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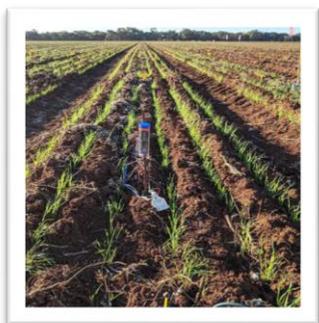
TURN THE DRAY TIME INTO LEARNING TIME

Rob Houghton, Chairman IREC, Irrigator, Gogeldrie

QUICK TAKE

This is our YEAR

Yearn to learn
Embrace change
Accept the challenge
Reap the rewards



REWARD FOR HARD WORK AND COLLABORATION

Iva Quarisa, Executive Officer, IREC

QUICK TAKE

IREC has been building momentum over the past few years and all the hard work and collaboration is now reaping rewards. The delivery of exciting new research and topical programs has come about through advice from our members and other irrigators



THE MIRID CHALLENGE – DOES CLOUDINESS AFFECT MIRID DAMAGE IN THE MURRUMBIDGEE:

Dr Mary Whitehouse Principal Research Scientist, CSIRO Agriculture & Food

QUICK TAKE

- Cloudiness, which reduces light to cotton plants, may reduce the plant's ability to compensate for damage from insects.
- We tested if mirid damage or fruit removal on pre-flowering cotton under "cloudy" conditions (reduced light caused by white cages) might affect yield in southern NSW.
- We found that heavy mirid pressure under "cloudy" conditions initially reduced square numbers but did not affect the number of bolls at picking or the amount of ginned lint.
- Early season mirid pressure on cloudy days could reduce early squares but at Griffith the cotton can compensate for this setback by the end of the season.



DEMONSTRATING BETTER OPTIONS FOR WEED CONTRL IN COTTON

Eric Koetz Research Agronomist, Weeds, Southern Cropping, NSW Department of Primary Industries

QUICK TAKE

- Changing weed management practices have resulted in a shift in weed species across cotton-growing regions.
- The efficacy of glyphosate in several weeds is decreasing and we appear to be on a slow path toward increasing glyphosate resistance.
- In terms of early weediness, a conventional control system of pendimethalin followed by glyphosate + Gesagard® (applied as layby) provided the cleanest result.
- The control and glyphosate alone were the weediest treatments, and had significantly lower yields.



TOPPING UP NUTRIENT BUDGETS FOR COTTON WITH NUTRIENTS IN POULTRY LITTER

Dr Wendy Quayle Research Scientist, Centre for Regional & Rural Futures, Deakin University, Hanwood

QUICK TAKE

- In a field trial, poultry litter at 8–16 t/ha, integrated with a urea application program to meet target nitrogen rates, provided the most favourable yield outcomes. In fact, within practical limits, the more the better!
- Poultry litter supplied adequate nitrogen and phosphorus for high-yielding, back to back cotton crops, either alone at appropriate rates or by topping-up nutrient requirements with inorganic fertiliser.
- Lint yield increased by 6% in litter-amended soils compared with treatments of inorganic fertiliser alone, over two years of back to back cotton.
- Yield decline caused by poor water infiltration and associated water stress, was buffered where poultry litter was applied, in the second year of back to back cotton.

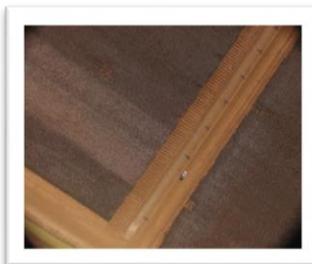


INTEGRATING MANURES AND COMPOSTS INTO FARM FERTILISER BUDGETS

Dr Wendy Quayle Research Scientist, Centre for Regional & Rural Futures, Deakin University, Hanwood

QUICK TAKE

- The potential of using animal manures as soil amendments is well-recognised by agricultural industries, but it is difficult for growers to predict the value of organic products to soil management programs.
- A new national research program, across four states and several major cropping industries, will develop and ground truth an integrated nutrient calculator, to assist growers to use organic waste to best effect within their conventional soil management programs.
- The research program includes a site at the IREC Field Station, where poultry litter is being used as a soil amendment and fertiliser for cotton.



THE VALUE OF THE LAST IRRIGATION OF COTTON

Steve Buster RivCott Ltd /Summit Ag, Griffith

QUICK TAKE

- The yield effect of the last (or terminal) irrigation of cotton was investigated in four commercial cotton crops in the Murrumbidgee Valley in the 2018–19 season.
- Cotton receiving a last irrigation in mid-March yielded the same yield as the cotton with a last irrigation in late February. This shows there is potentially 0.6–0.8 ML/ha of water that otherwise could be saved or sold.
- Cotton with a last irrigation in mid-February had a 0–25% yield loss compared with crop that had a last irrigation in late February or mid-March. Potentially, income reduction with one less irrigation is less than the cost of the subsequent irrigation.
- Final irrigation in early February had the greatest yield reduction (8–44%) in three of the four fields. While yield penalties were significant, quality was not affected to the extent that cotton would be discounted.



UAVS AND MULTISPECTRAL CAMERAS EARNING A PLACE IN MEDIUM AND HIGH-VALUE CROPPING

Richard Stone Rural Liquid Fertilisers, **Peter Borella** AgAerial Images Pty Ltd

QUICK TAKE

- Images gained from UAV-mounted cameras and sensors are providing farmers with timely and useful information for crop management.
- NDVI maps obtained by UAV imagery offer more precision than satellite images for locating sites within a field, to undertake sampling for soil or plant tissue tests.
- Aerial images provide information to plan zone-based testing, which compared with grid sampling, can provide a considerable cost saving in any crop.
- NDVI maps can be combined with a range of other data, such as yield maps or EM38 surveys, to thoroughly understand field variation and plan for remediations using variable rate application.



MID-ROW BANDING OF NITROGEN IN RIVERINA IRRIGATED WINTER CROPS

Dr Leigh Vial Centre for Regional & Rural Futures, Deakin University, Hanwood

Laura Kaylock Project Officer Western Murray Land Improvement Group

This research is part of the GRDC Southern NSW Local Trials initiative, funded by the GRDC in 2017 and 2018

QUICK TAKE

- Mid-row banding of high rates of nitrogen at sowing achieves a similar or slightly lower yield response and apparent nitrogen recovery efficiency (ANRE) than topdressing at stem elongation.
- On a 27 cm row spacing, banded nitrogen becomes available to the crop at 10 weeks after sowing.
- A large proportion of banded nitrogen is preserved as ammonium early in the season, preventing loss of nitrogen during waterlogging events.
- Mid-row banding is warranted where a yield potential 4 t/ha or more is expected and seeding equipment can band fertiliser to a concentration of at least 55 kg N/ha, placed at least 2.5 cm from the seed and at a depth of 5–7 cm.



WHAT CAN WE LEARN FROM THE RICE INDUSTRY'S BEST?

Troy Mauger - Extension Coordinator, Rice Extension, **Harriet Brickhill** Extension

Officer, Rice Extension, **Charleton Glenn** Extension Officer, Rice Extension

Mark Groat Field Extension/Agronomy Officer Grower Services, SunRice

QUICK TAKES

- New industry awards aims to promote the success of innovative growers who use new technology and adopting the latest research.
- By celebrating the industry's best growers, it is hoped that the awards inspire higher productivity with improved yields, maximising water use efficiency, adoption of new technologies and sustainable management practices.
- The operation of the inaugural SunRice Grower of the Year, Peter and Renee Burke of Jerilderie, featured industry-leading management practices, excellent workplace health and safety, water use efficiency driven by recycling and exceptional production results.



RIVERINA AG INDUSTRIES COMING TOGETHER TO REDUCE SPRAY DRIFT

Iva Quarisa Secretariat, SOS Riverina Valleys

IREC has been instrumental in the formation of a new group to tackle spray drift in the region—known as SOS

Riverina Valleys. SOS stands for stop off-target spraying.

More information

Twitter: [Stop Off-target Spraying-Riverina Valleys @DriftSpray](#)

Facebook: [@SOSRiverinavalleys](#)

Telephone: Iva Quarisa 0402 069 643



REDUCING THE IMPACT OF RURAL CRIME IN NSW

Detective Sergeant Damian Nott Southern Zone Coordinator – Rural Crime Prevention Team, New South Wales Police

QUICK TAKE

- The NSW Police Force defines rural crime as “incidents of crime that impact on the function of the pastoral, agricultural and aquaculture industries”.
- To better service rural and remote NSW, the Rural Crime Prevention Team was established during late 2017 and members of the team are located at 27 nonmetropolitan locations.
- Over 350 NSW police officers have undertaken internal rural crime workshops since 2017, to increase their understanding of rural crime and its impacts.
- The Rural Crime Prevention Team provides services to investigate and prevent rural crime, which are promoted to rural and regional communities through social media, community engagement and educational tools and resources.



BEATING THE DRY AND PREPARING FOR THE WET

Kieran O’Keeffe CottonInfo, Michael Ryan Riverina Agriconsultants, Chris Morshead Amberley Pastoral Company

QUICK TAKE

- It will rain one day—we just don’t know when. Use the dry time to get the farm, your office and yourself in good nick for when things turn good.
- Use the time to get develop a soil health program, clean and renovate channel banks or prepare seedbeds for when water is available again. It will be, one day.
- Review financial arrangements and investigate what assistance may be available. Start working on a plan for cash flow.
- People are the essential component of your business, community and industry—look after yourself and keep an eye out for your family and friends.