

Articles from IREC Farmers' Newsletter – edition 203 – Autumn 2020, with a quick overview.

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WIDE-RANGING IRRIGATION RESEARCH TRIALS LOOKING AT REGIONAL AND LOCAL ISSUES

Iva Quarisa - Executive Officer IREC, Griffith

QUICK TAKE

- IREC has a broad program of projects and field trials underway in 2020. The program delivers localised information and inspiration to members.
- Issues targeted in new projects this year include area-wide management of cropping system weeds, automation of cotton irrigation systems, and the potential of animal manures in cropping systems.
- IREC members have had the opportunity to be involved in new agricultural technologies, through the My Data Management Pilot Group and the My Digital Farm program.
- IREC's involvement in the Pulse Check program gave growers and advisors the opportunity to increase knowledge and confidence to optimise pulse crop yields.

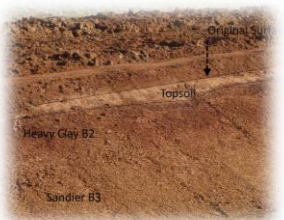


SMART SENSING AND AUTOMATION — CRUISE CONTROL FOR YOUR IRRIGATION SYSTEM

John Hornbuckle, Rodrigo Filev Maia and Carlos Ballester - Centre for Regional and Rural Futures, Deakin University, Griffith, NSW

QUICK TAKE

- Two new projects, led by Deakin University, are looking at the benefits of smart sensing and automation in cotton and rice systems.
- These projects, as part of the Smarter Irrigation for Profit Phase II project, aim to achieve much more than just remote control of irrigation.
- Smart sensing and automation maximise water and labour efficiency by automating control of irrigation and integrating in-field feedback sensors and forecast weather conditions.
- Industry project partners will ensure that products used in the trial are robust and ready for industry uptake.
- The projects aim to develop low-cost smart-sensing and automation systems for broadacre irrigation.



SOIL STRUCTURE 101

Pat Hulme - Soil Scientist Sustainable Soils Management, Warren

QUICK TAKE

- Soil structure is the arrangement of individual soil particles into aggregates or peds.
- Structure creates the holes through which water and air move through the soil, and through which roots grow.
- Farmers invest in creating small aggregates with tillage, then destroy these aggregates with irrigation.



A NEW WEED CONTROL SYSTEM FOR COTTON GROWERS IN SOUTHERN NSW

Angus MacLennan - Market Development Agronomist Bayer Crop Science, NSW

QUICK TAKE

- The Roundup Ready® Xtend Crop System is Bayer's new weed control system for cotton growers.
- The system will offer growers greater weed control flexibility through over-the-top tolerance to glyphosate, dicamba and glufosinate.
- Trials conducted in southern NSW showed there is an excellent fit for glufosinate on target grass weed species.
- The introduction of dicamba and glufosinate as over-the-top options will complement glyphosate tolerance and contribute to increased weed control across a number of difficult to control species.



WEAPONS FOR BATTLING GLYPHOSATE RESISTANT WEEDS IN COTTON AND GRAIN CROPS

Eric Koetz - Research Agronomist, Weeds, Southern Cropping NSW Department of Primary Industries, CottonInfo Technical Lead, Weed Management

QUICK TAKE

- The increasing incidence of glyphosate resistant weeds, including in Roundup Ready systems, is intensifying the need for alternative weed management options in cropping systems.
- Residual herbicide programs for cotton growing systems are being investigated in a new experiment, which includes sites at the IREC Whitton Field Station and NSW DPI Leeton Research Station.
- The relatively warm start to the 2019–20 season did not show any differences in plant stand numbers between the treatments; however this may not be the case in cooler seasons.



COST-EFFECTIVE REVEGETATION ON COTTON FARMS

Dr Rhiannon Smith - Research Fellow and Lecturer in Environmental Management University of New England, Armidale

QUICK TAKE

- Native vegetation on farms provides habitat for insects, birds and animals, as well as ecosystem services to growers.
- A new project will investigate cost-effective revegetation strategies for local native vegetation communities on heavy clay soils in semi-arid regions, to improve biodiversity and ecosystem service provision and support sustainable agriculture.
- The project will improve understanding of seed germination and test new seeding techniques, including using large drones to broadcast seeds into the soil with a modified air rifle.

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