

IRRIGATORS FLOCK TO ANNUAL IREC FIELD DAY

Egg and bacon rolls and hot coffee fuelled some 90 irrigators and farm advisors for a full morning's agenda at the annual IREC Field Day. Held on 19 January 2022, attendees were shown the full program of trials and demonstrations at the IREC Field Station at Whitton.

Rachel Diversi

Project Officer, IREC



SMART irrigation was the focus of several updates and presentations at the field day. Dr John Hornbuckle, Centre for Regional and Rural Futures, Deakin University, described the benefits of smart sensing and irrigation automation with Padman Stops. Two layouts at the field station have been monitored: bankless with water depth sensors on outlets and pipe-through-the-bank with in-field sensors. Both are using soil tension data to inform irrigation scheduling. Overall, smart sensing and automation benefit irrigators through water and labour savings, considerably reducing crop production costs.

Matt Champness of Deakin University and Shawn Padman of Padman Stops also discussed the benefits of automated irrigation. In Matt's words, 'The opportunity cost of conducting farm activities such as harvesting or spraying whilst irrigation occurs in the background with timely water changes is the greatest benefit that automated irrigation provides'.

Andrew Bell of Bidgee Automation talked about additional benefits of sensing and automation when smart technologies are used for water ordering and linking in with district-wide irrigation schemes.

Further information

[Integrated smart sensing and automation for cotton bankless channel irrigation](#)

[IoT enables automated low-cost surface irrigation](#)

Dr Wendy Quayle of the Centre for Regional and Rural Futures (CeRRF), Deakin University, studied the value of organic amendments to cropping soils, at the IREC Field Station over 3 years.

Results from the research will contribute to a decision-support tool to help growers make decisions about soil improvement. Using data about organic fertiliser rates, soil type and weather, the tool estimates available soil nutrients and when they will be readily available to the crop.

The tool is still under development and builds on the research by Deakin University, which was supported by CRDC and partner organisations.

See [page 32](#) for a re-cap of the results from the research.



Mark Groat from SunRice provided an update on the progress of the rice sowing rate trial.

Rice seed was direct drilled at rates of 60 kg/ha, 70 kg/ha and 120 kg/ha into a back-to-back rice paddock, to investigate the impact of sowing rate on lodging. At the time of the field day, the rice was developing very evenly across each sowing rate.



LEFT: Kevin Saillard of Rubicon Water explained the FarmConnect system, which assists growers to make irrigation management decisions based on real-time data. The system uses smart sensors, automated actuators and IoT enabled networks, to save water, improve yields and significantly reduce labour.

RIGHT: Dr Jackie Webb of CeRRF, Deakin University, discussed how on-farm irrigation dams could support carbon storage and emission reduction. New knowledge from the study will help develop strategies to utilise irrigation water bodies for sustainable carbon emissions/storage. This project is a partnership between Deakin University and AgriFutures.





Kieran O'Keeffe, CottonInfo, discussed the value of monitoring nitrogen in cotton crops. Nitrogen levels are tracking as sufficient across the MIA, especially with the free nitrogen from storms through January. The cotton at the IREC Field Station has done very well, considering increasing concerns about black root rot due to back-to-back cotton. To ameliorate these concerns for next season, if weather is ideal, cereals will be planted in cotton blocks B and C, and there are discussions for a green manure crop in cotton block D.

Emma Ayliffe, Summit Ag Agricultural Consulting, provided an exciting update on winter crop discussions for the GRDC Irrigation Discussion Groups.

The Griffith group, based at the IREC Field Station, will be looking at the use of growth regulators on irrigated barley to improve crop yield and standability, as well as reducing head loss.

The Coleambally group will be looking at high input durum wheat to optimise nitrogen and irrigation efficiency, and fungicides for improving profitability.

Ella Arnold and Jorian Millyard, Cotton Seed Distributors, encouraged growers to consider environmental conditions and management practices, and plant into optimal conditions wherever possible.

In less than ideal conditions, there are 3 key considerations:

1. variety, particularly seed type (seed density)
2. seed quality (from your statement of seed analysis, which will contain germination results)
3. significantly increasing planting rate when less than ideal conditions + low seedling vigour is combined.

More information www.faststartcotton.com.au



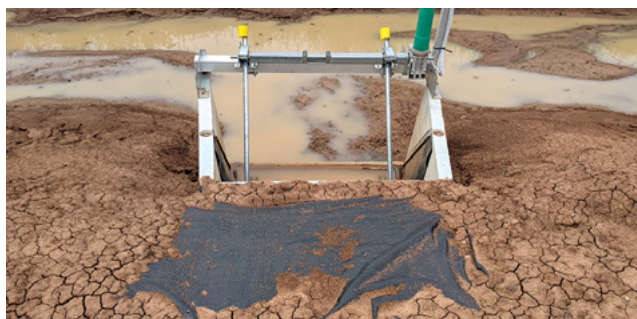
Shakira Johnson, AUSVEG, introduced the iMapPests project, which uses tall mobile surveillance units termed 'sentinels' that are topped with airborne trapping equipment and technology.

The sentinels trap pests and pathogens, which are collected for laboratory testing. The goal of the project is to develop a rapid national surveillance system capable of monitoring and reporting pests and pathogens across regions and industries.

More information

[Network of high-tech surveillance units set to cover key potato growing regions](#)

[iMapPESTS website](#)



Hayden Petty, Summit Ag Agricultural Consulting, provided an update on the IREC weeds project, which is part of the area-wide weed management of weeds project.

The project is looking at the management of tough-to-control weeds in areas where mechanical control is difficult (e.g. around stops and channels). The project is comparing some common treatments such as residual herbicides, as well as novel ideas such as weed matting!

Acknowledgements

The field day got off to a great start thanks to egg and bacon rolls sponsored by **Padman Stops** and coffee sponsored by **Omnia Nutriology**. 🌞



Why cotton is the crop to pick



Rewarding gross margins

Cotton provides consistently high gross margins



Simplified weed & pest control

Biotechnology in cotton allows for less insecticides



Greater flexibility

Greater flexibility in planting windows enables optimum planting schedules



Less risk

Advances in breeding and biotech have reduced risk



Marketing opportunities

Forwarding options and the small size of the domestic market

More and more Australian growers are discovering the benefits of including cotton in their crop rotations. If you've been thinking about joining them, the Acres of Opportunity website is a great place to start.

www.acresofopportunity.com.au



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