's clear that this slowdown is more of an issue for some farm types and regions than others."

The latest figures come on the back of a longer term slowing of productivity growth rates in recent decades, with the average annual growth of broadacre productivity increasing at 0.6% since 1999-2000, down from more than 2% per year before 2000.

Dr Greenville said that despite the trends and latest figures, agriculture is performing relatively well compared to other industries.

"We are also seeing rising differences between the 'all-agriculture' productivity numbers released by the ABS in their industry level statistics, which rose for 2023-24, and the fall in our broadacre productivity statistics. The difference is likely due to productivity growth in other sectors, like horticulture, aquaculture, forestry and pork and poultry.

"Despite the differences, the benefits from measuring productivity from farm-level data is that we can understand the changes in productivity across farm-types and regions. This provides a detailed view that can better inform attempts to lift productivity performance."

MORE INFORMATION

Read the latest Australian Farm Productivity - Broadacre and Dairy Estimates here: **https://www.agriculture.gov.au/abares/research-topics/productivity/agricultural-productivity-estimates**

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GLOBAL STUDY REVEALS CLOVER'S GENETIC SECRETS

MONASH UNIVERSITY SCIENTISTS HAVE UNCOVERED HOW INVASIVE PLANTS LIKE WHITE CLOVER RAPIDLY ADAPT TO NEW ENVIRONMENTS, REVEALING GENETIC CHANGES THAT UNDERPIN THEIR GLOBAL SUCCESS.

"Published as part of the Global Urban Evolution Project (GLUE), the study found that structural variants – large chromosomal changes involving hundreds of genes – drive parallel adaptation in white clover populations across continents. The study is part of a major international collaboration led by researchers from Monash University and the University of Louisiana, Lafayette.

Dr Paul Battlay from Monash University's School of Biological Sciences, who co-led the research published today in Nature Ecology & Evolution, said the findings show just how quickly plants can evolve when introduced to new regions.

"We discovered that white clover populations introduced around the world carry surprisingly high genetic diversity, which allows them to rapidly adapt to local climates through these large structural variants," Dr Battlay said.

"This has major implications for understanding how invasive species spread and how evolution is unfolding in the Anthropocene."

Associate Professor Kay Hodgins, also from the Monash University School of Biological Sciences, was a co-senior author on the study.

"By sequencing the genomes of over 2,600 plants from six continents, we discovered that large chromosomal rearrangements repeatedly helped populations adapt to similar climate gradients. It's a striking example of rapid evolution happening before our eyes," Associate Professor Hodgins said.

"This study highlights the power of international collaboration to reveal the hidden genetic mechanisms behind rapid adaptation. It shows that structural variants are key players in how plants respond to environmental change."

Visiting Assistant Professor Brandon Hendrickson from the University of Louisiana, Lafayette, said:

"Our work reveals the genetic architecture that allows invasive plants to thrive worldwide."

Dr Nicholas Kooyers, joint senior author from the University of Louisiana, Lafayette said:

> ***"These findings demonstrate that evolution isn't just a slow process – it's happening rapidly and repeatedly in response to similar climatic conditions in geographically-disparate parts of the world."***

Professor Marc Johnson from the University of Toronto, leads the GLUE initiative.

"GLUE, and this study in particular, exemplify the importance, power and potential of global collaboration to address some of the most important and urgent scientific problems, such as invasive species," Professor Johnson said. "Now more than ever, we need international collaboration and cooperation to tackle the great challenges facing humanity and Earth's systems."

The new research builds on the original GLUE findings published inScience (2022), which showed repeated evolutionary responses to urban environments across more than 150 cities worldwide.

This latest study deepens our understanding of how species like white clover evolve through large-scale structural genetic changes, with profound implications for managing invasive species and predicting how ecosystems will respond to accelerating human impacts.

MORE INFORMATION

Visit: **www.monash.edu/**
Read the full paper:
DOI: 10.1038/s41559-025-02751-2

EMERGING AUSTRALIAN CHERRY LEADERS GAIN GLOBAL INSIGHTS ON U.S. STUDY TOUR

TEN EMERGING LEADERS FROM AUSTRALIA'S CHERRY INDUSTRY HAVE RETURNED HOME EQUIPPED WITH NEW KNOWLEDGE AFTER PARTICIPATING IN AN INTERNATIONAL STUDY TOUR TO WASHINGTON STATE, USA, FUNDED BY HORT INNOVATION.

Led by the NSW Department of Primary Industries and Regional Development (DPIRD), the study group travelled from Seattle to Richland, Washington State, from 28 May to 6 June, visiting key cherry-growing regions including Wenatchee, Quincy, Mattawa and Prosser.

Brett Fifield, CEO at Hort Innovation spoke to the benefits of the tour, stating: "Investing in our emerging leaders is essential for building a strong and innovative future in Australian horticulture. Programs like this are all about building the pipeline and knowledge among the next generation of growers."

NSW DPIRD Temperate Fruits Development Officer, Jessica Fearnley-Pattison said, the tour coincided with the tenth International Cherry Symposium, providing participants with a unique opportunity to engage with global experts and explore large-scale production systems.

"The tour was designed to expose Australian growers to innovative practices and technologies used in one of most productive cherry regions in the world," Ms Fearnley-Pattison said.

"Washington State produces more than ten times Australia's national cherry crop, so it was an invaluable opportunity for our growers to see how large-scale operations manage quality, logistics and export readiness.

"This study tour has provided these emerging cherry industry leaders with the necessary tools and knowledge to expand and improve their own orchard operations back in Australia."

Ms Fearnley-Pattison said the group visited several leading cherry orchards and packhouses, focusing on quality management, new variety development and advanced growing techniques.

"Some of the key learnings included the use of reflective ground covers to enhance fruit colour, trellis systems to improve canopy structure and fruit size, and strategies to manage tree vigour," Ms Fearnley-Pattison said.

"One of the main focuses was understanding how U.S. growers consistently deliver high-quality fruit to export markets.

"These insights are crucial as Australian producers look to strengthen their global competitiveness."

At the International Cherry Symposium, participants connected with researchers and industry leaders from Chile, China, Italy and the United States.

Presentations covered a range of topics including early-season varieties, climate resilience through protective covers, the use of gibberellic acid (GA) to improve fruit firmness, and innovations in mechanical harvesting.

"We're thrilled that this cohort from the cherry industry took on so many learnings and look forward to seeing them implement innovative changes on farm following the tour," concluded Fifield.

This Emerging cherry leaders program, is part of CY22002 extension and communication for the australian cherry industry project and is funded by Hort Innovation using the cherry research and development levy and contributions from the Australian Government.

MORE INFORMATION

Visit: **www.horticulture.com.au/**

TIME OF SOWING TRIALS EQUIP WA GROWERS TO ADAPT TO VARIABLE SEASONS

WESTERN AUSTRALIAN GRAIN GROWERS ARE SET TO BENEFIT FROM A SERIES OF TARGETED PROJECTS FOCUSED ON TIME OF SOWING IN RESPONSE TO INCREASING SEASONAL VARIABILITY.

GRDC Grower Relations Manager – West, Kayla Evans, said the projects are expected to provide WA growers with improved decision-making tools for selecting optimal sowing windows. Photo: Kayla Evans

GRDC's National Grower Network (NGN) is a grassroots investment mechanism that ensures grower voices directly shape RD&E priorities. Photo: Evan Collis/GRDC

Four new GRDC National Grower Network (NGN) projects are underway in WA this season looking at time of sowing options to respond to seasonal variability. Crops at Kununurra on the Ord river Western Australia

Delivered through the Grains Research and Development Corporation's (GRDC) National Grower Network (NGN), the local projects are designed to support growers in making more informed sowing decisions in the face of shifting rainfall patterns, compressed sowing windows and climate unpredictability.

"WA growers are telling us that sowing time is one of the most critical and challenging decisions they face each season," Ms Evans said.

> ***"These projects are about helping growers manage risk and optimise returns by understanding how different crops, varieties and management strategies perform under local conditions across a range of sowing dates."***

A new two-year cereal crop phenology project in the Albany port zone led by Field Applied Research (FAR) Australia will compare winter wheat cultivars to currently adopted long spring and spring wheat, barley and oats systems.

The project builds on a previous GRDC investment, also led by FAR, investigating earlier sowing times for commercially available winter wheat varieties.

The first trials for the project are underway in Frankland River, across three sowing dates ranging from early April to mid-May.

Also new in 2025, a two-year project led by Mingenew Irwin Group is exploring the economics of late sowing options in June. It aims to equip growers in the region to make decisions about the most appropriate crop type when sowing late due to dry seasonal conditions.

The project will evaluate the profitability of short-season cultivars such as wheat, canola, lupins, chickpeas and field peas. Trials for this project are underway this season, sown in Mingenew on heavy soil, and near Dalwallinu on light soil, during the first and third weeks of June.

Two NGN projects exploring early sown oats have also commenced in 2025.

A two-year project led by South East Premium Wheatgrowers Association (SEPWA) is investigating deeper early sowing of oats to take advantage of early moisture in the Esperance port zone.

The project will also explore seeding oats early for frost risk mitigation, and the potential use of milling oats in areas of paddocks or farms that suffer from transient waterlogging.

In the Kwinana West and Albany port zones, a one-year project led by Trent Butcher of Consult Ag will explore the potential of seeding oats early to mitigate the effects of drought.

It will investigate the relationship between biomass production, nitrogen

application and grain yield across trials in three locations: Narrogin, Lake Grace and West Dale.

These new NGN projects add to a long list of GRDC investments exploring time of sowing that are underway or recently completed, including:

- Investigations in the Kwinana port zone, led by the Liebe Group, into sowing canola very early (March) following rainfall events to maximise establishment and yield potential.
- A four-year project concluding in 2025 exploring how to optimise the performance of winter wheats and how they fit into WA farming systems, led by Cropportunity.
- A project led by Stirlings to Coast Farmers exploring the suitability of early sown winter wheat to capitalise on late summer rainfall in March in the Albany Port Zone.
- An examination of the viability and productivity of late winter and early spring seeding of cereal varieties in Albany and Esperance port zones as a mitigation strategy to waterlogging, led by Stirlings to Coast Farmers and delivered in collaboration with SEPWA.

Ms Evans said the projects are expected to provide WA growers with improved decision-making tools for selecting optimal sowing windows based on seasonal forecasts and variety performance.

"The projects will help de-risk the challenges of climate volatility, generating regionally specific data to guide variety selection and management practices under changing climate conditions.

> ***"They'll provide growers with a greater understanding of early and late sowing risks and benefits, including frost, heat, and disease implications.***

"Ultimately, GRDC aims to increase growers' resilience and profitability by providing economically viable sowing options to mitigate seasonal variability."

ABOUT THE NATIONAL GROWER NETWORK

The National Grower Network (NGN) is GRDC's grassroots investment mechanism that ensures grower voices directly shape RD&E priorities. Through the NGN, growers, advisers and researchers collaborate to identify local production challenges and opportunities, leading to targeted, regionally relevant investments.

MORE INFORMATION

For more information on these projects or to get involved in the NGN, visit the NGN page: **https://grdc.com.au/about/our-industry/national-grower-network**

FIRST NATIONAL STOCKTAKE OF **AUSTRALIA'S FOOD SYSTEM REVEALS HIDDEN COSTS AND BIG OPPORTUNITIES**

A NEW REPORT SHINES A LIGHT ON THE COMPLEX CHALLENGES AND OPPORTUNITIES FACING AUSTRALIA'S $800 BILLION FOOD SYSTEM.

CSIRO, Australia's national science agency, has completed the first-ever national stocktake of our $800 billion food system, which feeds around 100 million people – including 27 million Australians – with food produced by 100,000 farmers.

Released today as part of the Food System Horizons initiative, the report urged a new approach to managing and reporting on our food system to make it more resilient to the challenges faced by farmers, to deliver healthy food for all, and to meet critical sustainability challenges.

The report also revealed the hidden costs of Australia's food system could be as high as $274 billion – primarily environmental and health impacts – the highest hidden costs per capita in the world.

As the first national stocktake to deepen our understanding of Australia's complex food system, the report highlights strengths and identifies practical strategies for improvement.

CSIRO Agriculture and Food Director Dr Michael Robertson said knowing and understanding the state of our food system through regular reporting is the critical first step in dealing with the complex challenges and opportunities facing Australia's food system.

"Our food system is more than just producing and exporting commodities – it's also about providing equitable access to safe, nutritious and healthy food, produced sustainably for all Australians," Dr Robertson said.

"We have an intergenerational responsibility to pursue these goals vigorously," he said.

"This national stocktake provides an evidence base to guide our actions as social, cultural, environmental, and economic priorities shift.

"While Australia's wider food system is an economic and production success, generating more than $800 billion annually and providing significant employment particularly in regional areas, the intersection of our food system with other critical goals calls for a more comprehensive way to evaluate its performance."

Australia's food system includes a range of factors from production to distribution and consumption of food and food ingredients, nutrition and health, alongside the natural and social systems that support it.

CSIRO Sustainability Research Director Larelle McMillan says food policy in Australia is currently fragmented across portfolios as diverse as agriculture, environment, industry, social services, health, transport and urban planning.

"We need to move from analysing specific parts of the food system, to establishing coordinated reporting for important food system attributes and interactions, thus enabling connected up action for a national food system that serves all," Ms McMillan said.

The report identified three key steps to guide a systems-based approach for transformation:

Recognising the food system as an integrated whole, moving beyond a fragmented, sector-based view

Navigating responsibility across government, industry, and communities to ensure shared accountability for sustainability, nutrition, and equity goals

Enabling interactions across disconnected parts of the system, from farming and nutrition to policy and innovation.

Ms McMillan said a reporting system would offer valuable insights into where the food system is falling short – for example, almost a third of Australian households experience moderate or severe food insecurity each year – and where it's failing to meet the needs of all Australians.

"This can be used as a focal point to bring together a greater diversity of voice and vision to identify pathways to sustainable, healthy and affordable food for all Australians," she said.

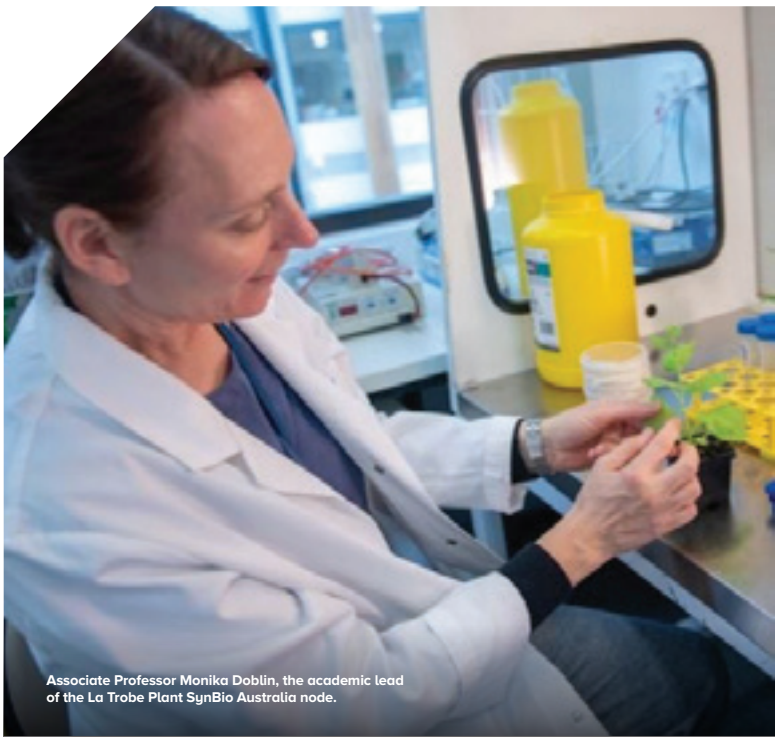
Towards a state of the food system report for Australia *has been produced by the Food System Horizons initiative, a collaboration between CSIRO and The University of Queensland.*

MORE INFORMATION

Read the report: **https://foodsystemhorizons.org/insights/reports/towards-a-state-of-the-food-system-report-for-australia/**

LA TROBE JOINS $20M AGRICULTURE INNOVATION NETWORK

LA TROBE UNIVERSITY IS ONE OF FOUR RESEARCH FACILITIES CHOSEN TO JOIN A $20 MILLION FEDERAL GOVERNMENT INITIATIVE TO INNOVATE IN AGRICULTURE.



Associate Professor Monika Doblin, the academic lead of the La Trobe Plant SynBio Australia node.

Plant SynBio Australia (PSBA) was launched in Canberra on Wednesday, 18 June, harnessing a national network of infrastructure and expertise to accelerate gains in agri-food productivity.

PSBA will focus on synthetic biology, which uses engineering principles to redesign biological organisms for a desired outcome including vaccines, novel crops, and foods and pharmaceuticals.

La Trobe's Institute of Sustainable Agriculture and Food (LISAF) is already working to enhance plant functionality, enabling food and medicinal crops to be grown with new properties to combat problems including nutritional and medicinal qualities, and climate resilience.

La Trobe Vice-Chancellor Professor Theo Farrell said the University was proud to be part of a national program driving agri-food advances.

“La Trobe University is a leader in world-class research across biotech, agtech and biomedical sciences,” Professor Farrell said.

“Our research institutes are at the forefront of discovery, translating pioneering science into commercial success.”

Other research nodes will be located at Adelaide University, Australian National University and University of Western Australia.

The PSBA network will provide plant synthetic biology services in agricultural, horticultural and medicinal species, including cereal, legumes and oilseed crops, as well as other species to bio-manufacture materials, medicines and other high-value products.

The university nodes will supply infrastructure and expertise to researchers, government and industry, as well as providing incubation space for the start-up community and opportunities to collaborate.

Associate Professor Monika Doblin, the academic lead of the La Trobe node, said LISAF researchers were committed to research with real-world impact.

“Collaboration like this is key to building resilient, efficient plant-based production systems for Australia’s future," Dr Doblin said.

The PSBA investment was provided by the Commonwealth Government via the National Collaborative Research Infrastructure Strategy (NCRIS) as part of a larger, $55 million ‘Step Change’ investment to enable synthetic biology across industrial fermentation, plant agriculture and food, medical research and biosecurity domains.

The investment is managed by Bioplatforms Australia, a non-profit organisation that supports Australian life science research by investing in state-of-the-art infrastructure and expertise in genomics, proteomics, metabolomics, synthetic biology and bioinformatics.

Andrew Gilbert, CEO of Bioplatforms Australia, said PSBA enabled a full synthetic biology approach to tackling agricultural and biomanufacturing challenges.

“The world needs transformative solutions to critical agricultural challenges – for climate resilience, environmental sustainability, food security and the development of green industries.”

MORE INFORMATION

Visit: **www.latrobe.edu.au.**

FLOATING SOLAR PANELS ON FARM DAMS TO SAVE WATER, GENERATE ELECTRICITY

AN AUSTRALIAN-FIRST RESEARCH PROJECT INSTALLING FLOATING SOLAR PANELS ON IRRIGATION DAMS COULD REVOLUTIONISE IRRIGATED AGRICULTURE BY MITIGATING EVAPORATION AND GENERATING ENERGY.

In what would help solve some of the cotton industry's biggest challenges - optimising water retention in the face of a hotter, drier climate, and reducing carbon emissions through the generation of clean energy - the groundbreaking research could save Australian cotton growers water and money, boost productivity, and set a crucial new industry environmental and sustainability standard.

It is a win-win project. Nearly half of water storage volume is lost each year to evaporation, and relocating just half of the current 16.6GW grounded solar panels to water storages could save 296GL of water a year – which equates to more than 118,000 Olympic-sized swimming pools – and generate vast quantities of energy in the process.

The research project – spearheaded by Ag Econ with support from the Cotton Research and Development Corporation (CRDC) – will test the feasibility of installing floating solar photovoltaic (FPV) panels on irrigation storages to mitigate evaporation and create energy.

The $13 million project, called the 'Novel Energy and Evaporative Storage Technologies for Irrigators' (NEESTI), secured $6 million in funding under the Federal Government's $5 billion Future Drought Fund's Resilient Landscapes program, which supports Australian farmers and regional communities to build their drought and climate resilience.

Previous CRDC-supported research has found that managing evaporative losses from on-farm storages will greatly improve cotton's water productivity. However, finding a practical solution is something the industry has been grappling with for decades. The water saved via the FVPs could be used for additional crop production, domestic needs during droughts, water trading, or water for the environment.

The project comes as agricultural supply chains face increasing pressure to lower emissions to meet national and sectorwide targets, which CRDC is prioritising through its Clever Cotton Strategic Plan and cotton's industry wide PLANET. PEOPLE. PADDOCK. Sustainability Framework.

Ag Econ Principal Climate Analyst & Economist Jon Welsh said the project addresses the critical issue of mitigating evaporation loss, improving drought resilience through improved water management and renewable energy generation that producers can actually offset or create income from, made possible through Virtual Energy Networks (VENs).

"This project investigates a practical, sensible and proven solution to store valuable water for longer, building resilience into an irrigated farming system then able to produce more food and fibre" Mr Welsh said.

"Australia faces a critical trilemma of securing water, food, and clean energy. Incorporating floating FPV on storage dams will help address all of those challenges simultaneously.

In addition to Ag Econ and CRDC, the project also involves research partners the University of Southern Queensland and Macquarie University, and will work across a number of agricultural industries outside of cotton, including grains, sugarcane, pecans, and rice.

"We know FPV projects can work but there are serious challenges and a critical research gap remains – and that is how to develop a practical and cost-effective solution ready for farm rollout.

"The project research will deliver technical, economic, policy, and legal

Ag Econ's Jon Welsh, CRDC's Allan Williams, and UniSQ's Michael Scobie

research to create a long-term and sustainable Australian FPV market for cotton and other irrigators."

While the Australian cotton industry has improved its water use efficiency by almost 50% from 1997, the most significant loss of on-farm water is the evaporation from on-farm storages.

CRDC Senior Innovation Broker Susan Maas said this research builds on the significant gains Australian cotton had already achieved.

"The Australian cotton industry has made huge gains in water use efficiency over the past 30 years, driven by research, development and extension. Today, we are one of the most water-efficient cotton producing countries in the world," Susan said.

"There are still improvements to be made, which is why we continue to invest in this crucial area of research. Mitigating evaporation losses is a huge unrealised opportunity for the industry and the environment.

"This project could be a game changer for our industry, local domestic storages and other irrigation industries by enhancing our resilience, productivity, and sustainability in a changing climate."

MORE INFORMATION

Visit: **www.crdc.com.au/**

HORT INNOVATION INVESTS IN FUTURE LEADERS TO DRIVE A THRIVING HORTICULTURE INDUSTRY

HORT INNOVATION IS PROUD TO ANNOUNCE ITS SPONSORSHIP OF THREE EMERGING LEADERS THROUGH THE 2025 AGRIFUTURES HORIZON SCHOLARSHIP PROGRAM, REINFORCING ITS LONG-TERM COMMITMENT TO CULTIVATING TALENT AND INNOVATION ACROSS AUSTRALIA'S HORTICULTURE SECTOR.

As the grower-owned research and development corporation for Australian horticulture, Hort Innovation is focused on building a resilient, sustainable and globally competitive industry. Supporting the next generation of horticulture professionals is central to this objective.

Brett Fifield, CEO of Hort Innovation, said the organisation's investment in young leaders is more than scholarships - it's about shaping the future of horticulture. "We're not just backing students - we're backing the future of our industry. These scholars represent the kind of forward-thinking, passionate individuals who will lead horticulture into its next chapter. Our support is a strategic investment in the people who will drive innovation, sustainability and prosperity for growers and communities across Australia."

The Horizon Scholarship provides students with financial support, professional development, and industry placement opportunities.

Fifield expanded, stating that for Hort Innovation, the value lies in the opportunity to connect scholars with real-world challenges and opportunities in horticulture.

> *"We want these students to experience the full breadth of our industry - from soil science and plant health to supply chains and consumer trends. By embedding them in the sector early, we're hoping to help support them with building the skills, networks and understanding the insights they need to make a lasting impact."*

THE THREE 2025 HORIZON SCHOLARS SPONSORED BY HORT INNOVATION ARE:

Chris Partridge, Bachelor of Agricultural Science, University of Adelaide: Raised on a grapevine nursery in South-West WA, Chris has worked across horticulture, broadacre cropping, and agricultural research. He aims to become an agronomist or researcher focused on improving farm productivity and sustainability.

Ella Wightman. Bachelor of Agricultural Science (Honours), University of Queensland: Ella's passion for agriculture began on her high school farm and grew through her work with the Queensland Department of Primary Industries. She is focused on soil health and pest management, with aspirations to transform raw data into actionable insights for growers.

James Haslett, Bachelor of Science (Soil Science), University of Adelaide: Growing up on a horticultural farm in the Riverland, SA, James has developed a deep interest in soil health and its impact on plant productivity. His experience spans citrus, stone fruit, viticulture, almonds, and broadacre cropping.

Hort Innovation's sponsorship of these scholars reflects its broader strategy to ensure the horticulture industry remains future-ready, innovative, and driven by capable leadership.

This project has been funded by Hort Innovation, using the vegetable and onion research and development levies, contributions from the Australian Government and co-investment from AgriFutures.

MORE INFORMATION

Visit: https://www.horticulture.com.au/

Hort CEO Brett Fifield and CQU researcher Karli Groves

CQU FIGHTS FOOD WASTE WITH NEW **CAPSICUM AND CHILLI RESEARCH**

CQUNIVERSITY RESEARCHERS ARE WORKING WITH AUSTRALIA'S MAJOR CAPSICUM AND CHILLI GROWERS TO SOLVE A PROBLEM THAT COSTS THE HORTICULTURE INDUSTRY AN ESTIMATED $53M A YEAR.

The new research project funded by Hort Innovation will improve productivity by optimising fruit quality and reducing common defects which often lead to consignment rejections, income losses for farmers, reduced consumer demand and food waste.

CQU researcher and chief investigator Karli Groves said the project will map capsicum and chilli supply chain performance, assess fruit quality using digital and traditional methods, and develop best practice recommendations for production and post-harvest handling.

"Recent surveys revealed that one in five consumers who purchased capsicum with black or rotten seeds threw the entire fruit away," Ms Groves said.

"Our goal is to empower growers with practical, actionable advice that will allow them to produce high-quality capsicums and chillis at greater volumes," Ms Groves said.

The research team will work closely with growers in on-farm trials and use digital trackers and sensors to measure a range of different variables, including temperature and humidity at multiple points along the supply chain.

Ms Groves said quality issues such as internal rot were poorly understood, and specific recommendations for minimising internal rot in open field production versus greenhouse systems did not exist.

"The data we gather from this research, combined with emerging analytics approaches, will allow us to answer those questions," she said.

> ***Hort Innovation CEO Brett Fifield said the project would deliver practical solutions that improve fruit quality, reduce waste, and drive profitability – strengthening the future of capsicum and chilli production and the broader horticulture industry.***

"This partnership with CQU is a powerful example of how targeted, science-backed research can deliver real-world benefits for growers," he said.

Bundaberg Fruit and Vegetable Growers CEO Bree Watson said the group was proud to partner with CQUniversity on the project.

"Our role is to ensure the research remains focused on delivering practical, commercially relevant outcomes for capsicum and chilli producers across Australia," Ms Watson said.

"With our deep industry connections and regional insights, we're committed to making sure grower voices are heard and that the findings lead to real improvements on-farm and along the supply chain."

The $1.68m project is expected to be completed in 2030.

HOW A STUDENT DELIVERED A REAL-TIME **SOIL MOISTURE MAP FOR TASMANIA**

AI-POWERED TOOL WILL HELP FARMERS, IRRIGATORS, GOVERNMENT AND FIRE AUTHORITIES.

The launch of an AI-powered soil moisture mapping tool created by University of Sydney researchers could transform irrigation, fuel reduction burning, and pasture management across Tasmania and beyond.

The interactive online map can accurately measure soil moisture levels across most of the state, at very high resolutions, in close to real time. The results are published in the academic journal Soil.

Lead developer Marliana Tri Widyastuti, a PhD student from Indonesia at the Sydney Institute of Agriculture, believes the new system is a world-first.

"The mapping tool uses information from satellites, weather forecasts, soil and land maps, and then applies deep learning – a type of artificial intelligence – to combine real-time data from 39 in-ground soil moisture probes with local rainfall readings. Our software effectively joins up the dots to create a clearer picture," Ms Widyastuti said.

Professor Budiman Minasny, co-researcher and a global expert in agricultural technology, said the secret of the AI-driven model is found in the complex algorithms that accurately monitor Tasmanian soil layers to a depth of 80 centimetres, in close to real time.

"The daily predictions being generated are the most high-resolution maps of soil moisture I've ever seen. The resolution works down to 80 square metres. This rich data can help Tasmania's land managers make faster, better decisions – such as timing the planting of crops, optimising irrigation flows or preparing for fires," Professor Minasny said.

The online soil moisture maps are freely available, and are already having real-world impact, following adoption by land managers at the Department of Natural Resources and Environment Tasmania (NRE Tas).

Dr Mathew Webb, a senior spatial scientist with the NRE Tas, said the tool is a good example of how AI technology can help manage environmental challenges.

"This new tool is great to have in the arsenal because it gives us more detailed information for decision making," Dr Webb said.

"It's already proving useful for trend monitoring – allowing us to monitor when local areas are moving into, and out of drought conditions. This is especially helpful for dairy regions like King Island, where changes in moisture have previously been hard to predict.

"Our fire managers are also starting to examine how it can help in planning fuel reduction burns in our national parks and forests. We're hoping the precise data from the tool can be added to the resources already being used by fire managers when assessing when a planned burn can be carried out in an area," Dr Webb said.

"This is just the beginning of the journey. We're excited to explore this awesome technology in the long-term and use it to help predict and assist with managing the impacts of droughts or heavy rainfalls across our vast landscapes."

Professor Minasny said the tool builds on more than a decade of soil science research developed at the University of Sydney, in partnership with Tasmanian agencies and national data providers.

"This is a perfect example of collaborative science delivering real-world impact – improving food security, protecting livestock and helping land managers adapt to increasingly variable rainfall," Professor Minasny said.

Marliana Widyastuti. Credit: Stefanie Zingsheim/The University of Sydney

Ms Widyastuti said she spearheaded the tool's development as part of a Masters scholarship funded by the Indonesian government. She hopes to see the new tool help rural communities in her Indonesian homeland, as well as in Australia and other nations.

"Now we have shown that the tool works in Tasmania, I hope it might one day help millions of people across the globe. From better irrigation in our food-bowls, through to the management of drinking water catchments, or the protection of rainforests, swamps and fragile ecosystems from fire," said Ms Widyastuti, who has now started her PhD research.

"I'm very pleased to be publishing our code and data as a resource for other agricultural scientists to use in their own global projects."

RESEARCH

Widyastuti, M. et al 'Mapping near-real-time soil moisture dynamics over Tasmania with transfer learning' (*Soil*, 2025). DOI: 10.5194/soil-11-287-2025

DECLARATION

The authors declare no competing interests. Funding was received from the Australian Research Council. Marliana Tri Widyastuti was funded by the Lembaga Pengelola Dana Pendidikan Scholarship. We thank Ag Logic and NRM South, which have allowed us access to their soil probe network to conduct this research.

MORE INFORMATION

Visit: www.sydney.edu.au

SCIENTISTS USE AI TO MAKE GREEN AMMONIA EVEN GREENER

TO FIND THE BEST CATALYST FOR GREEN AMMONIA, RESEARCHERS WERE STARING DOWN 8000 LAB EXPERIMENTS. WITH AI, THEY ONLY NEEDED 28.

Scientists and engineers at UNSW Sydney, who previously developed a method for making green ammonia, have now turned to artificial intelligence and machine learning to make the process even more efficient.

Ammonia, a nitrogen-rich substance found in fertiliser, is often credited with saving much of the world from famine in the 20th century. But its benefit to humankind has come at a cost, with one of the largest carbon footprints of all industrial processes. To produce it, industrial plants need temperatures of more than 400°C and extremely high pressures – more than 200 times normal atmospheric pressure. Such energy-intensive requirements have made ammonia production a major contributor to global greenhouse gas emissions, accounting for 2% worldwide.

But in 2021, a UNSW team discovered a way to make ammonia from air and water using renewable energy, at about the same temperature as a warm summer's day.

Dr Ali Jalili, with UNSW's School of Chemistry, says while the original proof-of-concept demonstrated that ammonia could be created entirely from renewable energy, at low temperatures and without emitting carbon, there was still room for improvement. For example, could it be produced more efficiently, using lower energy, less wasted energy and producing more ammonia?

To answer these questions, the team needed to find the right catalyst – a substance that speeds up the chemical reaction without being consumed by it. As they explained in the paper published today in the journal Small, the team began by coming up with a shortlist of promising catalyst candidates.

"We selected 13 metals that past research said had the qualities we wanted – for example, this metal is good at absorbing Nitrogen, this one is good at absorbing hydrogen and so on," Dr Jalili says.

"But the best catalyst would need a combination of these metals, and if you do the maths, that turns out to be more than 8000 different combinations."

ENTER ARTIFICIAL INTELLIGENCE

The researchers fed a machine learning system information about how each metal behaves and trained it to spot the best combinations. That way, instead of having to run more than 8000 experiments in the lab, they only had to run 28.

"AI drastically reduced discovery time and resources, replacing thousands of trial-and-error experiments," says Dr Jalili.

"Having a shortlist of 28 different combinations of metals meant we saved a huge amount of time in lab work compared to if we'd had to test all 8000 of them, which was simply not possible."

The winning combo was a mix of iron, bismuth, nickel, tin and zinc. While the researchers were expecting some improvement in the process of producing green ammonia, this new five-metal catalyst exceeded even their most optimistic expectations.

"We achieved a sevenfold improvement in the ammonia production rate and at the same time it was close to 100% efficient, meaning almost all of the electrical energy we needed to make the reaction happen was used to make ammonia — very little was wasted."

Known as Faradaic efficiency, high efficiency scores mean the process is more sustainable, cost-effective, and scalable, which is crucial for making green ammonia a viable alternative to fossil-fuel-based methods. Dr Jalili says his team was able to make ammonia this way at an ambient 25°C, less than 10% of the temperature required to make ammonia the conventional way via the Haber-Bosch method.

"This low-temperature, high-efficiency approach makes green ammonia production viable and scalable. We believe it can compete directly with electrified Haber–Bosch and even fossil-based routes, creating a realistic pathway for truly green ammonia."

FARMING OUT PRODUCTION

Looking ahead, Dr Jalili and his research team hope the new improvement in green ammonia production can lead to real-world impact. The goal is that one day soon, farmers will be able to produce ammonia for fertilisers onsite, at low cost and low energy, eliminating the need for delivery via transport routes – further reducing the carbon footprint of ammonia production.

In fact, localised ammonia production has already begun, although it's still in trial phase. Farmers can buy or lease ammonia modules which are compact, factory-built systems the size of a shipping container. Each module combines the AI-optimised catalyst, plasma generator and electrolyser into a single plug-and-play package.

"For a century, ammonia production was based on massive, centralised factories that cut costs by operating at enormous scales, but those projects take years to build, require billions of dollars in capital, and cannot adapt quickly as energy markets change," Dr Jalili says.

"Our approach breaks away from the era of centralised, giga-scale plants and opens the door for smaller, decentralised units that require much lower upfront investments."

HYDROGEN ENERGY STORAGE

Another benefit of low-cost, low energy ammonia production is the role it can play in the world's move towards a hydrogen economy. Liquid ammonia stores more hydrogen energy than liquid hydrogen, which means it's a better contender for renewable energy storage and transportation.

"This same system doubles as a carbon-free hydrogen carrier, creating new economic opportunities that align with the global shift to a clean hydrogen economy," Dr Jalili says.

Building on their farm-scale proof of nitrogen fertiliser production, Dr Jalili's team is now deploying their AI-discovered catalyst in distributed ammonia modules to cut costs, sharpen green ammonia's competitiveness, and accelerate its uptake in the global market.

MORE INFORMATION

Visit: www.unsw.edu.au/

FRESH FUNDING FOR AI, DRONE RESEARCH IN WEED MANAGEMENT

BY MARY BOLLING

CQUNIVERSITY TECH EXPERTS ARE SUPPORTING FARMERS TO TARGET WEEDS WITH AN AI-DRIVEN AND DRONE-DELIVERED SOLUTION – AND THE INNOVATIVE WORLD-FIRST APPROACH HAS BEEN BACKED BY FRESH FEDERAL GOVERNMENT FUNDING.

CQUniversity project leaders Dr Nahina Islam, Dr Jahan Hassan and Associate Professor Biplob Ray at the field trials for the AI-driven drones.

A new $1,136,194 grant will help take the smart approach to patent and commercialisation, after Central Queensland field trials proved successful in cotton crops earlier this year.

The CQU project offers Australian farmers a green and cost-saving game-changer in their $5 billion battle against weeds every year.

It's among 39 research initiatives awarded grants under round one of Australia's Economic Accelerator (AEA) Innovate program, announced by Australian Minister for Education Jason Clare MP last week.

The new two-year research initiative is aimed at transforming weed management practices through advanced technology.

The project is led by CQUniversity researchers Dr Nahina Islam, Dr Jahan Hassan and Associate Professor Biplob Ray, who bring deep expertise in Artificial Intelligence (AI), Internet of Things (IoT) and agricultural informatics.

Supporting the development and application of advanced robotics, drone engineering and agronomic design are Dr Md Nurun Nabi, Dr Lasi Piyathilaka, Dr Zhenglin Wang, and Associate Professor Surya Bhattarai.

The research will also benefit from cross-institutional collaboration with Professor Stephen Xu from Charles Darwin University, whose leadership in sustainable agriculture will strengthens the project's national impact.

The innovative project builds on previous work developing a world-first prototype that integrates image processing, AI, GPS and lightweight autonomous drones for precision herbicide spraying.

This collaborative effort extends beyond academia, engaging with Australian industry partners including Camzilla, Impexpo Pty Ltd, ConnectAuz Pty Ltd, Foxwell Farms, DQ Commodities, and Logical Analysis, as well as Northern Territory's Department of Agriculture and Fisheries.

Together, the team aims to advance the technology to commercialisation, helping to deliver sustainable, cost-effective solutions for the agricultural sector.

"Traditional methods to combat weed infestations, such as blanket herbicide spraying, are costly and harmful to the environment," Dr Islam said.

> ***"Our project will take our proven technology intervention, using a drone-based, AI-driven weed detection and management system, and grow our capabilities in real-world agricultural environments for green-on-green targeted weed management."***

Early industry-partnered development, led by CQU's AI, drone, IoT, mechatronics and agriculture specialists, held field trials at an Alton Downs cotton farm in February.

Minister Clare said the grants strategically targeted future-proofed solutions.

"These investments allow our world-class universities and researchers to work on game-changing projects that are good for our economy and good for Australia," he said.

Australia's Economic Accelerator brings together research and industry to create investor-ready commercial enterprises to provide jobs of the future in priority industries, and the Innovate grants support proof-of-scale commercialisation projects.

Learn more at the Innovate Grants website, and explore CQUniversity projects across agriculture and innovation at CQU's Institute for Future Farming Systems and Centre for Machine Learning – Networking and Education Technology.

MORE INFORMATION

Visit: www.cqu.edu.au

PROTECT YOUR VINES WITH **SMARTER RESISTANCE MANAGEMENT**

FUNGICIDE RESISTANCE IS AN ESCALATING CHALLENGE IN AUSTRALIAN VINEYARDS, PARTICULARLY WITH PLASMOPARA VITICOLA, THE PATHOGEN RESPONSIBLE FOR DOWNY MILDEW IN GRAPEVINES.

Recent national studies *(Ismail et al., 2025)* have mapped resistance development trends across key viticultural regions, revealing concerning patterns that demand proactive management.

KEY INSIGHTS FROM THE LATEST RESEARCH:

- Resistance and/or sensitivity shifts to multiple fungicide groups have been detected across Australian vineyards.
- Regional variation in fungicide sensitivity shifts and resistance levels highlights the need for tailored approaches.
- Data shows increasing resistance over time, especially in high-pressure zones.

WHAT THIS MEANS FOR YOU:

To maintain vine health and wine quality, it's essential to adopt a strategic resistance management plan.

RECOMMENDED ACTIONS:

- **Rotate Fungicides** – Use different fungicide groups to reduce selection pressure.
- **Know Your Fungicides** – seek advice on or learn how each fungicide works to control downy mildew i.e. preventative vs. curative. This is important for setting robust spray programs.
- **Integrate IPM** – Combine chemical control with cultural practices like canopy management and sanitation
- **Monitor Regularly** – Screen your vineyard's fungal populations for early detection of resistance development.
- **Stay Informed** – Leverage regional resistance data to guide your spray programs.

DON'T LEAVE DOWNY MILDEW TO THE LAST MINUTE

Waiting until symptoms appear can be costly. Resistance to metalaxyl—once a cornerstone of downy mildew control—is now widespread in several regions due to overuse and delayed application. Growers relying on curative sprays have contributed to reduced efficacy, leading to oil spot outbreaks and compromised fruit quality. That's why preventative action is critical.

Xivana® Prime offers a powerful solution. With a unique Group 49 mode of action (fluoxapiprolin), it provides long-lasting protection (up to 21 days), rainfast within 4 hours, and no measurable residue transfer to wine. Applied before infection, it helps prevent oil spot formation—even under high disease pressure. It's the ideal rotation partner with established modes of action and a key tool in any resistance management strategy.

REFERENCES:

The status of fungicide resistance in Australian vineyards
Reference - Ismail et al., 19th AWITC.

MORE INFORMATION

Download research here:
https://go.crop.bayer.com.au/l/708513/2025-08-10/3tjc78/708513/1754882619DC8bnwpE/Ismail_et_al_AWITC25_The_status_of_fungicide_resistance_in_Australian_.pdf

HUON AQUA BOOSTS SUSTAINABILITY WITH SMART FARMING TECH POWERED BY COMMS GROUP'S TASMANET

IN A LANDMARK COLLABORATION FOR TASMANIA'S AGRIBUSINESS AND TECHNOLOGY SECTORS, HUON AQUACULTURE (A SUBSIDIARY OF JBS FOODS) AND COMMS GROUP LIMITED'S (ASX:CCG) (WWW.COMMSGROUP.LIMITED) TASMANIAN TELCO AND CLOUD SERVICE PROVIDER – TASMANET WWW.TASMANET.COM.AU, HAVE PARTNERED TO DRIVE INNOVATION AND SUSTAINABILITY IN SALMON FARMING THROUGH THE DEPLOYMENT OF CUTTING-EDGE DIGITAL INFRASTRUCTURE AND SMART FARMING TECHNOLOGY.

As one of Australia's leading premium salmon producers, Huon Aqua has embarked on a digital transformation journey aimed at improving operational efficiency, reducing environmental impact, and enhancing animal welfare. To support this strategy, TasmaNet, a leading Tasmanian based IT&T Managed Services Provider, is delivering secure, high-performance connectivity and edge computing solutions across Huon's marine farms, hatcheries, and processing facilities.

"Our operations span some of the most remote and pristine environments in the world, and we've long believed that technology is key to farming more responsibly," said Charles Von Der Hyde, CEO of Huon Aquaculture. "With TasmaNet's advanced networking and IoT integration capabilities, we're now able to gather real-time environmental and fish welfare data, optimise feeding systems, and ultimately farm smarter and more sustainably."

The initiative includes the rollout of:

- Private Fixed Wireless and SD-WAN connectivity to offshore and rural acquaculture locations
- Edge computing nodes to support AI-driven biomass analysis and automated feeding
- Cloud-managed IoT platforms for live water quality, oxygen and temperature monitoring These capabilities enable Huon to make data-informed decisions in real time, reduce waste, and improve feed conversion efficiency – a critical metric in aquaculture sustainability.

"We're proud to help a world-class Tasmanian company like Huon Aqua set new benchmarks in sustainable food production," said Peter McGrath, CEO Comms Group Limited and Executive Director TasmaNet Pty Ltd. "This partnership shows how local technology can help solve global challenges in ethical food production, environment, and efficiency." TasmaNet was acquired by Comms Group Limited (ASX: CCG) in May 2025, expanding its ability to deliver national reach and global expertise while maintaining strong local operations and engineering capabilities in Tasmania.

Both companies emphasised their shared commitment to regional innovation and sustainability, leveraging Tasmania's unique position as a hub for premium aquaculture and advanced connectivity infrastructure.

ABOUT COMMS GROUP

About Comms Group Comms Group (ASX: CCG) is a leading provider of cloud communications and secure modern workplace IT solutions. Through its brands – TasmaNet, Comms Group Global, onPlatinum, and Next Telecom – the Company serves small and medium business, enterprise and government across Australia and globally with a range of ICT solutions. About TasmaNet TasmaNet is Tasmania's trusted technology partner, delivering fast, reliable and secure connectivity, cloud and managed services that keep businesses, government and communities connected. With on-island data centres, a private fibre network around Hobart, and a proven track record supporting councils, schools and enterprises, TasmaNet combines local expertise with national capability. We're passionate about helping Tasmanian organisations embrace innovation and unlock new opportunities through smarter technology. Visit: **https://commsgroup.limited/**

Left and right: Dr Chris Brosnan-and-Stephen Fletcher in the UQ laboratory (c)-Megan-Pope

MAXING OUT CHEMICAL-FREE CROP PROTECTION WITH dsRNAmax

A SOFTWARE PACKAGE DEVELOPED AND VALIDATED AT THE UNIVERSITY OF QUEENSLAND CAN TAILOR SAFE, EFFECTIVE AND CHEMICAL-FREE CROP PROTECTION USING RNA INTERFERENCE (RNAI).

The dsRNAmax software designs double-stranded RNA (dsRNA) to target pest and pathogen species while excluding off-target species like beneficial insects.

The program was developed by PhD candidate Stephen Fletcher and tested by Dr Chris Brosnan and his team in a collaboration with the Department of Primary Industries (DPI) nematology team.

"The idea of the software is that it designs a custom dsRNA for a target organism, and we can use it on almost anything across many projects," Mr Fletcher said.

"It will mean that you won't have off-target impacts, and you can add as many off-targets as you like to be excluded."

Dr Brosnan said dsRNA triggered RNAi is a mechanism that already exists to regulate genes in most species.

"What we can do is usurp this existing mechanism with dsRNA created by us to target any gene we choose, and use it to control pathogens and pests," Dr Brosnan said.

"In our validation study we used three species of nematode provided by the nematology team at the Department of Primary Industries, as well as an off-target nematode species.

"The software was able to design a single dsRNA which could target all three, irrespective of the number of copies of the gene we were looking at and have no impact on the off-target nematode.

"We've physically demonstrated that this software can do what we say it does, which is where this paper stands out.

"As well, our nematode work with DPI is ongoing and very promising."

Mr Fletcher said the next step for dsRNAmax was to further improve its effectiveness.

"We'll be using machine learning to improve the design to make our dsRNA five to ten per cent more effective, which would make a huge difference in a production system," he said.

"It also means we could use less dsRNA, which will bring down the cost.

"It was the collaboration with DPI that got us over the line because without the validation system we would not have been able to publish the software."

The research was published in NAR Genomics and Bioinformatics.

Expertise and biological material was provided by the DPI team of Wayne O'Neill, Dylan Corner, Jenny Cobon and Tim Shuey.

The Queensland Alliance for Agriculture and Food Innovation is a research institute at The University of Queensland established with and supported by the Department of Primary Industries.

MORE INFORMATION

Visit: **www.uq.edu.au**

NEW TECH GIVES SECOND LIFE TO PLASTIC FARM WASTE

RESEARCHERS FROM LA TROBE UNIVERSITY IN BENDIGO HAVE DEVELOPED AN INNOVATIVE RECYCLING SOLUTION FOR SYNTHETIC BALE TWINE, HELPING TO ADDRESS THE GROWING PROBLEM OF AGRICULTURAL WASTE.

In a study published in the journal Recycling,the research team analysed the thermal, physical and mechanical properties of various plastic waste materials to determine the optimal temperature to process them using a groundbreaking, cost-efficient melting machine developed by partner company Ritchie Technology (Rtec).

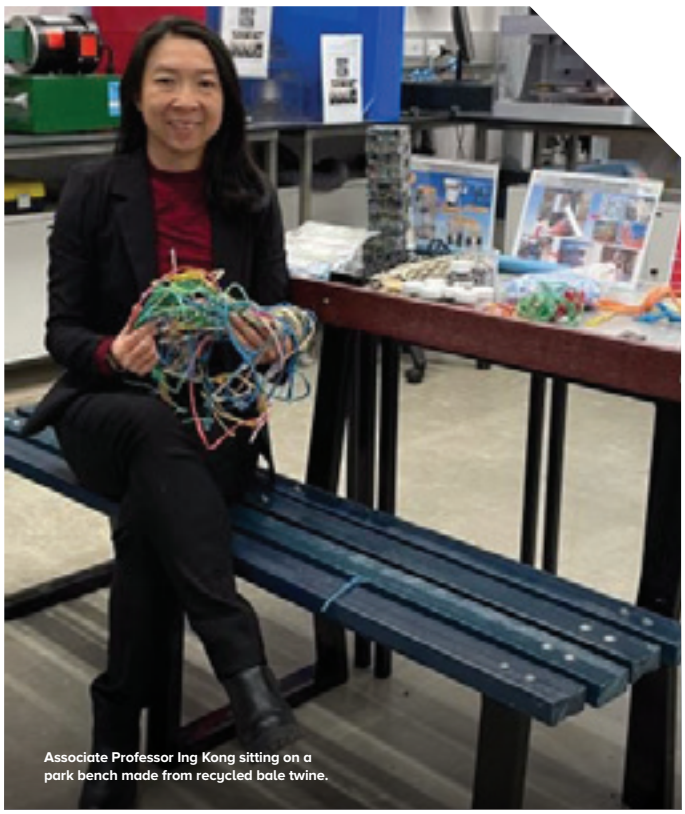
Bale twine - a strong plastic cord used to bind hay, straw and other crops - has long posed a recycling challenge due to contamination from soil, animal waste and other residues.

Until now, most twine has ended up in landfill or been burned on farms, contributing to environmental pollution.

Lead researcher Associate Professor Ing Kong said the team had developed a closed-loop recycling system to give second life to plastic farm waste.

"We successfully demonstrated that bale twine can be efficiently melted and reformed into useful, durable products such as garden planters, outdoor furniture and construction materials like decking or fence posts," Dr Kong said.

> *"Not only does this work provide an environmentally friendly solution for reducing agricultural plastic waste, but it highlights opportunities to build a sustainable circular economy in Victoria. Beyond its direct environmental impact, it could potentially influence industrial practices by providing scalable, low-cost recycling solutions."*



Associate Professor Ing Kong sitting on a park bench made from recycled bale twine.

The Rtec melting machine is compact, affordable and designed for on-farm use, offering a local recycling solution that could help cut plastic waste disposal costs for farmers.

Richie Technology founder and Chief Executive Officer Dr William Richie said the product was a "triple win" for the agricultural sector, the environment and the economy.

"This new technology offers a cost-effective economic and environmental solution to tackle mounting piles of agricultural plastic waste," Dr Richie said.

"It will give farmers the tools to reduce their ecological footprint, cut their waste disposal costs, while offering the added benefit of potentially selling recycled plastic material back to manufacturers."

Globally, the agricultural industry uses millions of kilometres of bale twine annually.

The team hopes to scale up its initiative for a broad range of applications that could be adapted for other plastic waste streams like silage wrap or irrigation tubing, which could lead to greater long-term environmental and economic benefits.

The joint project between La Trobe University and Ritchie Technology was supported by a $145,000 grant from the Victorian Government's Circular Economy Markets Fund delivered through Sustainability Victoria.

La Trobe is committed to sustainability, with Victoria's largest urban solar farm in Bundoora, north of Melbourne, and an ambitious goal to be carbon neutral by 2029.

MORE INFORMATION

Visit: **www.latrobe.edu.au.**
DOI: doi.org/10.3390/recycling9060121

KIMBERLEY COTTON GIN TO GROW FUTURE BILLION-DOLLAR INDUSTRY IN WA'S NORTH

THE ALBANESE AND COOK LABOR GOVERNMENTS HAVE OFFICIALLY OPENED THE KIMBERLEY COTTON GIN IN KUNUNURRA, WHICH IS EXPECTED TO CREATE MORE THAN 1,000 JOBS OVER THE NEXT DECADE IN A NEW BILLION-DOLLAR INDUSTRY FOR THE STATE'S NORTH.

The Albanese and Cook Labor Governments have officially opened the Kimberley Cotton Gin in Kununurra, which is expected to create more than 1,000 jobs over the next decade in a new billion-dollar industry for the State's north.

The Western Australian Government has worked closely with local stakeholders for more than a decade to establish a sustainable and profitable cotton industry, with the new Kimberley Cotton Gin set to drive economic growth and employment opportunities in the region.

The $60 million high-tech processing facility is owned by Kimberley Cotton Company, a consortium of local growers including the Ord River District Co-operative, Traditional Owners Miriuwung Gajerrong Corporation, Kimberley Agricultural Investment, Prime Grain Pty Ltd and Namoi Cotton Limited.

The Kimberley Cotton Gin has commenced operation, with an initial processing capacity of about 100,000 bales per year.

The Cook Government has invested $9 million to enable the project, including $5 million through the WA Investment Attraction Fund and $4 million to provide land and a renewable power supply for the high-tech processing facility.

The project has also been supported by a $34 million loan through the Commonwealth Government's Northern Australia Infrastructure Facility.

The 79.4-hectare gin site is serviced by a 100 per cent renewable power supply using low emission hydroelectricity, which is set to satisfy global market demand for low emissions cotton fibre.

The WA Government funded the high-voltage supply line and upgraded the network to deliver clean power from the Pac Hydro's Lake Argyle generation system.

In 2024, the WA Government unlocked 5,500 hectares at Knox Plain via a development lease to the Kimberley Agricultural Investment, which together with partners Keep Farming and other growers, will build cotton supply and scale to support the gin.

This agricultural expansion is underpinned by a $77 million State Government investment, through the Water Corporation, to upgrade the main water supply channel to supply water from Lake Argyle to the Knox development.

The State Government-backed WA Agricultural Research Collaboration will be driving research to explore the use of cotton and other irrigated crop by-products as livestock feed to add further value to the Kimberley economy.

COMMENTS ATTRIBUTED TO PREMIER ROGER COOK:

"My government is focused on diversifying Western Australia's economy with this milestone marking the launch of an exciting new industry for our State's north.

"The opening of the Kimberley Cotton Gin is a significant achievement that follows years of collaboration between industry, Traditional Owners, the local community and government.

"This is a new era for sustainable cotton production in WA, set to inject millions of dollars into our State's economy over the coming years and generate quality jobs for the people of the Kimberley region."

COMMENTS ATTRIBUTED TO FEDERAL MINISTER FOR RESOURCES AND NORTHERN AUSTRALIA MADELEINE KING:

"This state-of-the-art facility represents far more than just infrastructure - it's the foundation of an entirely new industry for the Kimberley region.

"The Kimberley Cotton Gin Project has the potential to transform the cotton industry across the Kimberley and into nearby parts of the Northern Territory by ensuring locally grown cotton can be processed and prepared directly for the market."

COMMENTS ATTRIBUTED TO REGIONAL DEVELOPMENT AND KIMBERLEY MINISTER STEPHEN DAWSON:

"I look forward to seeing how this visionary project will help generate jobs, growth and flow-on benefits in the Kimberley for generations to come.

"I am proud of the support the Cook Government has provided to the Kimberley Cotton Gin initiative over many years and our efforts to expand and diversify agriculture in WA's north."

COMMENTS ATTRIBUTED TO AGRICULTURE AND FOOD MINISTER JACKIE JARVIS:

"The development of a sustainable cotton industry for Western Australia is helping to future-proof this important region and its communities.

"I congratulate the Kimberley Cotton Company and wish them well with the continued growth and development of the Ord River cotton industry."

COMMENTS ATTRIBUTED TO KIMBERLEY MLA DIVINA D'ANNA:

"Today marks a significant achievement for a project that will leave a lasting legacy in the Kimberley region.

"The project is a testament to our government's commitment to developments in the region and the dedication of local growers and industry to building a sustainable, diversified future in the East Kimberley."

PINEAPPLES, PRAWNS AND PEANUTS: AGVET GRANT RECIPIENTS

PINEAPPLE, PRAWN AND PEANUT PRODUCERS WILL BE HELPED TO ACCESS SAFE AND EFFECTIVE AGRICULTURAL AND VETERINARY (AGVET) CHEMICALS THROUGH $2 MILLION IN GRANTS.

The grants are part of the Australian Government's $33.8 million 15-year commitment to help farmers access agvet chemicals to help feed Australia and the world.

The program has demonstrated great returns on investment, with an ABARES report showing a return of $117 for every grant dollar spent.

To date, the Improved Access to Agvet Chemicals program has awarded 250 grants totalling $19.86 million. This has resulted in 45 new permit uses and 45 new label uses for agvet chemicals.

Deputy Secretary for Agriculture, Fisheries and Forestry Policy, Matt Lowe said, funding was guided by a collaborative process between rural RDCs, commodity groups, the National Farmers Federation, and state and territory governments to compile a priority list of agvet chemical needs for Australian farmers.

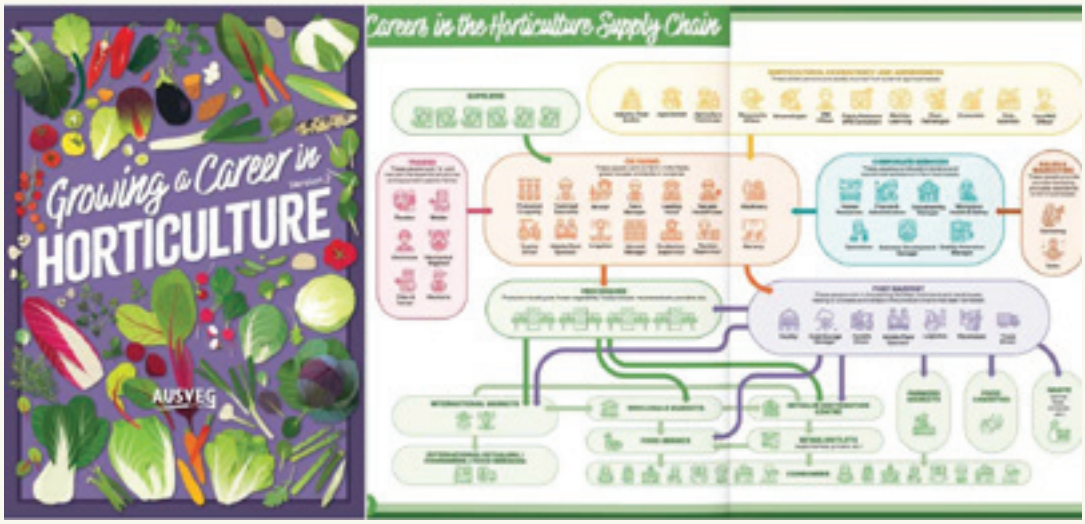
"This Round 10 approved 11 grants that address industry-identified priority uses in a range of plant and animal commodities, such as prawns, pineapples, peanuts, tea tree and poultry, for pest and diseases ranging from Blue Billygoat weed to calonectria," Mr Lowe said.

"The program improves the productivity of Australian farmers and helps smaller industries that can find it difficult to gain access to agvet chemical products."

MORE INFORMATION

For more information visit Improved access to agricultural and veterinary chemicals program: **www.agriculture.gov.au/agriculture-land/farm-food-drought/ag-vet-chemicals/improved-access-agvet-chemicals**

SPROUTING CAREERS IN HORTICULTURE



Hort Innovation, is proud to invest in the future of Australian horticulture.

That's why Hort Innovation supported the latest release of AUSVEG's Growing a Career in Horticulture initiative - Volume 2 is out now, complete with a brand new website!

This isn't just about picking fruit. The horticulture supply chain is bursting with career opportunities - from business and marketing to engineering, research, digital media, and advocacy. It's a sector that feeds the nation and offers future job security, innovation, and purpose.

Explore real career stories, watch videos, and discover how diverse and rewarding a future in horticulture can be.

This project (VG24009) has been funded by Hort Innovation, using the vegetable industry research and development levy and contributions from the Australian Government.

MORE INFORMATION

Find out more: **https://growingacareerinhort.com.au/**

CROPLIFE AUSTRALIA CALLS FOR ACTION AS APVMA PERFORMANCE NOSEDIVES

THE PEAK INDUSTRY BODY FOR THE PLANT SCIENCE SECTOR, CROPLIFE AUSTRALIA, IS CALLING FOR ACTION AFTER THE AUSTRALIAN PESTICIDES AND VETERINARY MEDICINES AUTHORITY (APVMA) REVEALED A STAGGERING DROP IN ITS PERFORMANCE.

New data for the quarter ending March 2025 shows just 54.9 per cent of application assessments for new, novel chemistry are being completed on time.

"In just three years performance in this critical category has nosedived from 98.8 per cent to a dismal 54.9 per cent," said Matthew Cossey, Chief Executive Officer of CropLife Australia. "This failure to meet even the most basic legislated performance standards and repeated delays in new product registrations is leaving Australian farmers exposed to preventable crop losses, costing the economy hundreds of millions of dollars every year."

"This kind of chronic underperformance by a commonwealth regulator is unacceptable and has gone on far too long. Despite the skill and dedication of its scientific staff, the APVMA has allowed itself to be dragged down by a culture mired in public service inertia," said Mr Cossey.

"Agriculture is a backbone of the Australian economy. At a time when the Treasurer and Finance Minister are calling for bold proposals to drive national productivity, growth and prosperity, the APVMA's inefficiency stands as a roadblock to progress. Immediate action is needed.

"The APVMA already has the tools and resources to fix this, including access to independent external scientific reviewers and fit-for-purpose digital assessment technologies. Delays in registration persist because of a cultural reluctance to embrace proactive, efficient practices. Delays of this magnitude are simply inexcusable when tools for improvement are readily available. What's required now is the leadership to return focus to providing on-time regulatory assessment required to deliver farmers with new technologies to boost farm productivity.

"The newly appointed Board members and CEO must now drive a cultural shift within the APVMA to overcome bureaucratic stagnation and enable the agency's scientific staff to deliver on both registration and compliance activities that Australian farmers and the broader community deserve.

"Sustainable long-term funding from the Australian Government is also critical to addressing the APVMA's structural funding flaws and supporting the growing demands on the Regulator to deliver public good functions such as chemical reviews, compliance and enforcement.

Mr Cossey concluded, "Without decisive action, Australian farmers will be denied access to the innovative tools they need, and consumers will ultimately bear the cost of reduced agricultural productivity and higher food prices.

ABOUT CROPLIFE AUSTRALIA

CropLife Australia is the national peak industry organisation representing the plant science sector in Australia. CropLife's members are the world-leading innovators, developers, manufacturers and formulators of crop protection and crop biotechnology products. The plant science industry, worth more than $31.6 billion a year to Australian agricultural production, provides products to protect crops against pests, weeds and diseases, as well as developing crop biotechnologies key to the nation's agricultural productivity, profitability and sustainability. CropLife is a part of the plant science industry's 91 country international federation.

REPORT OFFERS INSIGHTS INTO CROP LOSS AND WASTE ON AUSTRALIAN HORTICULTURAL FARMS

THE AVERAGE PERCENTAGE OF CROP LOSS OR WASTE PER AUSTRALIAN HORTICULTURAL FARM DROPPED IN 2023-24 AND VARIED SIGNIFICANTLY DEPENDING ON CROP TYPE, NEW DATA COLLECTED BY ABARES.

The average percentage of crop loss or waste per Australian horticultural farm dropped in 2023-24 and varied significantly depending on crop type, new data collected by ABARES reveals.

The report, Crop loss/waste on Australian horticulture farms 2023-24, shows the average percentage of crop loss or waste was 20 per cent in this period, down from 25 per cent in 2022-23 when production was impacted by heavy rainfall and flooding.

Crop loss or waste was highest for mangoes, at 37 per cent, and lowest for pineapples, at 8 per cent.

The report was commissioned by the Department of Climate Change, Energy, the Environment and Water to fill specific data gaps on food loss and waste in primary production in the horticulture industry.

ABARES Executive Director Dr Jared Greenville said weather events posed the biggest threat to producers, causing horticultural crop loss and waste on 63 per cent of farms.

"Agricultural production is inherently risky, and external events outside the control of farm managers are a constant challenge within Australian agriculture," he said.

Only 4 per cent of farms cited labour shortages as the cause of crop loss or waste, a drop from 7 per cent in 2022-23 and from 16 per cent in 2021-22.

The proportion recovered for alternative uses was 16 per cent, up from 10 per cent in 2022-23, led by almonds, macadamias and other nuts. Of the remainder in 2023-24, much occurred pre-harvest, accounting for 58 per cent of total loss per farm, with 26 per cent lost during or after harvest.

Crop loss or waste was left on the ground by nearly half of farms (45 per cent), ploughed into the ground (24 per cent), and used for compost (16 per cent) or animal feed (11 per cent).

FREIGHT PLAN KEY TO AG SECTOR'S SUCCESS

THE VICTORIAN FARMERS FEDERATION (VFF) HAS WELCOMED THE RELEASE OF THE VICTORIAN GOVERNMENT'S VICTORIAN FREIGHT PLAN 2025-30 , DESCRIBING IT AS A POSITIVE STEP TOWARD STRENGTHENING THE FREIGHT NETWORK AND DELIVERING IMPROVED OUTCOMES FOR VICTORIAN AGRICULTURE.

VFF President Brett Hosking said the VFF appreciated the opportunity to contribute to the development of the strategy through its participation in the Industry Stakeholder Reference Group and the plan was key to enhancing our freight network.

"As farmers, our viability depends on keeping freight costs under control and getting product to customers efficiently. This plan is all about making sure we can do that in a future where demands on the freight system are radically increasing."

"Ensuring we have a fit-for-purpose freight network that delivers increased efficiency, productivity and safety is a non-negotiable and this plan must strive to deliver exactly that."

"VFF has been around the table to shape this plan with input from our members, and we can see that input reflected in the result," Mr Hosking said.

The plan outlines 58 initiatives under four key objectives, with a strong focus on both road and rail infrastructure, port access and performance tracking.

The VFF welcomes measures to improve Victoria's rail freight system and strongly supports the development of a dedicated rail freight strategy. Road transport also remains a vital piece of the puzzle, and the commitment to plan for future investment in Victoria's Principal Road Freight Network is a step in the right direction.

"We're particularly pleased to see initiatives aimed at improving access to and the competitiveness of the Port of Melbourne, which is essential for the export and import of agricultural products and inputs vital to farming operations."

"Victorian produce has never been in so demand in the global market and investment in our critical freight infrastructure will help ensure we retain our mantle as Australia's most valuable agriculture exporting state," Mr Hosking said.

Importantly, the publication of key performance indicators to track the Plan's success provides greater transparency and accountability. However, the VFF notes that adequate funding is essential to deliver these ambitions, and current commitments only cover a limited number of initiatives.

The VFF looks forward to ongoing engagement with the Government to ensure the needs of Victorian farmers remain central to the Plan's implementation.

Left and right: 2025 cotton industry award recipients

BAYER COTTON GROWER OF THE YEAR CREDITS FAMILY AND TEAMWORK FOR SUCCESS

THE 2025 BAYER COTTON GROWERS OF THE YEAR, MERRILONG AGRICULTURAL COMPANY, REPRESENTED AT THE AWARDS LAST NIGHT BY BROTHERS HUGH AND JOCK BROWNHILL, HAVE CREDITED THE KNOWLEDGE OF THEIR PARENTS AND GRANDPARENTS, AND THE IMPORTANCE OF TEAMWORK FOR THEIR AWARD RECOGNITION.

The 2025 cotton industry awards were announced at the Awards Dinner during the Cotton Collective, held in Toowoomba.

As fourth generation farmers, Hugh and Jock Brownhill are part of a farming legacy that began when their grandparents moved into the NSW Liverpool Plains area to begin a farming enterprise in 1959. Today, Hugh and his brother Jock, along with cousins Oscar and Archie Brownhill are Directors of Merrilong with 1,200 hectares of dryland cotton and 320 hectares under irrigation.

Hugh said his father and uncle taught him everything he knows about cotton and that focus on family and teamwork drive their ongoing success. “We have a strong team, and they are the heartbeat of our organisation. Our work colleagues are like family to us, and we communicate with them regularly to make sure we are on the same page, so that we achieve our shared goals.”

Hugh said the region is well-suited to growing dryland cotton. “The climate in this region is suited to majority dryland cotton because we have reliable rainfall and good soils. If we keep preserving our soil and looking after what we have with management tools, crop choice and rotation, we expect to have better yields every year, with less inputs.”

The family employs an external advisory board to help make farming and business decisions which they describe as a game-changer, allowing them to focus on what's happening on farm. Hugh said they are not motivated by awards but view their nomination as a privilege in an industry that promotes its product to the rest of the world.

The recipients of the AgriRisk High Achiever Award are Tyson and Rosie Armitage from Cecil Plains on the Darling Downs, who manage the day-to-day operations of the Wamara Farming Trust, in close collaboration with parents Stuart and Maxine Armitage.

Tyson, who has grown up surrounded by cotton, is proud of the improvements they have made over the years particularly with their Insect Pest Management (IPM) efforts which have resulted in spraying for pests in cotton only once in 3 years. "We have also worked hard on water use efficiency and we have saved up to one megalitre per hectare by planting later in the season with yields just as good, if not better."

The Armitage's praise their long-time agronomists Matthew Holding and Liz Lobsey who have maintained a data bank of information detailing 20 years of nutrient inputs and crop removal rates. "In doing so we aim to apply only what the crops need, avoiding overapplication. While soil tests are used, leaf tests are preferred for reliable in-season tracking and any adjustments with in-crop needs are addressed with nutrient applications as required."

The recipient of the CRDC Chris Lehmann Young Cotton Achiever of the Year Award is Grace Griffiths, a cotton grower, agronomist and Geographical Information System (GIS) specialist with Digital Ag Technologies in Goondiwindi.

Grace began her cotton journey at 16 by leading her family farm's myBMP certification and later founded 101 Ag Pathways to promote careers in agriculture. Grace is a community leader, CGA events president, and was named Goondiwindi's Young Citizen of the Year in 2024. Grace has a particular interest in simplifying carbon discussions for growers, the topic she focused on in her Future Cotton Leaders project.

The recipient of the Cotton Seed Distributors Researcher of the Year Award is Dr Murray Sharman, Principal Plant Pathologist (Virology) at Department of Agriculture and Fisheries (Queensland). Dr Sharman oversees national virology diagnostics and research and plays a crucial role in biosecurity preparedness for viruses that may affect the cotton industry.

Cotton Australia CEO Adam Kay congratulated all award recipients, and every nominee, as extremely deserving given their high level of commitment to the industry.

> ***"We are seeing due recognition in these awards of the next generation of cotton growers. Both our Bayer Grower of the Year and AgriRisk High Achiever have incredible knowledge passed down from their parents, who are well-respected and awarded growers who still play a role on their farms. By doing so they continue to provide the benefits of decades of growing cotton, and the collaboration and learning that goes with it."***

The prestigious Incitec Pivot Fertilisers Service to the Cotton Industry Award was also announced at the dinner. This year that honour went to Andrew Watson, the 2008 Cotton Grower of the Year. Mr Kay said Andrew is highly regarded by all in the Australian cotton industry for his tireless efforts at improving the reputation of cotton in this country.

"He has been a leader in IPM strategies and biodiversity efforts, following in his parents' footsteps in their regeneration of native grasses and trees on his property including a stretch along the Namoi River. Andrew has also been at the forefront of water-use efficiency strategies which have been adopted over the years by many fellow growers. He thoroughly deserves this Award, and I know everyone who knows anything about cotton will join me in congratulating Andrew and his family."

AUSTRALIAN ORGANICS RECYCLING INDUSTRY REPORT

THE AUSTRALIAN ORGANICS RECYCLING ASSOCIATION (AORA) HAS RECENTLY RELEASED ITS LATEST REPORT CARD ON THE PERFORMANCE OF THE AUSTRALIAN ORGANICS RECYCLING INDUSTRY (AORI).

The Economic Contribution of the Australian Organics Recycling Industry 2023-24 update, produced by Nick Behrens from the Australian Economic Advocacy Solutions and commissioned by AORA, is the third edition of the report.

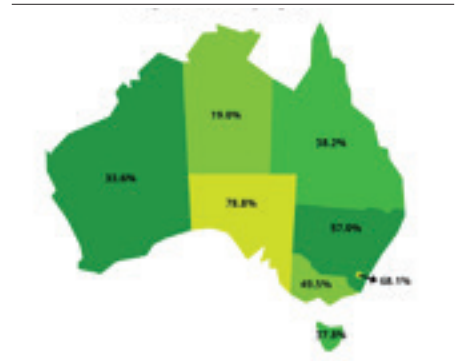
AORI in 2023-24 is estimated to have recycled 7,676 kilotons of organic material - a 2.1 per cent increase on the previous financial year. Across the decade AORI's recycled material has grown by 0.9 per cent each year and compares to Australia's average population growth rate over the same period of 1.5 per cent.

In 2023-24 Australia is estimated to have produced 14.9 million tonnes of organic waste of which:

- 5.7 million tonnes was sent to landfill,
- 7.7 million was recycled and
- 1.6 million tonnes recovered through energy.

The report illustrates Australia's overall organic material recycling rate in 2023-24 was 51.4%. This compares to 52.3% in 2021-22 The reduction in recycling rate for 2023-24 reflects a higher number of tonnes recycled but a comparatively higher amount of organic material generated. South Australia currently has the highest organics material recycling rate at 78.8%, followed by the ACT (68.1%), NSW (57.0%), Victoria 49.5%, Queensland (38.2%) Tasmania (37.8%) and Western Australia (33.6%). The Northern Territory had the lowest organics recycling rate at 19.0 per cent in 2023-24.

ORGANICS MATERIAL RECYCLING RATE



On a per head of population basis, Australia recycles on average 282 kilograms per person of organics material. Garden organics representing the largest percentage of recycled materials in each of the Australian states and territories.

The report confirms that AORI is maintaining its role as a significant economic contributor –employing over 5,000 people, with a collective industry turnover of $2.6b and contributing $843 million in industry value add to the Australian economy.

In addition to the impressive economic metrics, AORI is also a significant environmental contributor. The total estimated greenhouse gas savings from recycling of organics materials received in Australia in 2023-24 is approximately 3.9 million tonnes of CO2-e. These GHG savings are considered approximately equivalent to:

- 5.8 million trees that would have to be planted to absorb the same amount of CO2.
- The greenhouse gas emissions that 895,329 cars would produce in a year.

"The Australian Organics Recycling Industry continues to perform strongly," John McKew, National Executive

Officer for AORA states. "This can clearly be seen from the economic contributions of the industry from this latest report. Adding to this the environmental contributions, and we have an industry that is of significance importance to all Australians. With a continuing focus on organics recycling by all governments, including the FOGO (Food Organics, Garden Organics) mandates, we expect the industry to continue to grow."

"That is not to say there are not challenges to contend with – this latest report indicates that whilst we are recycling more organics as an industry, Australia is not on track to meet most federal and state government based organic waste recycling targets nor keeping pace with the generation of organic material. This generation is being driven by factors including population growth, economic growth, technological change, access to recycling markets, local government collection changes, and Federal and State government waste and carbon reduction policies. This cannot be ignored, otherwise more organics will inevitably end up in landfill and that is not a good outcome across the board."

"Tangible progress on increased harmonisation of regulations and policy across states would be beneficial to improving the rates of organics processing" states John. "The industry is keen and ready for growth, but in order to do so, the Government needs to hasten the planning and approval processes for new or expanding organics processing facilities. It is imperative that Australian Organics Recycling Industry continues to grow to meet the ever-increasing volumes of organics that need to be recycled, but we need governments to work collaboratively with the industry to resolve the barriers to achieving this."

MORE INFORMATION

The full Economic Contribution of the Australian Organics Recycling Association can be downloaded here: **https://aora.org.au/resources/**

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