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THE AUSTRALIAN AGRONOMIST MAGAZINE

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THE AUSTRALIAN AGRONOMIST

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NEW $1.3 MILLION PROJECT TO DEVELOP THE AUSTRALIAN JACKFRUIT INDUSTRY

KEY POINTS

- **The Australian jackfruit industry is worth around $2 million dollars annually and is currently a niche market despite being widely grown throughout Asia, however domestic demand is seeing the industry expand.**
- **AgriFutures Australia is investing $1 million in the new project developing ready to market jackfruit products for Australian market growth which will provide the opportunity for the Australian jackfruit industry to grow through the development of commercially viable, value added (processed) products.**
- **The Northern Territory Department of Industry, Tourism and Trade (NT DITT) and the University of Melbourne have received funding from AgriFutures Australia to carry out the project.**

The Australian jackfruit industry is worth around $2 million dollars annually and is currently a niche market despite being widely grown throughout Asia, however domestic demand is seeing the industry expand.

AgriFutures Australia is investing nearly $1 million into the new project Developing ready to market jackfruit products for Australian market growth which will provide the opportunity for the Australian jackfruit industry to grow through the development of commercially viable processed products.

The Australian Emerging Topical Fruits Strategic RD&E Plan identified jackfruit as a priority for investment and to receive research and development support. The plan is the result of extensive desktop research and stakeholder consultation across the Australian tropical fruit industry and pulls together specific recommendations for future investment to support the long-term growth and competitive advantage of the Australian tropical fruit industry.

AgriFutures Emerging Industries Senior Manager, Dr Olivia Reynolds is excited by the investment into the tropical fruit.

“Jackfruit is a fruit which is realising expansion of plantings in Australia as a result of strong market demand signals for fresh and value-added products that can be differentiated from imports through superior genetics, quality and safety standards,” said Dr Reynolds.

The project will work with growers, processors and retailers to try to build the supply chain from the ground up. It will focus on the development of three processed jackfruit products, building a processed jackfruit market which will enable Australian growers to increase their plantings or divert excess fruit when the fresh frui market becomes overwhelmed.

The Northern Territory Government’s Department of Industry, Tourism and Trade (DITT) has received funding from AgriFutures Australia to lead the project, with the University of Melbourne alsc involved.

DITT Project Lead, Chelsea Moore said Jackfruit has so many potential uses beyond fresh fruit.

“The arils can be cooked when they are green for a savoury flavour, the seeds can be roasted like nuts, and other parts can be processed into highly nutritious products,” said Moore.

With so many potential products it is important that the fruit specifications are specific to the product. The University of Melbourne will be looking at phytochemical characterization, nutritional composition, sensory, storage stability and packaging requirements. NT DITT will be assessing the harvest windows to meet the product specifications.

The University of Melbourne researcher Dr. Hafiz Suleria believes that the future is bright for the jackfruit industry.

“The jackfruit products will be profiled for nutritional status, taste and consumer acceptance. Packaging will be developed considering shelf life, environmental sustainability and commercial viability.”

“There is still some work to be done refining the products and working out exactly when to harvest the fruit for the different products,” said Dr Suleria.

This project aims to help Australian growers and processors achieve their vision of making Australian-grown, value-added products a reality. Find out more about the AgriFutures Australia Emerging Industries program. at **https://agrifutures.com.au/our-industries/#emerging-industries**

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POWERFUL TANK MIX PARTNER IMPROVING BROADLEAF WEED CONTROL

HERBICIDE TANK MIX PARTNERS DESIGNED TO BOOST CONTROL OF TREATMENTS AGAINST WEEDS ARE BECOMING A STRONGER OPTION FOR MANY GROWERS TO HELP MANAGE DIFFICULT POPULATIONS.

One of the more powerful tank mix partners emerging in recent seasons, providing significantly improved broadleaf weed control from a range of herbicides in cereal crops, is the Group 2 post-emergent herbicide, Priority®, from ADAMA Australia.

Priority is a flexible and cost-effective tank mix partner that is helping to broaden the control of broadleaf weeds, as well as volunteer pulses and canola, and it is being praised by growers, particularly on hard-to-control weeds.

ADAMA Australia Portfolio Manager – Herbicides, Rob Walker, said Priority was an ideal choice in tank mixtures to improve the weed spectrum, targeting up to 54 broadleaf weeds depending on the tank-mix partner utilised, and to control volunteer, non-imidazoline tolerant varieties of canola and pulses. Importantly, it also offered excellent crop safety and allayed residue concerns in oaten hay and following crops and pastures.

Priority contains florasulam, an acetolactate synthase (ALS) inhibitor, in a suspension concentrate formulation and once absorbed via weed foliage, it is translocated to the growing points via the xylem and phloem."An important benefit of florasulam is that it does not bind to stubble or plant material and has a relatively short half-life in the soil. Reduced soil residual enables greater flexibility for rotation crop options compared with other Group 2 herbicides such as metsulfuron or clopyralid (Group 4)," Rob said.

"The wide range of tank mix partners Priority could be used with provided plenty of flexibility for growers, allowing them to adjust herbicide mixes according to crop type, weed spectrum and seasonal conditions."

ADAMA Australia Market Development Manager Bevan Addison

Priority is effective against susceptible weeds from the two to eight-leaf stage, depending on the weed species and/or weed size. It can be applied with registered tank mix partners including LVE MCPA 570, Triathlon®, Picoflex®, MCPA 750, Quadrant®, Zulu® XT, 2,4-D Amine, 2,4-D Ester, Flagship® 400 and Bronco® MA-X between the three and flag leaf crop stages (GS13-37).

Alistair Crawford, Market Development Manager with ADAMA Australia in Victoria, said in recent seasons, tank mixtures with Priority had proved the solution for broadleaf weed control in various cereal crops, especially with the wet conditions delaying applications. "Growers couldn't get on their paddocks and weeds got bigger, but Priority then did really well with herbicides like 2,4-D, MCPA and Triathlon applied from mid-tillering through to growth stage 31," Alistair said.

"It is really broad spectrum, so there is a mix that can control most broadleaf weeds. It is a cost-effective tank-mix or spike compared with alternatives, which, when you add other modes of action and oil, can be quite expensive."

He said Priority also could be applied early, from three-leaf to early tillering, with various herbicide modes of action. The excellent crop safety and favourable pre-harvest interval and plant-back profile with Priority makes it ideal for use in oats in Victoria, as well as cereal crops in the Mallee to control volunteer pulses and wild radish.

"Plantback issues can happen going into canola or a legume that often follow cereals, so this is important," Alistair said.

In Western Australia, ADAMA Australia Market Development Manager Bevan Addison said Priority had been used across large areas in recent seasons and was extremely effective.

"It has been added to a lot of herbicide brews in the typical mid-season broadleaf application timing to pick up volunteer grain legumes including faba beans and vetch, and it is also used later as a radish mop-up," Bevan said. "A lot of growers couldn't get on to paddocks earlier, so they did later mop-ups and Priority has had huge success in this late period, taking out flowering radish. Some advisers said it worked ridiculously well."

He said Priority was in a sub-group of the Group 2 herbicides that had not been heavily exposed in the field and, hence, he urged responsible application of the herbicide to help safeguard its future use for growers.

"One of the main benefits of florasulam is its low residual, allowing minimal issues for any following crops that may be sensitive to longer residual Group 2 herbicides or clopyralid, for example. It will have a great fit where growers are wanting to remove clopyralid and SU's (sulfonylureas) from their programs due to residual carryover into their grain legumes and legume pastures. Clopyralid and SU's can really give them a headache."

Bevan said the wide range of tank mix partners Priority could be used with provided plenty of flexibility for growers, allowing them to adjust herbicide mixes according to crop type, weed spectrum and seasonal conditions.

Priority herbicide is registered for post-emergent application in cereals including wheat, barley, triticale and oats, established ryegrass pastures and fallow

NEW 'TRIPLE TRAIT' CANOLA GIVES AUSTRALIAN GROWERS EXTRA FLEXIBILITY AND STRONG YIELDS

True flexibility has arrived with the addition of BASF's best canola variety yet, InVigor LR 4540P, providing growers with their first opportunity to sow a 'triple trait' TruFlex variety.

InVigor LR 4540P joins InVigor LT 4530P (launched in 2021) as the only varieties bred with three different trait technologies. Both varieties contain the LibertyLink and PodGuard traits - which are exclusive to InVigor hybrids - however the new InVigor LR 4540P also contains the TruFlex trait, making it an appealing variety to wide range of growers.

"We're very excited to be able to offer growers Australia's first triple trait TruFlex variety," said Gavin Heard, Head of BASF Seeds and Traits, Australia and New Zealand.

Last year's National Variety Trials (NVT) results, placed InVigor LR 4540P amongst the top of the TruFlex varieties, emerging as one of the strongest performers in the low to medium rainfall environments with plenty of upside, as well as being number

one for harvest flexibility and a standout for weed control. InVigor LR 4540P is also an excellent performer in medium to high rainfall areas.

InVigor LR 4540P includes BASF's unique PodGuard trait, providing a much higher level of shatter-tolerance than traditional breeding programs can achieve. The superior PodGuard protection and compact plant height allows growers greater harvest timing flexibility and reduces harvest yield loss.

"Growers now have the opportunity to introduce Liberty Herbicide on top of their TruFlex spray program. InVigor LR 4540P provides a valuable opportunity to introduce a new mode of action, not previously used in broadacre cropping, into their canola program. This will give more flexibility than any other variety on the market and further improve control of certain weeds. In particular, those which have developed resistance to other herbicides, such as annual ryegrass," Heard said.

> **"We're very excited to be able to offer growers Australia's first triple trait TruFlex variety,"**
>
> ***Gavin Heard, Head of BASF Seeds and Traits, Australia and New Zealand."***

InVigor LR 4540P is scheduled for commercial release in time for the 2024 cropping season. If trial results are an indication, this would suggest it will be in high demand as it offers growers excellent yield potential and greater flexibility throughout the season. The TruFlex and LibertyLink traits are produced by genetic modification, so InVigor LR 4540P canola will be classified as GM and subject to the same management requirements as other LibertyLink and TruFlex crops.

For more information, please visit crop-solutions.basf.com.au/

- **BASF's latest breakthrough triple trait variety InVigor® LR 4540P contains TruFlex®, PodGuard® and LibertyLink®**
- **National Variety Trial (NVT) results place InVigor LR 4540P at the top of TruFlex varieties for outstanding yield potential**
- **InVigor LR 4540P sets a new standard for weed control and harvest flexibility**

ASK AN EXPERT...

‘HOW CAN I BEST TACKLE STERILE OAT IN NORTHERN REGION WHEAT CROPS?’

Gulshan Mahajan, Adjunct Associate Professor, Queensland Alliance for Agriculture and Food Innovation
Source: Weed Smart

Sterile oat (Avena ludoviciana) is the northern region’s most competitive grass weed in cereal crops, costing growers more than 20 thousand tonnes in yield loss and a revenue loss of $4.5 million.

Now with resistance to Group 1 [A], 2 [B], 9 [M] and 0 [Z] herbicide modes of action, this competitive Avena spp weed is becoming even more problematic.

> **“Widespread and increasing herbicide resistance means it is important to use effective herbicides and support them with strong crop competition.”**
>
> *Gulshan Mahajan, Adjunct Associate Professor, Queensland Alliance for Agriculture and Food Innovation*

Dr Gulshan Mahajan, Adjunct Associate Professor at Queensland Alliance for Agriculture and Food Innovation, says an integrated approach to controlling this weed will save yield and drive down the weed seed bank.

“Extensive weed ecology research has provided much of the information we need to target sterile oats in winter cereals,” he says. “Widespread and increasing herbicide resistance means it is important to use effective herbicides and support them with strong crop competition.”

“We know that controlling the seed bank is very important for sterile oat,” says Gulshan. “Our weed ecology studies at the Gatton research farm of the University of Queensland have shown that it is possible to regain control of herbicide-resistant populations in just two years if we take an integrated approach to suppress seed set and prevent seed bank recruitment.”

Gulshan says that in paddocks with moderate to low numbers of sterile oat, the best strategy is to plant wheat early at a high seeding rate and apply an effective pre-emergent herbicide package, such as pyroxasulfone and triallate, to maximise early weed control and crop competition.

Managing herbicide-resistant grass weeds will feature at the next WeedSmart Week event, scheduled for 1–3 August in Dubbo, NSW. Register now for this event and consider applying for a GRDC Study Tour grant to attend.

What effect does wheat planting time have on sterile oat control?

In brief: Early planted crops (7 May) produce higher wheat yield and can suppress weed growth and seed production when protected with effective pre-emergent herbicides, compared to later planted crops (7 June).

Management strategies that control all emerged sterile oat seedlings over two years and prevent seeds from returning to the seed bank can completely control this competitive weed, even in herbicide-resistant populations.

The details: In the two-year (2020 and 2021) field trial at Gatton, late-planted wheat (planted 7 June) reduced weed numbers by over 70 per cent in 2020 but made no difference in 2021. Also applying pre-emergent herbicides (pyroxasulfone and triallate) reduced weed density at both planting dates (7 May and 7 June) compared to the early-planted non-treated control plots.

In the early-planted non-treated control plots, weed infestation was 31 plants/m2 in 2020 and 29 plants/m2 in 2021. Other studies at Gatton demonstrated that 16 sterile oat plants/m2 will halve crop yield due to reduced wheat spikes. Since early-planted crops are likely to face high weed pressure, increase early crop vigour using high seeding rate and apply effective pre-emergent herbicide to protect crop yield and suppress weed germination.

2021 was a more favourable season than 2020 and resulted in high weed pressure at both planting times. Peak emergence of sterile oat is expected in July if soil moisture is close to field capacity. High rainfall at this time of year is also likely to leach residual herbicides and reduce herbicide efficacy.

How does wheat seeding rate affect sterile oat growth and wheat yield?

In brief: Averaged across all treatments, the higher wheat seeding rate markedly reduced weed seed production at both planting times compared to the recommended seeding rate while preserving yield.

The details: Wheat seeding rate of 200 seeds/m2 kept sterile oat seed production below 1000 seeds per m2 at both planting times. The reduction in seed production was 68% and 48% for the two planting dates (7 May and 7 June) compared to the recommended seeding rate of 100 wheat seeds/m2.

Where sterile oat is well-controlled, wheat grain yield is highest when the crop is sown early (7 May) at the recommended seeding rate of 100 seeds/m2. Pyroxasulfone- and triallate-treated plots, planted on 7 May using the seeding rate of 100 seed/m2, increased yield by 129% and 104%, respectively, compared with the non-treated control. This demonstrates the impact of sterile oat competition on wheat yield.

Increased crop seeding rate protects crop yield and reduces weed seed production, driving down the weed seed bank.

Pyroxasulfone- and triallate-treated plots, planted on 7 May using the seeding rate of 200 seeds/m2, still resulted in yield improvement of 38% and 32%, respectively, compared with the non-treated control, in addition to suppressing weed seed production.

In late sown crops (7 June) seeding rate made no difference to crop yield due to the reduced weed pressure at this time of year.

What should I do if there is a blow-out in sterile oats and the weed seed bank is very high?

In brief: Sow the wheat crop late at a higher seeding rate and implement other herbicide and non-herbicide control tactics.

The details: Early cohorts of sterile oat are known to be more competitive in wheat than late cohorts. Where there is a known high weed seed bank, a later sowing date may have some advantages. The seed production potential of late cohorts (July emergence) is 84 per cent less than that of early cohorts. Adding pre-emergent herbicides such as pyroxasulfone and triallate further reduces weed seed production.

Where early cohorts of sterile oat have germinated, apply effective knock-down herbicides or cultivate prior to planting.

Harvest weed seed control (HWSC) is an effective tactic against sterile oat, which retains 64 to 80 per cent of the seed in the seed head at wheat harvest. This is in contrast to wild oat (A. fatua), which is more common in the southern and western grains regions, and tends to shed its seed very early in the harvest period.

Management strategies that control all emerged sterile oat seedlings over two years and prevent seeds from returning to the seed bank can completely control this competitive weed, even in herbicide-resistant populations.

WEED smart

Dr Gulshan Mahajan, Adjunct Associate Professor at Queensland Alliance for Agriculture and Food Innovation, says an integrated approach to controlling sterile oat will save yield and drive down the weed seed bank.

HOW TO ASK A WEEDSMART QUESTION

Ask your questions about increasing crop competition on Twitter @WeedSmartAU or Facebook WeedSmartAU

'WeedSmart' is the industry voice delivering science-backed weed control solutions to enhance on-farm practices and promote the long term, sustainable use of herbicides in Australian agriculture.

WeedSmart has support from the Grains Research and Development Corporation (GRDC), major herbicide, machinery and seed companies, and university and government research partners, all of whom have a stake in sustainable farming systems.

The GRDC is a Platinum investor in WeedSmart to ensure Australian grain growers have access to world class research in strategies to mitigate weeds and control herbicide resistance

NATIONAL PARTNERSHIP TO HARNESS ANALYTICS FOR GRAINS RD&E

Australian growers will benefit from a renewed focus on grains research, development and extension (RD&E) data and insights with the announcement of a five-year strategic partnership aimed at harnessing analytics to drive the sector's profitability and global competitiveness.

Analytics for the Australian Grains Industry (AAGI) is a co-investment from the Grains Research and Development Corporation (GRDC) with strategic partners Curtin University, The University of Queensland (UQ) and University of Adelaide.

GRDC managing director Nigel Hart says AAGI would work to unleash the potential of statistics, machine learning, data fusion and analytics for Australian grain growers, aiming for the "unconstrained adoption of analytics-driven decision-making". "Our RD&E projects require a rigorous, data-driven approach, so statistical and analytical capabilities are critical for converting raw data into meaningful knowledge for grain growers and the broader grains industry," Mr Hart says.

"This strategic partnership in data science aligns with Curtin's goal to provide leadership and capability for a profitable and sustainable agriculture industry, and I look forward to seeing Australian grain producers thrive as a result."

"As such GRDC is committing $36 million over five years to AAGI, which complements a $56 million co-investment from the initiative's three strategic partners at Curtin University, The University of Queensland and the University of Adelaide.

"This investment will support Australian grain growers to be world leaders in analytics-driven decision making, which will drive efficiency and precision and support farm enterprise risk management."

Over a decade ago, GRDC identified the value of investment in statistics for the Australian grains industry and AAGI will be a significant step change in that approach.

This new research will build on the foundational work done under the GRDC's $23.8 million Statistics for the Australian Grains Industry 3 (SAGI3) investment, which delivered vital information for the grains sector between 2016 and 2023. During this period SAGI3 provided statistical expertise to more than 210 GRDC investments totalling more than $490 million.

As a result of these investments, growers now benefit from better germplasm selections in pre-breeding programs, clearer research-driven agronomic recommendations, and tools that use data to support on-farm decision-making.

Curtin University Vice-Chancellor Professor Harlene Hayne says Curtin is proud to be involved in this new globally significant partnership that will directly address challenges and opportunities associated with a data driven future for agriculture.

"AAGI will involve researchers from our Centre for Crop and Disease Management, as well as other Curtin research groups who are already well known for their expertise in industry engagement, biometry, sampling and experimental design, bioinformatics, spatial modelling and machine learning, computer vision and artificial intelligence, econometrics, optimisation and more," Professor Hayne says.

"This strategic partnership in data science aligns with Curtin's goal to provide leadership and capability for a profitable and sustainable agriculture industry, and I look forward to seeing Australian grain producers thrive as a result."

UQ Vice Chancellor, Professor Deborah Terry AO, says the partnership will build frontier research solutions for all levels of the grains industry while helping to expand analytics training and support for the agriculture community.

"This is an excellent demonstration of how collaboration between industry and the higher education community can deliver outstanding outcomes for those working across Australia in one of our most important export industries," Professor Terry says.

"One of the real legacies of the AAGI initiative will be developing the capability of a new generation of talented analytics graduates to support the grains industry for many years to come."

Professor Peter Høj AC, Vice-Chancellor and President, University of Adelaide, says that as a global leader in research and development, the University of Adelaide welcomed the opportunity to work collectively with its partners to deliver high-quality, leading-edge data analytics capability for the Australian grains industry.

"The University of Adelaide has assembled a strong cohort of well-established industry driven analytics research teams for AAGI, with expertise across biometry, data science, mathematics, machine learning and artificial intelligence," Professor Høj says.

"Collaboratively with our partners, these teams will drive analytical innovation and ensure accelerated productivity, profitability and future sustainability for Australian grain growers."

AAGI will be led by Dr Nathan O'Callaghan, who commences today (August 28) as AAGI's inaugural Director.

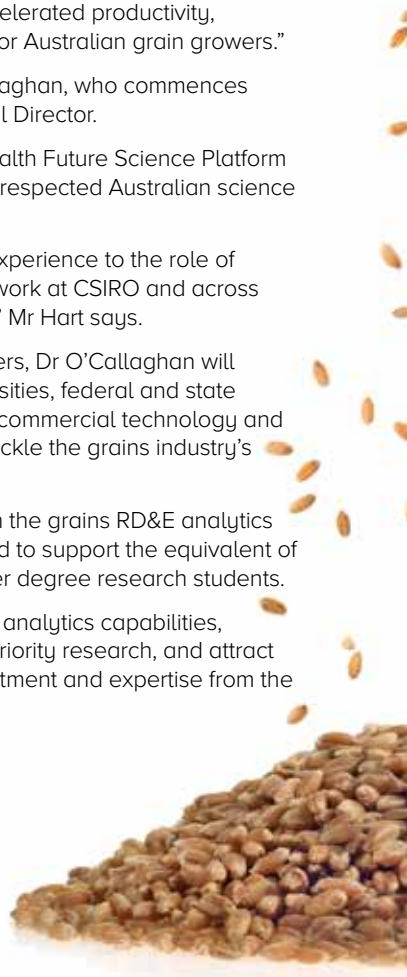
Formerly Director of the Precision Health Future Science Platform at CSIRO, Dr O'Callaghan is a highly respected Australian science and innovation leader.

"Dr O'Callaghan brings a wealth of experience to the role of AAGI Director, through his extensive work at CSIRO and across government, academia and industry," Mr Hart says.

"Working closely with strategic partners, Dr O'Callaghan will lead AAGI in bringing together universities, federal and state government research agencies, and commercial technology and analytics providers as one team to tackle the grains industry's biggest challenges."

AAGI will build substantial capacity in the grains RD&E analytics workforce, with investment earmarked to support the equivalent of 49 full-time researchers and 48 higher degree research students.

This increased capacity will broaden analytics capabilities, allow for more investment into high-priority research, and attract additional intellectual property, investment and expertise from the commercial sector and other parties.



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FUTURE ORCHARDS

SMALL SCALE RESEARCH PROGRAM AIMS TO RESPOND TO EMERGING ISSUES AND ENABLE GROWERS TO EXPLORE NEW ON-FARM CONCEPTS

Source APAL (Apple and Pear Levy)

APAL is launching a new small scale research program aimed at responding to emerging issues and enabling growers to explore new concepts on-farm and learn some new skills along the way.

The Future Orchards® Trial Program will start accepting applications from Monday 3 July, with interested growers, service providers and others in the industry able to propose and apply for funding to undertake these activities.

The majority of projects sought for this program are likely to be single-year studies with expected budgets ranging from $2,000 to $10,000; some larger projects will be considered on a case-by-case basis.

This funding can be used to undertake the project activities, purchase necessary equipment or access services with successful applicants required report on the outcomes, with all findings to be published in an annual research review outlining their findings.

To apply, interested parties will be required to submit a short expression of interest and then approved applicants will be asked to prepare a proposal for their project outlining their budget, expected outcomes/impact and the likely timeline for their project, as well as any extra assistance they might need to complete the project.

Projects will be available in two formats:

Assisted – those unfamiliar with trial management but are willing to manage and complete trial activities. Those in this category will be engaged directly with APAL (and, where needed, a local provider) to assist them with data capture, analysis and/or report writing.

Self-managed – those who have experience in managing their own small-scale trials and can complete the project independently (including all data analysis and reporting).

Nic Finger, Industry Development Manager for Grower Development and Trials, said he is excited to introduce the concept and hopes to see a range of growers and those who support them applying for the program.

“It’s a great opportunity to tap into a few of those ideas that have been sitting at the back of your mind and explore them in the orchard. I would hope some growers see it as an opportunity to involve some of their junior staff in leading a small project to find better ways of doing things on the farm.”

In addition to an open expression of interest, a list of potential projects will also be published when the program launches based on some suggestions posed over the last 12 months.

For further information on the program, please contact Nic Finger nfinger@apal.org.au

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$11.5M EFFORT TO DELIVER BOT-READY STRAWBERRIES

STRAWBERRIES SPECIALLY BRED FOR AUTOMATED PICKING WILL SOON BECOME A REALITY IN AUSTRALIA AFTER THE LAUNCH OF AN INITIATIVE TO DEVELOP VARIETIES THAT CAN BE EASILY HARVESTED BY ROBOT.

Scientists will naturally meld together the flavour, colour and aroma traits Aussies love the most with premium strawberry varieties from the world that feature single stemmed fruit ideal for robotic picking. The $11.5M, four-year effort is being delivered through Hort Innovation and led by the Department of Agriculture and Fisheries Queensland (DAFQ).

Hort Innovation chief executive Brett Fifield said recent data shows the horticulture workforce has decreased by 20 per cent over the past three years, which has resulted in 40 per cent of Australian growers adopting advanced machinery.

"The development of a sweet, rich red and aromatic strawberry that is ideal for automation will prove a game changer for growers who want to apply new technologies on-farm," he said. "While harvesting strawberries using automation is not common practice yet in Australia, it will be before we know it."

Mr Fifield said Hort Innovation is working with tech companies and researchers on various horticulture related automation projects, and scoping discussions with the berry industry to identify opportunities for technology adoption are underway.

"I commend the great work of Hort Innovation and my department and look forward to seeing the fruits of this investment benefitting the industry for years to come."

Department of Agriculture and Fisheries Queensland Principal plant breeder Dr Jodi Neal

Department of Agriculture and Fisheries Queensland principal plant breeder Dr Jodi Neal said the program will reduce the time needed to pick and pack strawberries, resulting in a more profitable outcome for growers.

"It takes the same amount of time to pick a small strawberry as it does to pick a large one," Dr Neal said. "This breeding program is focusing on delivering a consistent fruit size that is preferred by consumers on unbranched flower stems – meaning that the fruit can be picked faster – either by conventional methods or through automation."

Minister for Agricultural Industry Development and Fisheries Mark Furner said Queensland is a leader in agricultural innovation.

"Queensland remains on the cutting edge of AgTech, which will be vital to the future of agriculture and the thousands of good jobs it supports in our state," Mr Furner said.

"I commend the great work of Hort Innovation and my department and look forward to seeing the fruits of this investment benefitting the industry for years to come."

Berries Australia executive director Rachel Mackenzie said the nation's strawberry growers are ready to reap the benefits of the program's efforts to reduce the cost of harvesting.

"Breeding bespoke varieties to suit strawberry growers across the country is a priority for our industry," she said. "We are looking forward to this program equipping us to profitably deliver consistent, high-quality fruit for Australians and the world."

The Australian national strawberry industry has an estimated farm gate value of $417 million (2021/22 Australian Horticulture Statistics Handbook). Varieties developed by the Australian Strawberry Breeding Program currently capture 45 per cent of the national market and 90 per cent of the subtropical industry.

These varieties currently provide approximately 11,000 jobs in production alone in Australia and are estimated to have a farm gate value of approximately $174 million last year.

NEW INVESTMENTS AT THE 2023 BUNDABERG STATION FIELD DAY

SUGARCANE GROWERS, MILLERS, AND INDUSTRY HAD THE OPPORTUNITY TO LEARN HOW SCIENCE IS HELPING FARMERS IMPROVE THEIR PRODUCTIVITY THROUGH THE LATEST RESEARCH FINDINGS AND NEW RESEARCH PROJECT INVESTMENTS.

Shaun Coffey, Sugar Research Australia's Interim Chief Executive Officer said the field day was a great opportunity to meet with researchers on the latest research findings and technology as outlined in the Southern District's Productivity Plan.

"We had the Southern Variety Development team on hand to lead a guided research walk and discuss the process for the Southern breeding program, information on variety trials and the new varieties currently in the selection pipeline.

"We also provided attendees with an overview of our latest research investments."

Shaun said the research projects were identified as part of the SRA Board's approach to targeted investment and after extensive consultation on research priorities with our stakeholders.

"These investments focus on advancing technological solutions, soil research and biological research on pest and disease risks and threats. We are ensuring that our new investments address the research gaps and requirements identified in our Strategic Plan," Shaun said.

"All of these projects have been chosen as part of a considered selection process and confirmed by the Research Investment Panel and the SRA Board based on the positive outcomes they will deliver for our growers, millers and industry."

Ratoon Stunting Disease (RSD) affects sugarcane yield and profitability across Australia causing yield losses of more than 30 per cent in crop yield in some regions.

"To address RSD, we are collaborating with milling and industry partners to roll out 'dip-stick' diagnostic technology for Ratoon Stunting Disease (RSD) which will capture pathogen DNA from expressed sugarcane juice with rapid DNA amplification at the mill, and a project to further validate the RSD Near Infra-Red (NIR) diagnostic assay system.

"Nutrient management research will also be funded with a significant leaf and soil survey to assess nutrient availability and uptake by the crop across a range of factors and a new project to better understand phosphorus for sugarcane crops grown in alkaline soils," he said.
Additional training systems for the Australian sugar industry to further develop and facilitate 'any time' operator training is another project to be funded in the current round.

"The on-line training will deliver additional training modules for mill workers to qualify in extraction, boiler and laboratory skills and methods, via the Australian Sugar Industry Training Learning Management System (ASIT LMS).

"With the increasingly transient workforce, we need to develop programs that can be accessed readily and easily and this will build our industry workforce to ensure the Australian sugar industry remains competitive."

The field day last Thursday was held at SRA's Bundaberg Research Station and attracted an estimated 50 growers and stakeholders. In addition to the formal presentations a series of practical displays about Biosecurity and Ratoon Stunting Disease, a demonstration of handheld Micro Near Infra Red (NIR) and Bundaberg Sugar Services' one eye sett propagation program was shown.

Southern District Manager, Lisa Deveraux said this year's event featured a mix of short presentations and displays, giving visitors a chance to interact with researchers.

"Attendees heard the latest on smut, plant pathology and major exotic and endemic pests relevant to the Southern region from our expert researchers," Lisa said.

"It was also be an opportunity for our growers to register for the Online Sugarcane Nutrient Management Training program based on the Six Easy Steps."

That's why I grow Nuseed

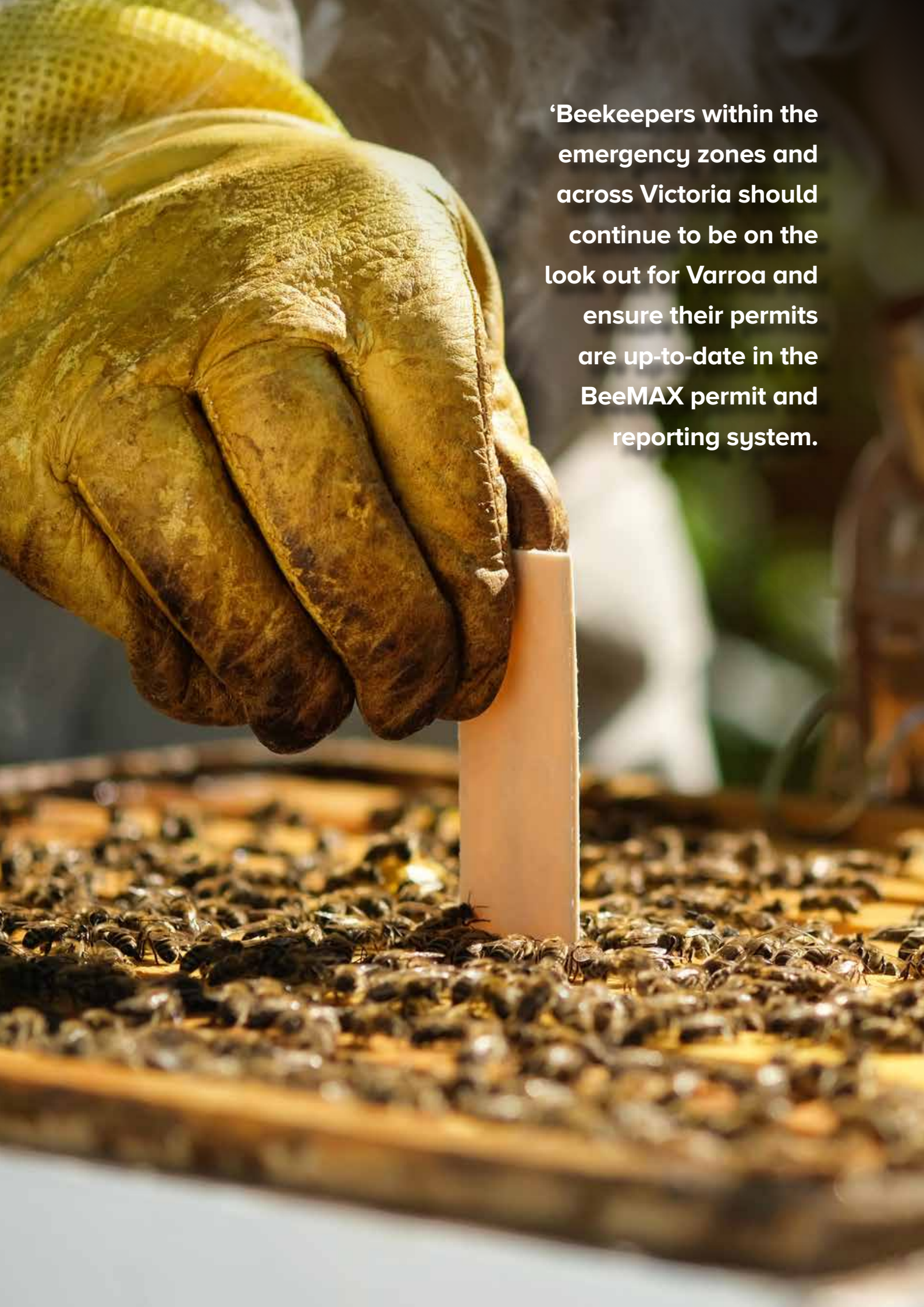
A field team with strong agronomic expertise.

Our in-field Sales and Market Development Teams have outstanding agronomic experience and are canola experts based in your area. They specialise in understanding how canola grows in your local growing conditions so that you have the variety that best suits your needs.

That's how we offer # ValueBeyondYield

nuseed.com/au

NUSEED®



‘Beekeepers within the emergency zones and across Victoria should continue to be on the look out for Varroa and ensure their permits are up-to-date in the BeeMAX permit and reporting system.

SECOND VARROA EMERGENCY ZONE EXTENDS INTO VICTORIA

VARROA MITE HAS BEEN DETECTED NEAR BALRANALD IN THE NSW RIVERINA DISTRICT WHICH WILL IMPACT BEEKEEPERS WITH HIVES IN VICTORIA WITHIN THE 25 KILOMETRES SURVEILLANCE EMERGENCY ZONE

Varroa mite has been detected near Balranald in the NSW Riverina district which will impact beekeepers with hives in Victoria within the 25 kilometres surveillance emergency zone (SEZ) put in place by New South Wales Department of Primary Industries (NSW DPI). This is the second emergency zone extending into Victoria, after the detection at Euston last week.

Biosecurity (Varroa mite) Emergency Orders have been issued for both locations. Victorian beekeepers within the surveillance emergency zones will not be allowed to move their hives into, within or out of the zones at this time. All other movements of bees, beehives, used beekeeping equipment and bee products into Victoria are being strictly regulated and will continue to require a permit. Permits will not be granted for queens, escorts and queen cells from NSW at this time and any permit granted will take into account the increased risk environment.

Victoria's Chief Plant Health Officer Dr Rosa Crnov has confirmed that no Varroa mite has been found in Victoria. The department is working to address concerns about bee health and reduced floral resources.

'We understand that beekeepers are concerned about the situation and their hives. I reassure everyone that we are working on a resolution," Dr Crnov said.

'Beekeepers within the emergency zones and across Victoria should continue to be on the look out for Varroa and ensure their permits are up-to-date in the BeeMAX permit and reporting system. Industry groups such as the Victorian Apiarists Association (VAA) and Australian Honey Bee Industry Council (AHBIC) are working alongside Agriculture Victoria with response efforts.

Varroa mite is a parasite of adult honey bees and honey bee brood. It weakens and kills honey bee colonies and can also transmit honey bee viruses.

For more information on Varroa requirements, reporting and permit applications, visit the Varroa page on the Agriculture Victoria website: agriculture.vic.gov.au/varroa. Any suspected cases of Varroa should be reported to the Exotic Plant Pest Hotline on **1800 084 881.**

Any suspected cases of Varroa should be reported to the Exotic Plant Pest Hotline on 1800 084 881.

GATTON FIELD DAY DEMONSTRATES OUTSTANDING PERFORMANCE OF VERPIXO ADAVELT ACTIVE

GROWERS IN THE LOCKYER VALLEY HAVE JOINED AGRONOMISTS FROM ACROSS QUEENSLAND AND NEW SOUTH WALES AT ELDERS GATTON FIELD DAY FOR A POWERFUL DEMONSTRATION OF VERPIXO® ADAVELT® ACTIVE IN THE CONTROL OF CHALLENGING ASCOMYCETE PATHOGENS.

Verpixo Adavelt active is a highly effective new mode of action which will help farmers achieve healthy and abundant yields while strengthening resistance management strategies.

Corteva Agriscience Horticulture Marketing Manager, Nick Koch, said the Gatton Field Day was a valuable opportunity to show Verpixo Adavelt active's efficacy and versatility ahead of it becoming commercially available in October.

"We share this journey and want to help them navigate the complexity of plant disease by focussing on solutions. In this case, it's tough ascomycetes pathogens. To succeed we need to develop more flexible tools that support land stewardship and simplify crop management."

Nick Koch, Corteva

"This is many years of Research and Development and a commitment to horticulture coming to fruition with the great assistance of the Elders team including Greg Teske and Maree Crawford," Mr Koch said.

"At the Gatton field site they demonstrated Verpixo in leafy veg, cucurbits and fruiting veg and showed its efficacy on sclerotinia, powdery mildew, Alternaria and botrytis.

"Greg and Maree did a fantastic job and it's great to see the technical capability of Elders supportinglocal farmers and their commitment to helping them have access to new technology."

Verpixo Adavelt active has now been registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) for use in strawberries, fruiting vegetables, leafy vegetables and cucurbits with registration for other crops already lodged for 2024.

Diseases controlled include grey mould (botrytis), powdery mildew, target spot, Yellow Sigatoka, gummy stem blight, anthracnose, septoria, and sclerotinia rot.

Corteva Territory Sales Manager, Adam Harber, said the trial site showed how Verpixo would suit many horticultural programs.

"It delivers a broad-spectrum solution with no cross-resistance with other fungicides used for ascomycete pathogens so this will allow growers to think strategically about resistance management," Mr Harber said.

Corteva's Adam Harber (left) and Nick Koch (centre) with Elders agronomist Greg Teske discussing Verpixo trial results.

"In many cases existing chemistries are under threat of resistance so this will redefine custom fungicide programs to sustain healthier crops, better yields and greater value."

Verpixo is the first-ever picolinamide fungicide that offers a novel solution for managing key diseases over a wide range of crops. The unique structure of Verpixo, based on a naturally occurring compound found in soil bacetria, enables picolinamide activity across a broad spectrum of diseases and builds upon a family of chemistry first established by Corteva with the discovery of Inatreq™ active for use in cereal crops and banana. Where pathogen resistance to SDHIs, strobilurins and triazoles is a concern, Verpixo offers a powerful solution.

The new mode of action, along with a short harvest withholding periods and low toxicity, gives growers the flexibility to successfully manage diseases in crop strategically throughout the year.

"Growers inspire us to innovate with purpose," Mr Koch said.

"We share this journey and want to help them navigate the complexity of plant disease by focussing on solutions. In this case, it's tough ascomycetes pathogens.

"To succeed we need to develop more flexible tools that support land stewardship and simplify crop management.

"This breakthrough solution is designed to meet those needs and give growers the freedom to grow."

Verpixo application in lettuce demonstrating outstanding sclerotinia control.

NEGOTIATING BETTER LAND ACCESS DEALS BY EMPOWERING PRODUCERS

Georgie Somerset, General President. AgForce

A bloke turns up at your house one day and says he wants to dig a dirty great hole in your backyard, what do you do?

For city dwellers, a swift door slam is likely to be the best course of action. But if you're a farmer it's not that simple.

When it comes to giving resources companies access to land, producers often feel powerless to negotiate a fair deal.

Although AgForce has worked closely with the government and resources sector to improve the situation – through landholder support projects and better dispute resolution processes – there is still a long way to go to level the playing field.

Sadly, the rights of mining and energy companies often continue to trump the rights of family farms that feed and clothe the nation.

What's more, inadequate land use security is not only harming farming – restricting operations, stifling investment to improve land, and increasing costs – but it also imposes an unsustainable emotional burden on producers.

That said, the recent Federal Government review into community engagement practices for renewable energy infrastructure is certainly a step in the right direction.

Australia's transition to renewable energy means thousands of kilometres of new transmission lines on farmland.

Often farmers are left in the dark about these projects, but the review aims to improve planning and community engagement.

As farmers, we recognise the benefits of bringing new renewables into the grid (we too bear the weight of rising energy prices), and we also want to work with energy companies to achieve the best possible outcome for everyone.

Producers Des Bolton and Will Wilson have plenty to say on this in AgForce's new agriculture podcast Yarns from the Paddock. If you want to find out more about the challenges facing farmers, then be sure to have a listen on your favourite app. Ultimately, co-existence of agriculture and resources activity can only work when companies are respectful of the farming operations on which they seek access.The average mining operation has a lifespan of 30 years – but we need agriculture to be around forever.

DISCOVERY OF GENETIC MUTATION AFFECTING GROUP 11 FUNGICIDES

BASF RESEARCHERS DETECT AUSTRALIA'S FIRST KNOWN INSTANCE OF A GENETIC MUTATION AFFECTING GROUP 11 FUNGICIDES

KEY POINTS

- BASF researchers detect F129L mutation in barley leaf samples infected by net form of net bloch (NFNB)
- The mutation can reduce the sensitivity of crop diseases to Group 11 (QoI) fungicides and is the first known occurrence in Australia
- The discovery is a reminder of the need to implement integrated disease management strategies to help manage the development of fungicide resistance

BASF researchers have detected Australia's first known instance of genetic mutation affecting Group 11 fungicides. The barley leaf samples infected by net form of net blotch (NFNB) were collected during a product trial in the Yorke Peninsula, South Australia last year. After being sent to Germany for genetic analysis, test results revealed the presence of the F129L mutation, the first known occurrence of the mutation in Australia.

Net form of net blotch – Pyrenophora teres f.sp. teres – is currently the most damaging disease in Australian barley crops and maintaining effective control of it is a very high priority for growers. The F129L mutation has been widely reported overseas and is known to reduce the effectiveness of Group 11 fungicides, which are classified as quinone outside inhibitors (QoIs), on barley net blotch.

The leaf samples were collected in October 2022 from a trial conducted by AgXtra, an independent contract research company, on behalf of BASF.

Melissa Brown, the Technical Development Manager for Broadacre Crops at BASF Australia, sent samples to a BASF laboratory in Germany for testing. The genetic screening found the unexpected mutation.

"This was an inadvertent discovery," Brown said. "But now that we have recorded the first known occurrence of the F129L mutation in barley net form of net blotch in Australia, it is important to share this knowledge with the industry. The mutation confers reduced QoI fungicide efficacy against this disease."

Ian Francis, Head of Development – Crop Protection, agrees that this is a finding the industry needs to be aware of and potentially investigate further. "Overseas experience shows that this mutation doesn't necessarily create full QoI resistance in net blotch. However, barley growers and agronomists now need to be even more mindful of their management strategies for the disease. We've found the mutation randomly, so it's likely to be more widespread. As a matter of good stewardship, we should be on the lookout for it and growers should be proactive in their rotation of different fungicide groups."

BASF continues to work on delivering product innovations to the market and supports strong stewardship of crop protection products. It encourages industry to integrate good agronomic practices such as crop rotations, varietal selections and rotation of chemistry to strengthen the management of pests and diseases.

BASF will also continue to focus on fungicide research and development and work with the barley industry in managing NFNB.

WESTERN AUSTRALIAN HORTICULTURE UPDATE 2023

TUESDAY 31 OCTOBER - WEDNESDAY 1 NOVEMBER 2023
ASCOT RACECOURSE, 71 GRANDSTAND ROAD, ASCOT

Two-day industry expo dedicated to innovative technology in horticulture.The biennial Western Australian Horticulture Update (WAHU) event is back again, bringing all areas of horticulture together to grow connections and build knowledge on the changing landscape of horticultural production.

About this eventThe event will showcase the latest in business development and research innovations and will provide an opportunity for all those involved in the industry to get an insight into the rapidly changing global food production landscape.

The program includes several leading stakeholders, who will share their experiences and knowledge in adapting to the changing technology, consumer expectations and operating environment.The focus of this year's event will be:how to implement practical technology innovationapplications to improve horticultural practices from the grower to consumer.

To find out more visit:
https://www.agric.wa.gov.au/wa-hort-update-2023

CELEBRATING THE ART OF AN AWARD WINNING WINE

A VICTORIAN SHIRAZ DESCRIBED AS A DROP THAT COULD COME FROM NO OTHER PLACE ON EARTH HAS TAKEN HOME THE NATION'S TOP WINE AWARD AT THE NATIONAL WINE SHOW OF AUSTRALIA

With more than 965 wines competing across 42 classes, it's proof of the industry's resilience.

"Throughout droughts, floods, bushfires and trade sanctions over the last few years the Australian wine industry has adapted and innovated in clever ways to produce some of the world's best and most exciting wines," said Chief Executive Officer of CropLife Australia, the national peak industry organisation for the plant science sector, Mr Matthew Cossey.

As a sponsor of the National Wine Show of Australia, CropLife Australia and its members are proud to support and celebrate Australian viticulture that contributes $45.5 billion to the Australian economy. The show has been a highlight on the Australian wine industry calendar since it began in 1975. With only the highest-awarded wines making it to the judging table.

"It's fantastic to see winemakers from all across the country, particularly smaller producers from regional areas represented in these awards. The number of alternate varieties that made qualification this year reflects more growers exploring different grape varieties that do well in warmer drier climates.

"With around 25,000 producers in Australia, the plant science industry is proud to support an industry renowned for consistently delivering the highest quality grapes from prestigious regions with rich histories.

"The interplay between science, agriculture, climate and skill is what makes Australian viticulture so dynamic and impressive. Plant science innovations such as modern fungicides are providing critical control of diseases like powdery mildew which threaten Australia's entire viticulture production," Mr. Cossey concluded.

Source: Croplife

THE CHAMPION WINE OF SHOW 2023:
Yarra Yering 2021 Underhill Shiraz

THE WHITE WINE OF SHOW 2023:
Deep Woods Estate 2021 Reserve Chardonnay

THE RED WINE OF SHOW 2023:
Yarra Yering 2021 Underhill Shiraz

CROPLIFE AUSTRALIA AND MEMBERS CONGRATULATE ALL FINALISTS AND TROPHY WINNERS WHO CAN BE FOUND HERE.

SEAWEED EXTRACT INCREASES YIELD AND IMPROVES POST-HARVEST QUALITY IN AVOCADO PRODUCTION.

New published research from Seasol Australia shows that seaweed extracts increase yield and profitability and improve post-harvest quality in commercial avocado production.

Seaweed extracts have been shown to increase the yield and quality of many horticultural crops, due to their biostimulant effects, which include improvements in nutrient use efficiency and stress tolerance. Until now there has been limited data available on the effectiveness of seaweed extracts on avocado yield and quality in the Australian context.

In this new study, field trials were conducted with Hass and Shepard cultivars in three locations on commercial avocado farms in Queensland. Seaweed extract (Seasol, Seasol International, Australia) was applied at 10L/ha/month in the treatment plots and untreated control plots received the equivalent in water. All other inputs (fertiliser, irrigation water and crop protection products) were applied to both trial and control plots as per the grower's standard practice. Data was collected across five seasons to determine the yield, post-harvest fruit quality, and revenue per hectare.

Increased yield per hectare

Data collected from all three sites from 2017-2021 showed that regular use of seaweed extract consistently increased the yield in kg of fruit harvested per tree. On average, yield increased by 38%, compared with untreated trees (*Figure 1*).

Increase in fruit numbers

In 2020-2021 (Site 2), data collected showed trees treated with seaweed extract produced a significantly greater number of fruit (42% more on average) than the untreated control trees, with an increase in fruit set measured at each assessment date through the season (*Figure 2*).

Field site, cultivar and year – Fruit weight per tree (kg)

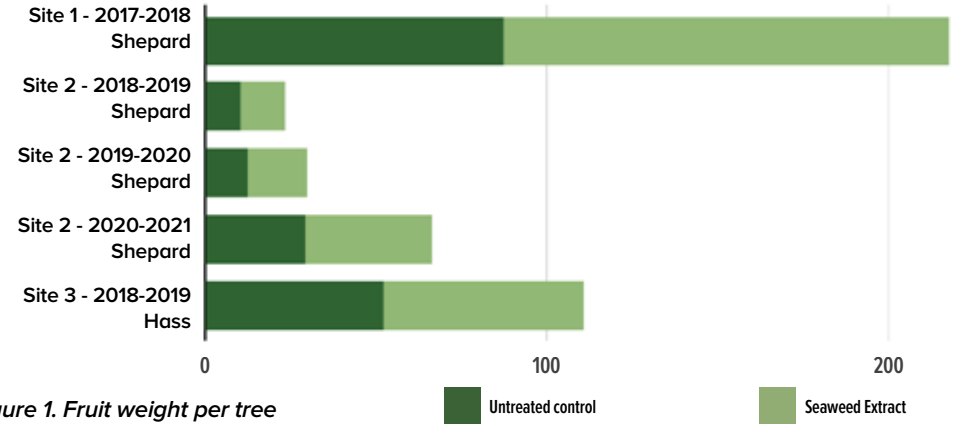


Figure 1. Fruit weight per tree

Increased yield increases revenue per hectare

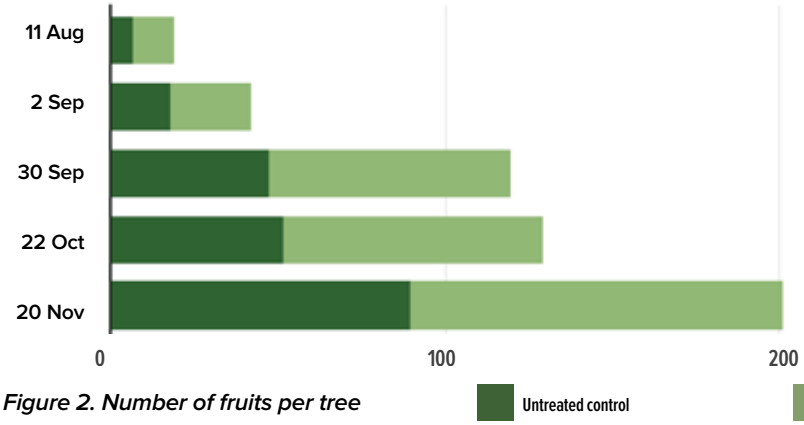


Figure 2. Number of fruits per tree

Increased post-harvest quality and shelf-life

The effect of seaweed extract on post-harvest quality was analysed in Shepard avocados over four seasons. Fruit was assessed for skin and flesh firmness, skin colour and ripeness after cold storage, cold storage followed by ripening, and after ripening without prior cold storage. In all cases both the skin and flesh of the fruit were significantly firmer after treatment with seaweed extract (4% and 22% respectively). Fruit treated with seaweed extract had less skin darkening and reduced ripeness. Seaweed extract consistently improved fruit firmness and colour, both important indicators of shelf-life in the marketplace.

Increased yield increases revenue per hectare

The use of the seaweed extract increased the pack-out yield (trays/ha) by 26%, resulting in an increase in revenue/ha of 24%, and an increased partial profit of $8,632/ha *(Table 1).* The cost of the seaweed extract was included in the analysis, and extract was applied at the same time as normal fertigation no further costs were incurred.

The results from these trials show regular application of seaweed extract increases avocado fruit yield and improves post-harvest quality (colour, firmness, shelf-life) under Australian conditions. The partial revenue analysis indicated a 26% increase in marketable yield/ha resulting in a 24% increase in return to the grower, showing that the use of seaweed extract has measurable economic benefits in avocado production. The use of seaweed extracts can be easily incorporated into existing production systems, and their use is compatible with sustainable farming practices which are becoming increasingly important to both consumers and retailers.

Treatment ↓	Yield (fruit trays/ tree)	Total Yield (trays/ha)	Total Revenue (AU$/ha)	Increased Revenue (AU$/ha)	Increased Cost (AU$/ha)
Untreated control	5.3	1590	37,905	-	-
Seaweed extract	6.7	2010	47,017	9,112	480
% increase		26	24		

Table 1. Partial budget analysis

Yield increase / ha 38%

Increased Fruit Numbers 42%

Increased Post Harvest Quality and Shelf Life $5 & 22%

Increased Revenue / ha $8,632

DROUGHT-RESILIENT SHRUB GOES EAST TO SUPPORT FARMERS IN DRY TIMES

THE ELITE VARIETY OF SALTBUSH WAS DEVELOPED OVER 15 YEARS AND WILL HELP FARMERS THROUGH POOR SEASONS, BUILDING THEIR RESILIENCE TO DROUGHT.

Sheep and cattle farmers are planting hundreds of thousands of an elite variety of Oldman Saltbush across Australia's southeast this winter to supplement feed during dryer conditions heralded by a potential El Nino.

Anameka Saltbush is a specially selected variety of the drought-tolerant native shrub, developed over 15 years by CSIRO, Australia's national science agency, with partners in government and industry.

It is unique for its higher nutritional value and improved palatability for livestock and its potential to regenerate the topsoil of land that is too saline or infertile.

CSIRO agricultural scientist, Hayley Norman, said that during dry years when there is a shortage of available feed, Anameka saltbush can provide key nutrients that improve livestock productivity and health.

"Anameka Saltbush is a moderate-energy, high crude protein and sulphur feed source that is full of essential minerals and antioxidants," Dr Norman said.

"It grows well on most landscapes, and once established, Anameka Saltbush can become a 'living haystack' for grazing livestock for more than 20 years if managed correctly."

"We're now bringing these benefits to new regions across Australia's southeast to carry farmers through poor seasons and build their resilience to drought."

CSIRO's Drought Resilience Mission is driving wider adoption of Anameka Saltbush in drought-prone regions across southeast Australia for the first time.

CSIRO modelling indicates that Anameka shrub systems offer 20 per cent higher economic returns compared to standard saltbushes, particularly in relatively dry years. This reduces exposure to financial risks associated with climate variability or drought.

Tulla Natives nursery is supplying CSIRO's Anameka Saltbush to the southeast.

Other benefits include greater wool and meat production and reduced supplementary feed.

Marcus Hooke, a merino sheep farmer in Booroorban, southern New South Wales, is doubling the number of Anameka Saltbush in his paddocks after successful establishment last year.

“It’s early days but we believe the benefits of Saltbush will be long-term,” Mr Hooke said.

“For us the benefits will be two-sided in providing crucial shelter to lambs to improve their survivability out on the plains during colder months, and for feed to provide energy during dry seasons.”

Anameka, as well as standard Saltbushes, have traditionally been grown in Western Australia (WA) for salinity management. The new plantings build on six million Anameka Saltbush already planted across 8000 hectares, mostly in WA, since commercial release.

This year marks 325 farmers adopting Anameka saltbush across Australia. CSIRO’s partners include Tulla Natives, Chatfield’s Tree Nursery, Select Carbon, Meat & Livestock Australia, WA government’s Department of Primary Industries and Regional Development, Australian Wool Innovation and several producer groups across Australia. The program has also received funding from the Australian government’s Future Drought Fund.

Anameka Saltbush is one of many farming system innovations that CSIRO’s Drought Resilience Mission is scaling to help Australia’s agricultural sector adapt and transform through future cycles of drought.

These include new decision-making tools, techniques to improve water use efficiency and facilitating the development of new financial tools to share risks.

Sheep love grazing on Anameka Saltbush, an ideal supplementary feed during dry conditions.

iGRAIN PURCHASED BY CLEAR GRAIN EXCHANGE

Source: Grain Central

Clear Grain Exchange is set to consolidate its position as Australia's leading electronic market for grain with the purchase of igrain.

Announced today and effective from tomorrow, the private sale has been negotiated in recent months for an undisclosed figure following agreement between igrain managing director **Tom Roberts** and directors **Peter Flottman** and **Andrew Kelso**, and the CGX board.

Both Mr Roberts and CGX managing director **Nathan Cattle** told Grain Central the sale will be advantageous to the two companies' client bases.

"The opportunity here is that Clear Grain Exchange is the market leader in the warehoused market, and igrain has operated in the ex farm space," Mr Roberts said.

Founded in 2009 in the wake of export market deregulation, Mr Roberts said igrain has had a total of 12,000 registered users, mostly in New South Wales and Victoria, but also in Queensland and South Australia.

"We're thankful for the client base that's supported us, and I'm sure they'll be serviced well by Clear Grain Exchange now that they've purchased our technology.

"We're optimistic about the opportunity this sale will bring to the market, and we think Nathan and the team do an excellent job."

"I couldn't be happier with them as a buyer, and I have a high level of respect and admiration for them."

Mr Roberts said buyers on igrain have been varied, and include domestic end users such as stockfeed mills and feedlots, as well as container packers and bulk exporters, who will all be ably serviced under the new ownership.

CGX has developed as an online exchange for grain warehoused at bulk-handler sites across Western Australia, South Australia, and in eastern states with more than 18,000 growers, 186 agents, and 300 buyers registered.

CGX was purchased by NZX Ltd in 2009, which ran it until it was privatised in 2016; Elders now owns a 30pc stake in the business.

Mr Cattle said the purchase of igrain has partly come about in response to feedback from CGX users looking for a service to help transact grain stored on farm, and create a more efficient market similar to the role CGX has played for warehoused grain.

"Tom is a good thinker, and he's put a lot into igrain; we think there's technology in igrain and thought processes that we can use and enhance," Mr Cattle told Grain Central.

"We've learnt a lot regarding igrain as you'd expect, though we only get the keys to start operating on Monday, and there's a lot more learning to be done."

CGX's purchase of igrain is ultimately expected to put grower offers before a broader range of prospective buyers, and give buyers access to parcels available on farm as well as in warehousing.

In a statement, CGX said igrain will continue to operate from its own website in the short term at least while CGX gets across the transaction types in the ex-farm space.

"CGX is committed to long term value creation at the farm-gate and believe we achieve this by working with all parties in the industry to improve price discovery and make it easier for all buyers to purchase growers' grain whilst ensuring growers are protected."

iGrain managing director, Tom Roberts

"We believe that coupled with the CGX knowledge of operating markets, we can provide a combined offering to service a broader set of grain transactions for the benefit of the Australian grain industry."

CGX said its business-development and operations teams will work across both the CGX and igrain markets, and were looking forward to helping users maximise benefits of the two.

"As we learn, we will continue to invest in the igrain technology with the aim of making it easier and more secure for buyers, growers and grower agents to participate in buying and selling grain.

"CGX is committed to long term value creation at the farm-gate and believe we achieve this by working with all parties in the industry to improve price discovery and make it easier for all buyers to purchase growers' grain whilst ensuring growers are protected."

Mr Roberts said the sale of igrain will allow him to concentrate on his grazing operation near Bathurst on the Central Tablelands of NSW.

Tom Roberts iGrain

SPROUTX ANNOUNCES BUSINESS OF AGRICULTURE PRE-ACCELERATOR PROGRAM

NATIONAL ACCELERATOR SPROUTX HAS RECEIVED FUNDING FROM THE STATE INNOVATION AGENCY, LAUNCHVIC TO BOOST AGTECH ENTREPRENEURSHIP IN THE STATE.

The Business of Agriculture Pre-Accelerator Program will attract new entrants to the agtech ecosystem with the long-term aim of converting science and technology entrepreneurs into Victorian technology businesses.

The $2.2 million in funding will be used to run a two-year project, with a target to foster 70 incorporated startups by 2024.

“We believe that increasing the volume of entrepreneurship at ideation stage will have the flow-on effect of increasing the number of startups that grow into investment-ready opportunities down the track.” said Maxie Juang, Community Manager, SproutX.

Running an autumn cohort and a spring cohort each year, the online workshops and farm tours will cater to individuals from tertiary research, academic, and corporate R&D participants to consider commercial opportunities through startup.

SproutX has built a strong reputation nationally since launching 2016 and has an active portfolio of 26 food and agtech startups, from pre-seed to Series A.

“With support from LaunchVic, we’re delighted to see the team join forces with the University of Melbourne to take 154 aspiring entrepreneurs through The Business of Agriculture Pre-Accelerator Program, a new initiative designed to engage non-traditional participants in the Victorian startup ecosystem.” said Kate Cornick, CEO of LaunchVic.

“SproutX’s Business of Agriculture Pre-Accelerator Program is an opportunity for the University of Melbourne to work with SproutX to create additional impact in the agrifood sector by leveraging our teaching and research translation, particularly that based at our Dookie Campus, as well as our NorVicFoods knowledge exchange activities. We welcome collaboration with investors throughout this vital sector and look forward to working with SproutX.” said John Fazakerley, Dean of Faculty of Veterinary and Agricultural Sciences, The University of Melbourne.

About SproutX

SproutX is a commercialisation and mentorship accelerator for Australian early stage agtech. The company is an initiative of Findex financial advisory and accounting firm, and boasts Bayer CropScience as their premier sponsor.

After launching the first agtech focused accelerator program in the Asia Pacific, and with a $10 million Venture Capital fund, SproutX has been a leading force in the creation of agtech in Australia’s $60 billion agricultural industry.

Software engineer, agtech founder and alumni of SproutX, Carlos Gonzalez pictured on farm.

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BASF AND AGLINK JOIN FORCES TO PROMOTE CHILD SAFETY ON FARMS

BASF AUSTRALIA HAS JOINED FORCES WITH AGLINK AUSTRALIA MEMBERS TO UNVEIL A FREE SAFETY CHAMPS PROGRAM TO PROMOTE CHILD SAFETY ON FARMS.

The BASF Safety Champs packs, supported by AgLink Australia members Farmer Johns, TGT, McGregor Gourlay, Pursehouse Rural, AGnVET Rural and AgriShop, contain fun and educational farm safety themed activities and are designed to assist parents and caregivers in having discussions with kids about the importance of farm safety.

Farms are not just busy workplaces, many are also family homes where children can encounter hazards every day. In 2022, 18% of the injury events on farms involved children under the age of 15. Spreading awareness and sharing knowledge via the Safety Champs program are key to helping identify potential hazards and prevent accidents.

Following a successful launch campaign in New Zealand in 2022, Gavin Jackson, Head of Agricultural Solutions in BASF in Australia and New Zealand, said Safety Champs is part of BASF's dedication to upholding the safety of its people, customers, and their families.

"At BASF we remain steadfast in our commitment to ensuring the safety and livelihood of all in our farming communities, including the youngest members. Many farms are family owned and operated, therefore, the children of farmers today, may one day bear the responsibility of taking over the family's farming business. We are proud to partner with AgLink to contribute to farm safety in Australia. Our intent is to roll out a bigger and better Safety Champs program that will drive greater awareness and understanding of what it means to be safer around equipment and hazards, in 2023 and beyond."

Ian Scutt, CEO of AgLink Australia said, "We are delighted to partner with BASF to deliver a unique program that champions safety culture in rural and regional communities across Australia. Through participating in the Safety Champs program, farming families can work together to implement measures that can make their farm an even safer and more fun environment to grow up in."

Families are encouraged to share their Safety Champ experiences via social media to generate greater understanding around the importance of embracing safe behaviours.

700 Safety Champ packs are available at no cost to families while stock lasts. To find out more or to order a Safety Champs pack for your child, visit **www.crop-solutions.basf.com.au.**

KEY POINTS

- Over 700 free Safety Champ program packs are now available to boost farm hazard awareness in children living on farms
- Safety Champs helps parents and caregivers facilitate conversations with children about farm safety in a fun and educational way
- Farm safety for children is a key issue with 18 percent of recorded farm injuries in 2022 involving children under the age of 151

SAFETY CHAMPS PACK

The packs, which come in a re-usable drawstring bag, are targeted at 5- to 10-year-old's and include:

- A Safety Champs program introductory letter
- Child-sized safety vest
- Noise reducing earmuffs, which meet Australian safety standards
- Printable safety themed activities
- An 'Our Farm Safety Pledge' for families to complete together
- An official Safety Champs certificate

10 TRIAL AVOCADO SHIPMENTS TO INDIA SUCCESSFULLY RECEIVED

THIS WEEK AVOCADOS AUSTRALIA RECEIVED CONFIRMATION THAT ALL 10 TRIAL SHIPMENTS OF AUSTRALIAN AVOCADOS WERE SUCCESSFULLY RECEIVED BY INDIAN OFFICIALS.

Australian Hass avocado growers will be able to proceed to the next step towards export to India. This is great news for the Australian avocado industry as it has been working hard to increase exports to overseas markets.

Peak industry body Avocados Australia, welcomes the news and is very pleased that the thorough process adopted by all the participants involved with all ten shipments resulted in this excellent outcome.

"I would like to thank The Avolution, Costa Group, Simpson Farms and Dons Fort Packing for participating in the ten trial shipments and for their professionalism in the way they approached the process," said John Tyas, CEO of Avocados Australia.

"Our access to India rested on the success of these ten trial shipments so we are very grateful that the process went smoothly, more steps are ahead of us but we are closer to our end goal," he said.

"I would also like to thank Hort Innovation, the Department of Agriculture, Fisheries and Forestry, Austrade, Kiran Karamil our Indian Agricultural Counsellor and Joe Siana from the Australian Horticultural Exporters' and Importers' Association."

Early this month John Tyas visited India and met with key stakeholders such as importers, government officials and other important contacts that will have a part to play in the success of Australian avocados in the Indian market.

Avocados Australia intends to retain a strong presence in India to support on-going marketing activities. Avocados Australia has an avocado launch planned in Delhi in the coming months that will be organised by Delhi-based business, AMPRO marketing. Market visits to Mumbai and other Indian cities are also planned so that Australian avocado growers and exporters can further connect with Indian importers and retailers.

"The launch and market visits will provide participating Australian avocado growers and exporters with the chance to forge strong relationships with Indian market contacts and these initiatives will be the first of many we plan to organise in India," said John Tyas.

"We look forward to great Aussie avocados becoming an important part of a healthy Indian diet." Avocados Australia would like to also acknowledge the support provided by the Avocado market access and trade development (AV20004) project. This project has been funded by Hort Innovation, using the Avocado research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned,

not-for-profit research and development corporation for Australian horticulture.

Source: Avocados Australia

ABARES *Insights*

AGRICULTURAL COMMODITIES, AUSTRALIA

STATISTICS ON THE PRODUCTION OF PRINCIPAL AGRICULTURAL COMMODITIES INCLUDING CEREAL AND BROADACRE CROPS, HORTICULTURE AND LIVESTOCK

KEY STATISTICS

369 million hectares of agricultural land, down 5% from 2020-21

36 million tonnes of wheat produced, up 14%

7 million tonnes of canola production, up 43%

70 million sheep and lambs on farms at 30 June 2022, up 3%

22 million beef cattle at 30 June 2022, up 1%

Australian farms

At 30 June 2022 there were:

- **369 million hectares of agricultural land, down 5% from 2021**
- **87,800 agricultural businesses, unchanged from 2021**

Cereal and other broadacre crops

The ongoing La Niña weather cycle during 2021-22 resulted in a mixed season for Australia's broadacre crop producers in the eastern states. Flooding across areas of New South Wales and Queensland from November into December 2021 affected the growth and harvesting of many winter crops while summer crops such as rice and cotton benefitted from greater access to water for irrigation. Western Australia experienced improved soil moisture levels and highly favourable growing conditions during 2021-22 resulting a bumper harvest for the state's broadacre crops.

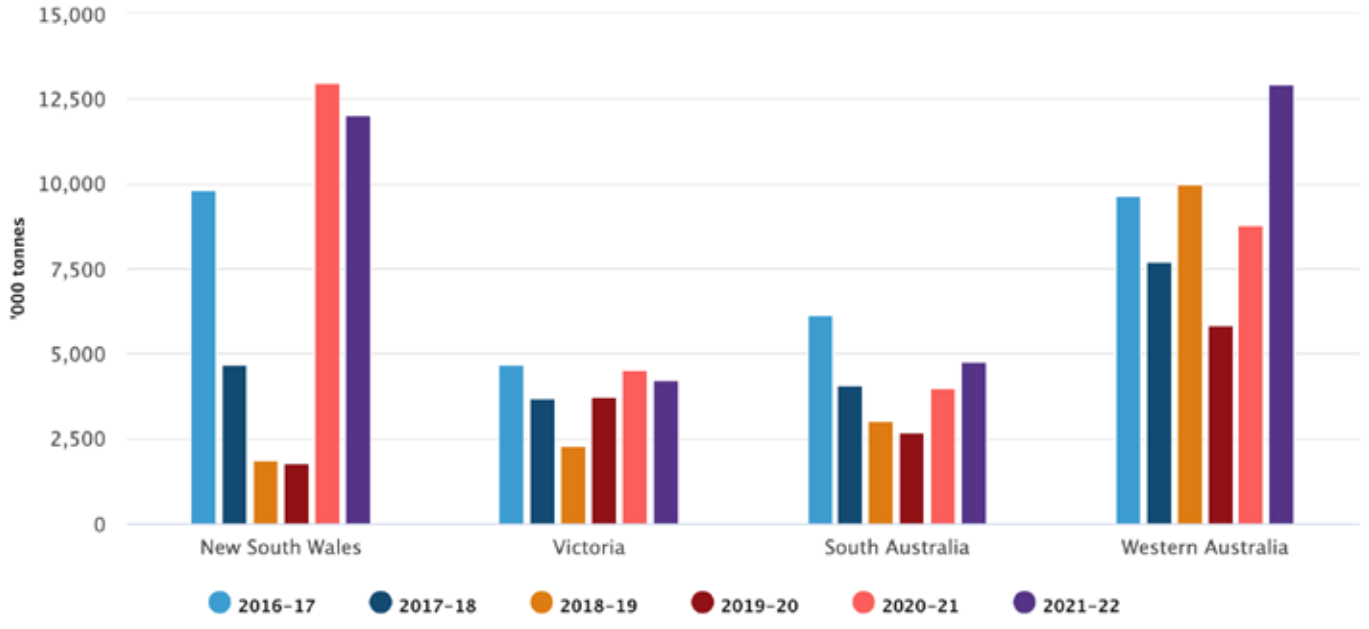
Increases in the price of oilseed crops such as canola saw businesses reducing their area sown to cereal crops with the area of barley down 7% and oats down 21%.

In 2021-22:

- **sugar cane; 28.7 million tonnes produced, down 8%**
- **barley; 14.3 million tonnes, down 2%**
- **sorghum; 2.6 million tonnes, up 62%**
- **oats; 1.7 million tonnes, down 9%**
- **rice; 691,000 tonnes, up 63%**

Australia's wheat production increased 14% to a new record of 36 million tonnes in 2021-22 driven by a 47% jump in Western Australia's harvest. An 8% increase in the area sown to wheat in Western Australia combined with favourable timing of rainfall and mild spring conditions resulted in record high crop yields and 13 million tonnes of wheat produced. South Australia also experienced a favourable season with production up 19% to 4.8 million tonnes. New South Wales experienced heavy rainfall across the entire state's wheat growing belt at the beginning of harvest and contributed to a 7% decrease in production, down to 12 million tonnes.

Wheat production for selected states

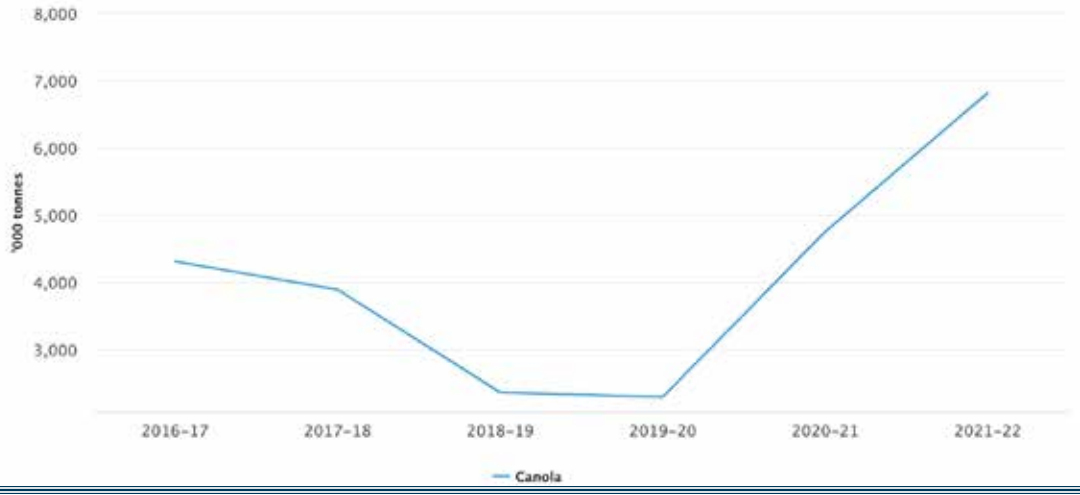


Source: Australian Bureau of Statistics. Agricultural Commodities, Australia 2021-22 financial year
Agricultural Commodities Australia. ABS. https://www.abs.gov.au/statistics/industry/agriculture/agricultural-commodities-australia/latest-release.

Canola

Increases in the price of oilseed crops resulted in more businesses sowing canola in 2021-22 (up 12%) and existing producers increasing their area sown. Australia's total area sown to canola rose 24% to 3.3 million hectares with Western Australia, the country's largest producer, increasing its area 28% to 1.5 million hectares. The increased area sown to canola and favourable growing conditions, especially in Western Australia, resulted in a production record of 6.8 million tonnes, up 43%. Western Australia's production increased 75% to 3 million tonnes.

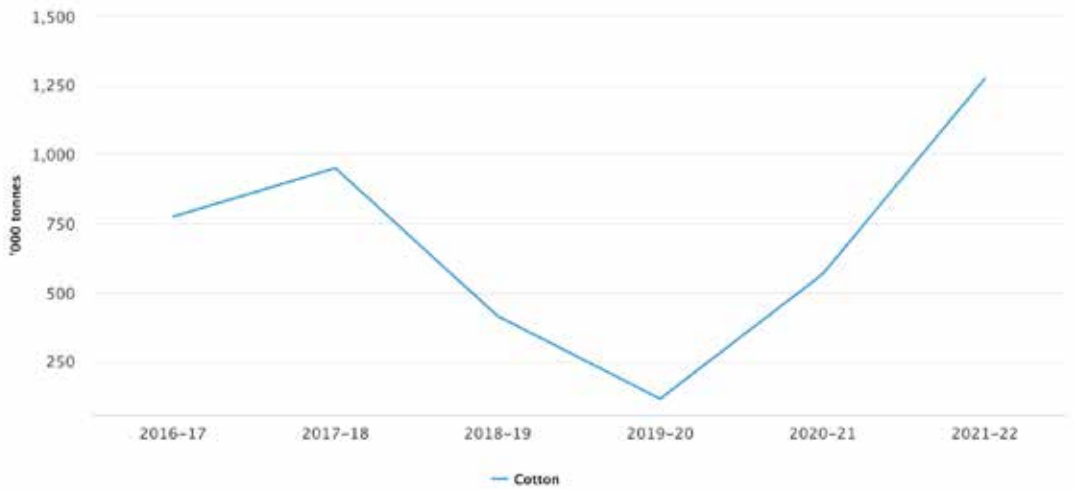
Canola production, Australia



Cotton

During 2021-22 the area of sown to cotton almost doubled (up 99%) to 549,000 hectares driven by favourable cotton prices and forecasts of favourable weather conditions. Significant rainfall across cropping regions of eastern Australia recharged on-farm water storage and increased water availability for irrigated cotton. This, combined with ideal growing conditions, resulted in increased yields and a record 1.3 million tonnes of cotton lint harvested.

Cotton production, Australia



Source: Australian Bureau of Statistics. Agricultural Commodities, Australia 2021-22 financial year
Agricultural Commodities Australia. ABS. https://www.abs.gov.au/statistics/industry/agriculture/agricultural-commodities-australia/latest-release.

ABARES *Insights*

PRODUCTION CONDITIONS FOR BROADACRE CROPS

A decline in international production conditions has reduced the outlook for global crop production in 2022–23.

Above average rainfall forecast for June to August 2023 to lift production for many of the world's major grain- and oilseed-producing regions in 2023–24.

There is a high probability for an El Niño developing between May and July. El Niño can have widespread global impacts on rainfall and temperature.

A positive Indian Ocean Dipole is also likely to occur, potentially exacerbating El Niño-related drying influences in Australia.

In Australia, given soil moisture levels have declined during May, a below average rainfall outlook presents a downside risk for 2023–24 crop production.

Production conditions for broadacre crops

Moisture and rainfall over the entire growing season need to be considered when determining planting opportunities and crop production outcomes for dryland winter crops. Adequate rainfall and high levels of soil moisture during early autumn is likely to have boosted planted area of winter crops across most growing regions.

Root zone soil moisture responds quickly to seasonal conditions and often shows a pattern that reflects rainfall and temperature events in the days leading up to the analysis date. At the sowing time of year, root zone soil moisture plays a significant role for germination and establishment of early sown winter crops across Australian cropping regions. It is also an important indicator for accessing paddocks to undertake harvesting of summer crops in New South Wales and Queensland, as well as planting activities for winter crops.

Root zone soil moisture for April 2023 (Figure 1) was average to very much above average for this time of year across most of the country. The main exceptions to this were parts of northern and southern Queensland, the central north and coastal New South Wales, southern Tasmania, western South Australia, and in parts of western and south-eastern Western Australia.

April rainfall generally benefitted root zone soil moisture levels across most cropping regions. At the end of April 2023, root zone soil moisture was generally average to extremely high in Western Australia, South Australia, Victoria, across large areas of New South Wales, and eastern and northern Queensland. These above average soil moisture conditions provided an increased confidence to plant longer season winter crops during April.

May 2023 rainfall totals have been well below average, with large areas of New South Wales, Victoria, northern Queensland, eastern South Australia, and eastern and central Western Australia receiving little to no rainfall for the month. This has seen root zone soil moisture levels across most winter cropping regions decline to below average to average levels. Areas with below average levels of root zone soil moisture will be highly dependent on timely and sufficient in-season rainfall to support winter crop production prospects.

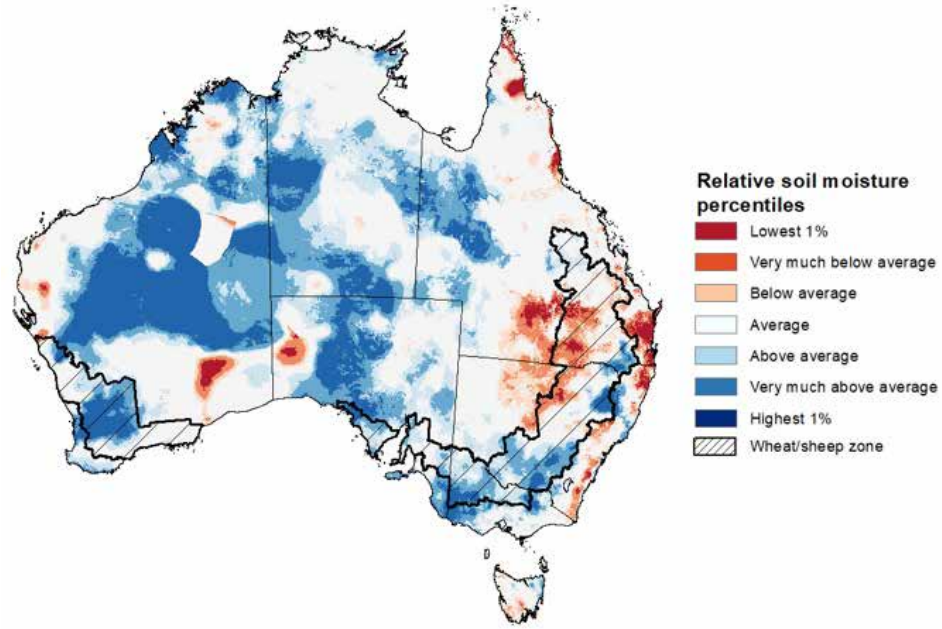


Figure 1 Root zone soil moisture, April 2023
Source: ABARES; Bureau of Meteorology

The potential crop yield is determined by soil moisture at planting and rainfall received during the growing season. Estimates of water availability over a growing season provide an indication of potential crop yield which can be used to inform crop production forecasts.

On average, the total water requirement to achieve the national 5-year average wheat yield of 2.3 tonnes/ha is 250 millimetres. This is based on a conversion rate of 16kg of wheat per millimetre of water and a standard soil evaporation loss factor of 110 millimetres. The total water requirement to achieve 3.0 tonnes/ha, 2.5 tonnes/ha, 1.5 tonnes/ha, 1.0 tonnes/ha and 0.5 tonnes/ha based on this same conversion rate have been estimated to be 295, 265, 205, 175 and 140 millimetres, respectively.

The crop yield associated with a specific level of water availability varies across regions with variations in soil characteristics. The implications for yield of the analysed threshold values of water availability will differ across regions, as responsiveness of crop yield to soil water availability depends on factors such as temperature, humidity, soil nutrition and the timing of rainfall.

As of 22 May 2023, ABARES analysis (Figure 2) indicates that if the forecast below average rainfall totals over the remainder of the growing season are realised, potential wheat yields are likely to be below average for all states analysed. This modelled wheat yield potential is highly dependent on the timing and intensity of rainfall events during the

remainder of the growing season. This is particularly the case in Western Australia and Mallee regions of Victoria and South Australia, where soils have a lower moisture holding capacity.

Should an El Niño and a positive IOD both occur in the upcoming winter and spring season, crop yield prospects could be similar to that achieved in 2012–13, the most recent year when an El Niño or a positive IOD immediately followed a La Niña event (Figure 3). The winter growing season in 2012–13 had a similar start to the growing season, and despite a significant reduction in growing season rainfall, crop yields remained close to the 5 and 10-year average at the time, but below current averages.

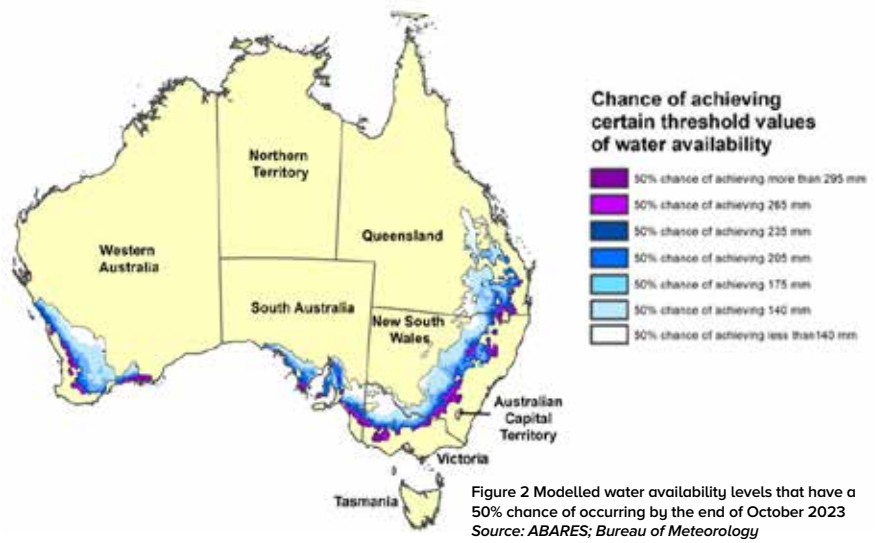


Figure 2 Modelled water availability levels that have a 50% chance of occurring by the end of October 2023
Source: ABARES; Bureau of Meteorology

Irrigated crops

The unseasonably high inflows into reservoir storages in the Murray–Darling Basin during early summer appear to have slowed, with small declines in water storage levels recorded in the first half of 2023. On 8 May 2023 the volume of water held in storage was around 22,200 GL, or around 90% of total capacity. This was 4% more than at the same time last year and remains at the highest level since 2016–17.

ABARES modelling indicates that the average water allocation price in the southern Murray–Darling Basin (sMDB) is forecast to remain relatively low in 2023–24 at $80/ML (compared to $210 over the last 10 years). Consecutive years of high water availability and rainfall have led to reduced irrigation water demand in 2022–23. The high water storages would also offset the likely return to drier seasonal conditions owing to an El Niño. Most of the major entitlements in the sMDB are forecast to reach 100% allocation in 2023–24 in all but an extreme dry scenario.

Combined with high carryover levels, there is more certainty about water availability at the start of the 2023–24 water year. This will allow irrigators to make more informed planting decisions and offer favourable irrigated planting prospects in both Queensland and northern New South Wales during 2023–24. This is despite the expected El Niño-induced decline in rainfall over the coming season.

Below average winter rainfall likely across Australian cropping regions

According to the Bureau of Meteorology's climate outlook for June to August 2023, there is a 50% chance of rainfall totals between 25 and 200 millimetres across central and eastern New South Wales, the southeast and northeast of Queensland, southern parts of South Australia and Western Australia, Victoria and Tasmania. Rainfall totals in excess of 200 millimetres are forecast for alpine regions of Victoria, part of northeast Queensland, far southwest of Western Australia and much of western Tasmania.

There is a 50% chance of receiving rainfall totals between 50 and 100 millimetres across most winter cropping regions. These 3-month rainfall totals are well below the historical average (1981–2018). Given the current levels of root zone soil moisture, below average rainfall totals are likely to be sufficient to support crop growth and development through to the end of winter. However, the 3-month rainfall totals are expected to be below 50 millimetres for Queensland growing regions. With below average levels of root zone soil moisture, below average rainfall totals are likely to be insufficient to support crops growth and development through to the end of winter particularly if the forecast above average temperatures are realised.

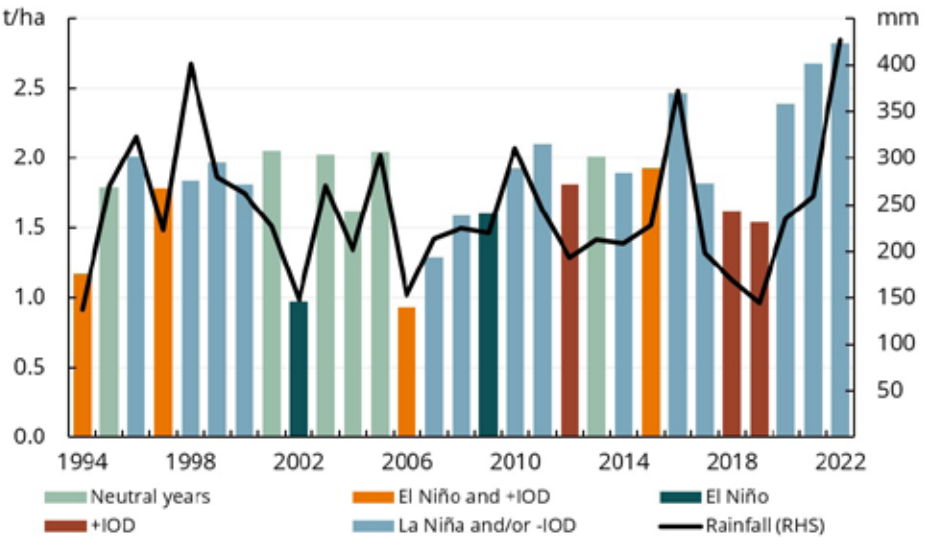


Figure 3 Australian cropping zone growing season rainfall and total grain, oilseed and pulse yields
Source: ABARES; Bureau of Meteorology

HERBICIDE CONTROL OPTIONS FORM PART OF A HOLISTIC ORCHARD WEED MANAGEMENT STRATEGY

Research[1] has shown that any weed growth in the first three months after planting will reduce tree growth. Weeds allowed to grow near new trees will reduce yields even two years later. Weeds compete with trees for water and nutrients and can slow the development of the tree and delay productivity. Weeds can also make the micro-climate more favourable for pests and diseases in both young and established orchards[2].

To be effective, weed management strategies should utilize a variety of management practices, such as orchard size, tree age, weed spectrum and density, soil type, moisture and under tree management. Good orchard hygiene is always the first step – keeping an eye out for new weeds and working quickly to eradicate or reduce spread, and wherever possible stop weed seed set.

Physical strategies for weed management include cultivation, weed matting, thermal weeding, grazing and mulching. Mulching is the most effective of these and the benefits go far beyond weed control. Mulching under tree rows with straw (or similar) will stop weed growth if applied thick enough to block sunlight. Mulching also increases moisture retention, regulates soil temperature and increases organic matter and soil microbe density.

Chemical herbicides are a cost-effective and reliable strategy for managing weeds in orchards. With an array of herbicides available, knowing how each works helps you get the best out of your herbicide application. Herbicides can be pre-emergent (applied before weeds emerge) or post-emergent (applied after the weed has emerged from the soil).

Syngenta Technical Services Lead Dr Brandy Rawnsley said knowing what weeds are in the orchard is important for product selection. "Growers may need a selective herbicide like FUSILADE® Forte which only controls grass weeds, or maybe they are looking for a product that eliminates all weed types," she said.

"If using knockdown herbicides, like SPRAY.SEED® or glyphosate, these act quickly and do not have any residual activity."

Residual herbicides remain active in the soil for extended periods and can act on successive weed germinations. Non-residual herbicides, such as the non-selective herbicides paraquat and glyphosate, have little or no soil activity and are quickly deactivated in the soil.

Syngenta offers two powerful post-emergent herbicide options, which can be used in orchards any time from dormancy to harvest. FUSILADE® Forte herbicide (Group 1) is a selective herbicide that provides powerful post-emergent control of couch, many annual grasses and certain perennial grasses in a range of horticultural crops, ornamentals and nursery trees.

"FUSILADE® Forte herbicide has a built-in adjuvant to help with coverage and retention, and is quickly absorbed and translocated to the growing points of weeds," said Dr Rawnsley.

"To be most effective, apply FUSILADE® Forte to young, actively growing weeds at 2-5 leaf stage before tillering. The advanced formulation containing surfactants and wetting agent, ensures uniform distribution.

"Good coverage of weeds is essential, and should be matched to the weeds being sprayed, using water rates greater than 200 L/ha.

"In orchards, your spray should be directed at the base of the tree, and you should avoid spraying any foliage of the tree wherever possible. Although FUSILADE® Forte is specific to grasses, it is important not to spray over the top of young trees, or over many nursery, native or ornamental trees."

FUSILADE® Forte herbicide should not be applied to weeds that are not actively growing, under stress or to flowering weeds. FUSILADE® Forte herbicide has no withholding period in stone fruit, pome fruit, citrus or avocado when used as directed.

"FUSILADE® Forte herbicide can be applied at any stage throughout the year, when weeds are small, and is rainfast in 1 hour, which is significantly better than other some other grass selective herbicides," said Dr Rawnsley.

"FUSILADE® Forte is the perfect solution to control grass weeds and offers the flexibility to be tank-mixed with a post-emergent broadleaf herbicide if required."

FUSILADE® Forte herbicide can be safely applied around the base of trees.

SPRAY.SEED® herbicide manages difficult to control weeds via double-knock applications.

A double knock approach uses two different modes of action, to stop hard to control weeds and any weeds from setting seed.

"A double knock strategy can be done with SPRAY.SEED® herbicide when weeds are young and actively growing in late winter or early spring. The SPRAY.SEED® causes rapid burn of green growth before hitting any new shoot growth with FUSILADE® Forte herbicide approximately 50 to 70 days later, when the new growth is approximately 5 cm in length."

SPRAY.SEED® herbicide (Group 22) is an ideal partner with FUSILADE® Forte. It is unrivalled for its speed of action to kill a wide range of both grass and broadleaf weeds in orchards. With specific strategies on label for avocados, mangoes, walnuts, pistachio and hazelnuts, SPRAY.SEED® herbicide is safe on perennial crops. It is rapidly absorbed, rainfast within 30 minutes and contact activity provides fast knockdown.

"One major advantage of SPRAY.SEED® herbicide is that it has no soil activity so it can be used around trees without risk of root absorption," said Dr Rawnsley.

For optimal effectiveness, apply SPRAY.SEED® herbicide to small, actively growing weeds using a water volume that thoroughly covers all of the foliage. The formulation delivers adequate adjuvant when SPRAY.SEED® herbicide is applied at 2.4 L/ha in 200 L of water, however it is advised to add an adjuvant such as AGRAL® spray adjuvant or BS1000* as per the label directions when using higher water rates.

Effective weed management relies on understanding the weed spectrum and orchard characteristics and integrating appropriate hygiene, physical and chemical strategies to suit. It is important to select herbicides based on the specific weed profile of the orchard, maintain and calibrate application equipment and adhere to label directions for application to achieve the most effective weed control.

® Registered trademark of a Syngenta Group Company.

* Registered trademark

References:

1. University of California (UC) IPM Pest Management Guidelines: Almond. UC ANR Publication 3431 (2017)

2. https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0007/1185154/Orchard-plant-protection-guide-2022.pdf

BASF'S TWO NEW COMMUNITY PADDOCKS SPROUT IN PASKEVILLE AND NHILL

BASF'S COMMUNITY PADDOCK INITIATIVE PARTNERS WITH LOCAL GROWERS TO GENERATE NEW AGRONOMIC INSIGHTS AND RAISE FUNDS FOR LOCAL COMMUNITIES

Stemming from last year's success, the 2023 BASF Community Paddocks initiative has extended to two new locations in Paskeville, South Australia and Nhill, Victoria. Local growers have generously designated paddocks on their land to grow barley, canola and wheat, with BASF providing crop protection products and continuous support throughout the season to drive healthy crops. The profits from the harvest obtained later in the year will be donated to the Nhill District Sporting Club and Paskeville Progress Association.

"We are delighted to extend our Community Paddock project with the partnership of the Nhill and Paskeville community. BASF takes great pride in not only supporting growers, but also giving back to local groups that are the heart and soul of our communities," said Andrew Gourlay, Head of Broadacre at BASF Australia.

Both sites were sown with barley in May, alongside small amounts of canola and wheat. Now well into the growing cycle, they have been carefully treated with BASF products such as Systiva®, Voraxor®, Frequency®, Opus® and Opera® to ensure an optimal level of weed control, and delivery of high-quality yield.

BASF is working alongside local grower Grant Pontifex to manage the Paskeville paddock. The team regularly visits and offers advice on yielding maximum returns that would better support the Paskeville Progress Association's work in the community. "It is wonderful to see members of our community join forces and give back in a meaningful way, by sharing knowledge and contributing much needed funds to the Association and to Paskeville itself," Pontifex said.

To drive further collaboration and understanding, members of the community will be able to visit both sites in the coming weeks, with the Paskeville site being open during the Yorke Peninsula Field Days in September, for agronomists and growers to view.

Throughout the season, BASF will regularly visit both sites to ensure crops are tracking well, and the right products are being used properly. Finding solutions for growers and giving back to the next generation of agri-professionals helps to strengthen local farming communities as they do **#TheBiggestJobOnEarth.**

For more information, visit **crop-solutions.basf.com.au/.**

BASF will supply crop protection products and ongoing support throughout the season, with profits donated back to the local community

FOOD SAFETY STARTS IN THE PADDOCK

ACCESS TO SAFE AND NUTRITIOUS FOOD IS EVERYONE'S HUMAN RIGHT, ANDYET ONE IN 10 PEOPLE ARE AFFECTED BY FOOD INSECURITY AND FOODBORNE DISEASES AROUND THE WORLD.

Worst of all, unsafe foods contribute to poor health conditions that are entirely preventable.This World Food Safety Day highlights the importance of food production and standards thatare informed and regulated by science and not misguided ideological demands on foodproduction that can do more harm than good.

"Stringent food systems play an important role in preventing exposure to microbial pathogens,toxins and other foodborne diseases that lead to impaired growth and development. Onlywhen food is safe can we fully benefit from its nutritional value and the social enjoyment ofsharing a good meal," said Chief Executive Office of CropLife Australia, the national peakindustry organisation for the plant science sector, Mr Matthew Cossey.

"Australia's agricultural sector has a global reputation for high produce safety standards andresponsible use of advanced crop protection technologies to manage food toxin risks toconsumers. Continuous pesticide residue monitoring shows that the use of these highlyregulated products continue to safely minimise dangerous toxins caused by fungus and insectdamage.

"We are fortunate in Australia, like in most of the developed world, that food has never beensafer and never has there been such variety of produce available to consumers. Plant scienceinnovations underpinned by good agricultural practice and food standards ensure what we eatis safe and builds resilience into our food systems.

"With 73 per cent of crop production attributable to the effective use of crop protectionproducts, this must not be taken for granted. It is vital that regulation in Australia keeps upwith advancements in science and technology so that farmers continue to have access to thebest possible tools that enable production of nutritious fruits, vegetables and grains.

Mr Cossey concluded, "There is no room for error. The implications of food contamination canhave very real widespread public health consequences. Whether we grow, process, transport,store, sell, buy, prepare or serve food, we all have a role to play. Australian farmers and theplant science industry are doing their part, so the best thing consumers can do for their healthis to continue to eat plenty of fresh fruit and vegetables and ensure proper food hygienepractices.

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REGIONAL WINNERS

INNOVATOR CATEGORY

Clayton Donovan, Rocklea, Queensland

Nick Bloor, Varsity Lakes, Queensland

Fiona & Liam Mann, Eradu, Western Australia

COMMUNITY AND PEOPLE CATEGORY

Allan & Nell Dawson, Bay of Plenty, New Zealand - Grower

David Manktelow, Hawkes Bay, New Zealand - Adviser

Cam Conboy, Lake Bolac, Victoria - Adviser

Andrew Gawith, Murtoa, Victoria - Grower

PRODUCTIVITY CATEGORY

Broden Holland, Young, New South Wales - Grower

Edward (Ted) Langley, Bordertown, South Australia - Grower

Martin Lovegrove, Verran, South Australia - Adviser

Scott Paton, Fremantle, Western Australia - Adviser

Daniel Andrews, Echuca, Victoria - Adviser

Bill Campbell, Geraldton, Western Australia - Adviser

Craig Brown, Perth, Western Australia - Adviser

Darren Best, Toodyay, Western Australia - Grower

Bruno Capogreco, Mandurah, Western Australia - Grower

SUSTAINABILITY CATEGORY

James Kahl, Wee Waa, New South Wales - Grower

Rob Long, Moree, New South Wales - Adviser

Hamish Marr, Methven, New Zealand - Grower

Murray Kelly, Christchurch, New Zealand - Adviser

Lawrence DiBella, Ingham, Queensland - Adviser

Nigel Blieschke, Barossa Valley, South Australia - Adviser

Jurie Germishuys, Greater Adelaide, South Australia - Grower

SYNGENTA GROWTH AWARDS REGIONAL WINNERS ANNOUNCED

OUTSTANDING GROWERS, ADVISERS, INNOVATORS AND COMMUNITY LEADERS PROGRESS TO NEXT STAGE OF PRESTIGIOUS AWARDS PROGRAM

The future of agriculture in Australia and New Zealand is in sound hands, according to Syngenta Managing Director and Country Head ANZ, Paul Luxton, who today announced the Regional Winners of this year's Syngenta Growth Awards, which recognises growers, advisers and innovators for their contribution to the industry.

The 23 Regional Winners, selected from a list of impressive nominations, will now progress to the final stage of judging, decided by a panel of independent industry specialists. The Regional Winners will gather in Sydney later in the year for the National Gala Dinner, where National Winners will be awarded in each category, and participate in a series of business workshops prior to the gala on agtech advancements and sustainable farming to extend their skillset.

The Syngenta Growth Awards program was launched in 2014 with Productivity, Sustainability, and Community & People categories. An Innovator category was added in 2020.

"We had an incredibly strong pool of nominees this year, reflecting the huge amount of talent, commitment and sheer hard work in our industry. Choosing regional finalists was a difficult task – as it always is – but it's such an honour to recognise individuals who are leading the way through exemplary practice, innovation, collaboration and passion for the industry," Mr Luxton says. "The list of Regional Winners covers a broad range of careers, locations and achievements – because excellence can be found everywhere in this diverse sector."

Mr Luxton says the impact of the awards program goes beyond the award winners.

"While we're celebrating individual achievement with this program, we are also seeking to empower regional and agricultural communities, which are sometimes undervalued and underestimated. Our agriculture industry is world class and deserves its time in the spotlight."

The National Winners in each of the four categories will be offered the opportunity to attend an international study tour next year, and will also join an alumni of previous winners, who remain connected and continue to add value to their communities.

The Syngenta Growth Awards supports the goals of Syngenta's four ambitious global sustainability commitments to reduce agriculture's carbon footprint and help farmers deal with the extreme weather patterns caused by climate change.

The four commitments include accelerating Syngenta's innovations to provide solutions for farmers, striving for carbon neutral agriculture, partnering with stakeholders across industries for impact, and lastly helping people stay safe and healthy by training eight million farm workers and striving for fair labour across their entire supply chain.

STRONG GROWTH FOR AUSTRALIAN BROADACRE FARMLAND PRICES

The average price of broadacre farmland per hectare has almost doubled over the last three years, increasing by 93% from 2020 to 2023.

ABARES executive director Dr Jared Greenville said recent growth in farmland prices has been extraordinary, and likely reflected a combination of factors including low interest rates in previous years, recent good commodity prices and seasonal conditions, and increased demand for land in general.

“Farmland is often used to secure lending, so increases in value can both improve equity and drive investment,” Dr Greenville said.

Median farmland prices have grown most in the high rainfall zone, increasing by 125% over the last 3 years to almost $9,000 per hectare. Price growth in the wheat-sheep zone was also strong, increasing by 80% over the same period to $3,465 per hectare.

Coming off a lower base, the average price of pastoral zone farmland increased by 130% since 2020 to reach $1,528 per hectare in 2023.

Dr Greenville said the latest farmland price estimates can be accessed by anyone through ABARES’ new Farmland Price Index online tool.

“Through an innovative and simple to operate dashboard on our website, users can gain valuable insights into market trends, access reliable information on the value of their farmland assets and track annual changes over time,” Dr Greenville said.

“Users can make price comparisons between farming zones or download data for their own analysis.

“The Index utilises a robust and effective method developed by ABARES ensuring estimates reflect market conditions.”

This is the first release of the ABARES Farmland Price Index — a statistically robust measure of Australian broadacre farmland prices using CoreLogic data and a stratified median approach. Further expansion of this product is already underway to include detailed regional estimates and quarterly indexes.

ABARES’ new Farmland Price Index can be found here **www.agriculture.gov.au/abares/data/farmland-price-index**

NEW QUEENSLAND-GROWN MELON, EMPEROR'S PEARL SET TO DAZZLE JAPANESE CONSUMERS

:Daintree Fresh CEO and leading agronomist, Shaun Jackson.

Consumers in Japan could soon be enjoying a new, sweet, white-fleshed Queensland melon – Emperor's Pearl.

In one of 8 projects co-funded by the Queensland Government under the Food and Fibre to Market: Industry Partnerships (FF2M) Program, North Queensland's Daintree Fresh and their supply chain partners will receive $58,000 towards their melon trials.

Daintree Fresh CEO and leading agronomist, Shaun Jackson expects the fruit to be heading to Japan as early as September. Mr Jackson has already secured an importer and leading retailer to support him in promoting the fruit.

He is convinced that Emperor's Pearl can capitalise on increasing demand from Japanese consumers for Queensland's sweet, yellow-flesh varieties, Emperor's Gold and Orange Candy. He said "I'm grateful for the support of the Queensland Government with the trials. It can take years to successfully breed new fruit varieties and input costs are constantly on the rise. Growers always need to be innovating by securing breeding rights and trialling new varieties that can give us an advantage over our competitors in the market."

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