



Information when you need it



the cotton thread

Border Rivers, St George and Dirranbandi

Jan/Feb 2021



There was keen interest from irrigators at the Glenn Lyon's organised tour of bankless irrigation systems around St George recently. Automation of Padman structures was on display with grower and supplier insights into the systems.

Season Update

Crops in the Balonne region are progressing well with many crops reaching or past cut out stage. There are a handful of late crops that have been "restarted" in the Irrigation area around St George due to the additional flows into Beardmore Dam. Recent rain is seeing further flows into Beardmore at



Best Practice



present with flows passing upstream gauges on the Maranoa and Balonne rivers indicating in excess of 20,000ML is likely to come in. Pressure from insects (SLW, mirids, shield beetles) continues however reports are control measures, where used, have been effective. Damage from mice is also evident with baiting happening on some farms although it would appear pressure is less than some of the regions south of the Balonne are experiencing.







The MacIntyre region has received some scattered, but useful, rainfall over past 2 weeks however this has failed to produce any significant change in the storage volumes at Pindari or Glenlyon dams. Many crops in the region will be short one irrigation or more.

Both regions are tracking roughly in line with the 10 year average for day degree accumulation despite the hot period in the second half of November generating rapid day degree accumulation.

Disease presence (mostly verticillium and fusarium wilts) across all valleys is reportedly higher than in recent years. Many occurrences are in fields with a history of disease however incidences of atypical disease, including reoccurring wilt, is being reported for investigation by the plant pathology teams.

The recent [CottonInfo Moisture Manager](#) shows models continue support an above normal outlook for rain in the coming months.



| Source | Temp Forecast | Precipitation outlook | | | | |
|---|---------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | | Emerald | Sth Q'ld | N-NSW | C-NSW | S-NSW |
| ACCESS-S  | Cooler | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May |
| UK Met  | Normal | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Normal | Normal | Normal |
| IRI NMME  | Normal | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May |
| ECMWF  | Cooler | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Normal |
| CMCC  | Cooler | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May |
| JMA  | Cooler | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May | Above normal Mar/Apr/May |

MacIntyre Valley Cotton Field Day

The MacIntyre Valley cotton field day is on March 17 after COVID 19 resulted in the cancellation of the National Field day in the MacIntyre last year. The field day will be hosted by Brooklyn Farms on the “Mobandilla” property. The day kicks off from 7:30am with breakfast and coffee at Riddles oval, Goondiwindi with buses departing for the property at 8am. Presentations on the day include:

- Defoliation – updates from CSIRO and CSD
- Collaborative Farm Management – Agworld
- Roundup Ready Xtend Cropping system and Roundup Ready Plus update – Bayer
- Trapview, an automated pest network – ADAMA
- Fast Start program update – Syngenta
- Integrated Sensor monitoring on farm – Goanna Ag
- Using Precision Ag to understand constraints to production – PCT
- Plus a guest speaker.

For more information contact: Cameron Derbridge 0407 299 056
RSVPs by March 16 to George Phillips at Georgie.phillips@nutrien.com.au

Irrigation Focus Events

There has been several irrigation focused events in and adjacent to the region during February.

Tour of Bankless Systems in St George

St George irrigation consultant, Glenn Lyons, organised a tour in early February, of farms around St George that had converted fields to forms of bankless irrigation over recent years. A number of these had progressed with automation over the past 12 months. Representatives from Padman stops were on hand as most of the automation technology installed had been developed by Padman.

Grower insights revealed the ability to operate the systems manually for a few years before adding automation helped define and clarify what they needed the automation to be able to do. Irrigators, with and without automation, highlighted the ease of use, the labour saving features of the system design and the water savings they had been able to achieve. Those who had adopted automation felt they had further refined the efficiency of the system and were saving more water. One irrigator felt the cost to automate would be recovered inside of two crops.

Irrigation Head Ditch talks

Associate professor, Joe Foley from USQ delivered a series of demonstrations on three farms between Goondiwindi and Mungindi in early February. These focused on practical ways to improve irrigation with siphons and the impact that siphon size, length, placement and channel head can have on flow rates through a siphon. The CottonInfo water team have put together an “[Irrigation Toolbox Series](#)” which includes factsheets and videos to help you better understand best practice for an efficient irrigation and to help train/refresh irrigation staff.



Joe Foley , USQ demonstrating practical ways to improve siphon irrigation to a group of growers

GVIA Smarter Irrigation for Profit Phase 2 Field Day

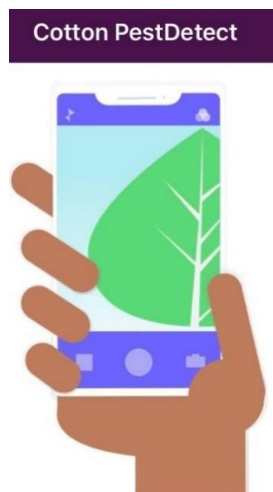
As part of the Smarter Irrigation for Profit Phase II (SIP2) project, the Gwydir Valleys Irrigators Association organised a field day hosted at Keytah, Moree. The theme of the day was digital technologies and automated irrigation with the host property showcasing a range of technologies. Attendees heard from a range of presenters and suppliers on topics including:

- New tech integrated smart sensing and automation for cotton
- Padman Stops Auto Winch
- GoField – Canopy Sensor and soil Probe
- EnviroNode Farm Automation Control
- SISCOweb irrigation Optimisation
- Plant Based Sensing for Cotton Irrigation
- Light weight surface drip technology and automation
- Evaporation mitigation for water Storages
- Adoption of Automated irrigation

For more information on the SIP2 project, visit the website at [Smarter Irrigation for Profit](#). For information specific to the Keytah field day, contact Lou Gall at GVIA on lou.gall@gvia.org.au.

CTS Information Session Dirranbandi

A small gathering of growers attended the CottonInfo and Cotton Australia organised session on canopy temperature sensors. Funding from Cotton Australia enabled the Dirranbandi Cotton Growers association to install a canopy temperature sensor (CTS) on a local farm for the season. The CTS unit, provided by Goanna Ag, is combined with a soil moisture probe. Data from the probe and CTS was transmitted via the Telstra CAT M1 communication network and is viewable on the Goanna Ag dashboard. This data can be used to aid irrigation decisions.

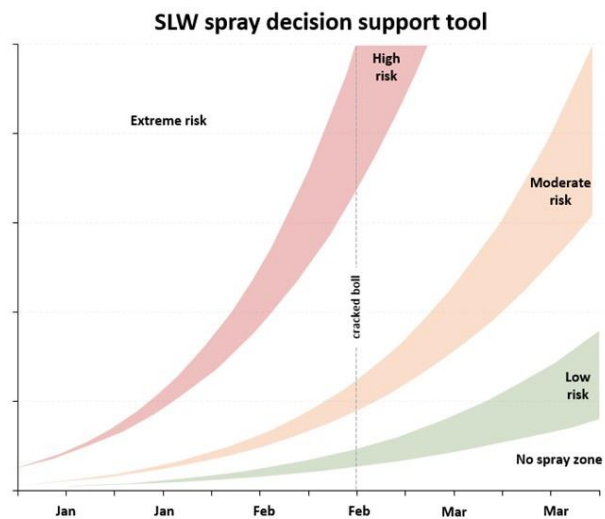


Smart phones join the hunt for whitefly

The Cotton PestDetect App is a digital tool in development to assist with sampling for silverleaf whitefly nymphs and cotton aphids by providing image-derived insect counts using the phone's camera. The app had an initial test run last year, during which thousands of photos were captured by researchers and agronomists. Over the past 8 months, the project team and the University of Southern Queensland and Queensland Department of Agriculture & Fisheries have been improving the accuracy of the camera app using the thousands of photos taken by researchers and consultants and building in new features.

The biggest of those new features is the automatic plotting of results on the latest decision support tools. The app automatically records the accumulated day degrees for each field based on the provided GPS location, and so you can see the latest results for that field as soon as you are finished taking photos. The app also indicates when sufficient samples have been collected for a management unit.

A beta version of the App is about to be released for this cotton season, and the development team is inviting all interested growers and consultants to try it out when sampling for whitefly and aphids in the coming weeks. You can get started by contacting Derek Long from USQ (derek.long@usq.edu.au) who will create an account for you and send a link to the App.



New silverleaf whitefly decision support tool by Dr Richard Sequira (CRDC project DAQ1903).

Roundup Ready Extend Spray App and Crop System Training

To support the Roundup Ready Xtend Crop System in the US, Bayer has developed and published the RRXtend Spray App.

The RRXtend Spray App is a convenient and easy-to-use digital tool that provides growers and applicators with location-specific weather forecasts, digital record keeping capabilities, and educational resources related to the XtendiMax® with VaporGrip® Technology herbicide, used over-the-top of XtendFlex cotton. The forecast feature helps applicators identify weather conditions and inversion risk as they plan their applications.

The RRXtend Spray App provides location specific, hourly forecasts of temperature, relative humidity, wind and inversion risk; that are developed using publicly available weather data and machine learning (ML) models developed at The Climate Corporation. In the RRXtend Spray App, the inversion risk forecast function indicates the probability (by percentage) of an inversion occurring at a particular location and hour of the day; the forecast function gives applicators an approximate inversion risk reading for the next 100 hours.

In order to train the model for Australia, Bayer require real-time weather station data.

Bayer has installed five weather towers across cotton growing regions that measure: temperature at multiple heights, wind speed, relative humidity, solar intensity and rainfall. Data from these towers will be used to test and train the existing model for Australia, with plans to launch an Australian version

of the RRXtend Spray App. Underpin and improve the Herbicide Resistance Management Strategy and put in place guidelines and protocols for the stewardship and management of new herbicide tolerance traits in cotton. This is important to prolong the efficacy and use pattern of glyphosate in the Australian cotton farming system. Monitor and identify herbicide resistance and put in place tactics to manage emerging issues.

For more information on the app, visit the following website:

[Successful Application Starts Right Here | RRXtend Spray App \(roundupreadyxtend.com\)](https://roundupreadyxtend.com)

Spray application training for the Roundup Ready Xtend crop system starts in March. Bayer has released training dates with those for the Balonne and MacIntyre listed in the “What’s On” Section at the end of this newsletter. Contact your local Bayer representative Michael.fing@bayer.com for more information.

CottonInfo Blog

[Evaluation Interactions between Irrigation Infrastructure and Fish](#)

In line with CRDC’s goal to improve sustainability, research is underway to better understand and minimise the impact of irrigation infrastructure on fish populations in rivers.

Specialists from QLD DAF, with support from CRDC, will evaluate how various fish species interact with different types of irrigation infrastructure. This information will enable measures to be developed to avoid fish being entrained - or caught up - in irrigation systems.

CSD Update

FACTS ON FRIDAY

The recent publications of [last irrigation and defoliation](#), and [boll weights and boll factors](#) have covered the topics of determining [last irrigation and defoliation](#), and [boll weights and boll factors](#). See the highlighted links for more information.

COTTON YARN

The February publication of the [Cotton Yarn](#) covers a range of topics and news including:

- James Quinn announced as the new General Manager – Growth and Development
- CSD and Lower Namoi Field day March 2nd.
- Strong establishment sets up dryland crops on the Downs
- Developing a new cotton variety for the Australian Cotton industry – this blog looks at the process of bringing new varieties to market.

- Seasonal updates from the cotton production areas

CSD members can access this publication from [here](#).

CRDC news

News from CRDC includes:

- [Partner\(s\) sort to commercialise the SLW phone app developed through USQ and QDAF](#)
- Participants in the Australian Future Cotton Leaders program were announced in January.
- Feasibility study grants awarded to applicants in the “Revolutionising Spray Application” project
- Review of irrigation automation technologies to be conducted.

For more details on these, click [here](#).

COTTON AUSTRALIA CORNER

Cotton Matters – key points

- Emergency mouse baiting permit approved by APVMA
- Gwydir valley consultation sessions on proposed changes to floodplain harvesting rules
- ICAC global cotton update released
- Field day held at Gatton

News from Cotton Australia:

- Cotton Conference 2021 postponed
- Australian Cotton Industry awards resurrected for 2021
- Teach the Teachers event held in Emerald
- Students learning about cotton in Theodore and Junee
- Students learn about tackling textile waste at the Australian Natural Fibres hackathon hosted by the University of Western Sydney.
- Trenery launches Australian cotton sweat range of clothing
- For further information click [here](#).

What's On:

- 2 March:** CSD and Lower Namoi Field Day, Wee Waa.
- 5 March:** St George CGA Awards Dinner, St George
- 17 March:** MacIntyre Valley Field Day, Goondiwindi.
- 26 March:** Bayer Roundup Ready Extend Flex Crop System spray application training, Goondiwindi.
- 1 April:** Bayer Roundup Ready Extend Flex Crop System spray application training, St George

7 June: Bayer Roundup Ready Extend Flex Crop System spray application training, Goondiwindi.

8 June: Bayer Roundup Ready Extend Flex Crop System spray application training, St George

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