



the **cotton tale**

October 2021

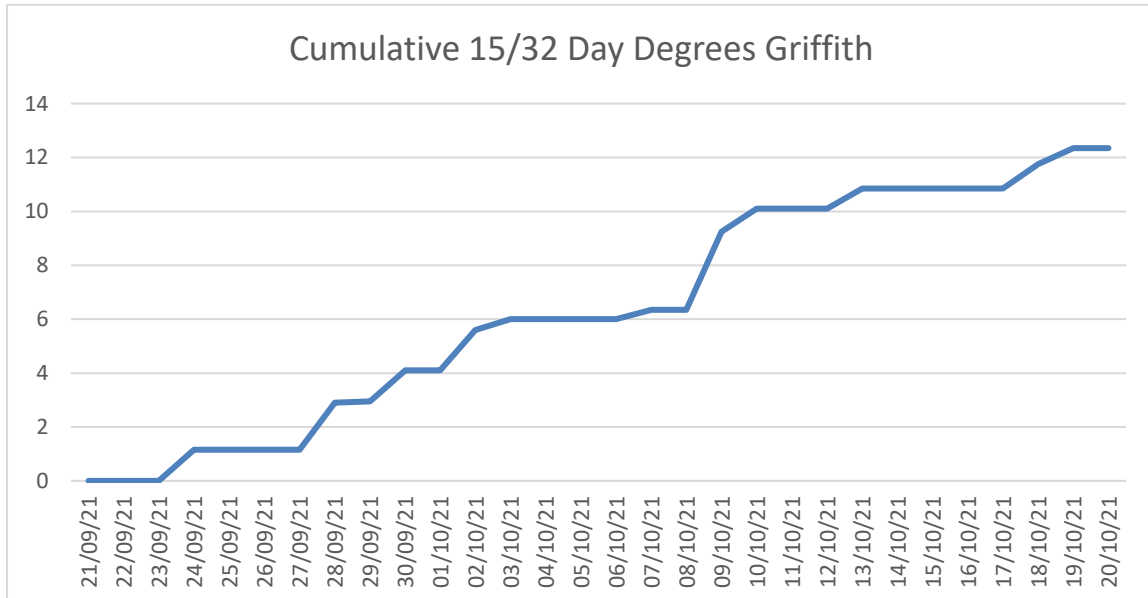
The first 30 days of the season has been the coolest start in the last five years with 26 cold shocks and daily average temperatures 2 degrees below average at 14.5 degrees (2016 for the same period at 13.5 degrees and 26 cold shocks). Establishment of consistent stands has been difficult and replant decisions have been made in many fields. Some fields do have good consistent numbers as in this photo from a first time grower. Some fields did get a rain strike but others did run into very cool mornings.



The cool nights are highlighted by the following 15/32 day degree graph which is the new way of calculating day degrees. There are sections in the graph where it flatlines showing zero day degrees occurring due to cool nights. A rising plane of temperatures is the key.



Replant decisions have been made by now and there will be a focus on reading the long term conditions as we move into the season. Management of crop growth and development becomes more critical after this slow start to get a good end result.



Cotton Nutrition Management (Southern Rivers) webinar

5.30 pm AEDT Thursday 4 November

With the high urea price and a wet season predicted it is important to make the most of your nutrition inputs. Knowing what levels you have in field by testing leaf blades and petioles will help you make informed nutrition management decisions.

Join from the meeting link

<https://backpaddock.webex.com/backpaddock/j.php?MTID=m541013f5d047588bc0238a47172ba701>

Chris Dowling from Back Paddock has extensive experience in cotton nutrition and will be taking us through some of the latest research and recommendations for cotton, and how we should prepare for this season.

He will also go over some of the basics including sampling protocols for petioles and leaf blades. There will also be some discussion time at the end, so bring any questions you have about cotton nutrition.

PLEASE PASS THIS LINK ONTO ANY COLLEAGUES OR GROWERS.

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Retention for high yielding cotton trials 2020-21

Retention is a key focus for crop managers during squaring and early flowering. However, opinion on what actually constitutes acceptable retention for securing yield potential varies between individuals and regions, with agronomist survey data suggesting a range as wide as 25-90% retention prior to first flower as the trigger for control action. During the conventional cotton era, early boll retention was a driver for yield potential, simply because holding bolls in the later canopy was very difficult due to resistant *Helicoverpa*. With the advent of Bollgard® varieties, it is the bolls retained in the upper and outer canopy that now contribute a significant portion of yield potential compared with first position bolls on the lowest fruiting branches.

For Bollgard® varieties, early retention is primarily affected by mirids and/or environmental conditions. Industry practice surveys suggest that 51% of farms spend \$11-50/ha and a further 40% spend up to \$100/ha on managing mirids each season. While this might be a relatively low input cost for some farms in monetary terms, there are other costs associated with the potential to flare SLW and mealybugs as well as products such as fipronil adding the industry's environmental toxicological load (ETL). While this is a term that may currently be unfamiliar to many people, all of agriculture is facing increasing regulatory pressure to reduce their ETLs where possible, driving a need to optimally target insecticide use.

To better understand the when and how for managing retention, research is re-examining the relationship between early season retention and crop growth, maturity, lint yield and quality of irrigated Bollgard® 3 cotton. In these experiments, squares are removed from fruiting branches (FB) 1-5 pre-flowering, FB 6-10 just after first flower, or both (FB 1-10;

removed at two separate occasions) from plants within treatment plots. This work was done at 12 sites from Emerald to Whitton during 2020/21 within commercial fields

Results indicate full compensation for early season square loss with no impact on lint yield, quality and picking date for all sites north of Narrabri. At cooler sites, the extreme treatment where fruit were removed from the fruiting branches 1-10 impacted yield and in some cases reduced micronaire. At Leeton, square removal from the first 5 OR second 5 fruiting branches resulted in a yield loss (9%) but not quality. The reason for this is not fully clear (and a departure from the previous season) but is possibly due to a combination of variety, defoliation timing and a cool finish. More detailed work will be conducted in the south this season at two sites to further explore variety impacts.

Growth measurements and segmented picking assessments conducted at each site show that at first flower, a crop has only grown 25% of the total number of fruiting sites that will be produced by cut-out. Of the total number of sites grown by cut-out, only 40-50% will remain at crop maturity. When squares were removed, our data showed that additional bolls were retained directly adjacent to or above the lost position. In other words, compensation was rapid and did not depend on growing additional fruiting branches. Rather, substitute bolls were retained elsewhere nearby in the canopy. Fruit removal from fruiting branches 1-5 or 6-10 had no impact on final boll number compared with the undamaged controls across all sites including the south (see photos).

The impact on final maturity was also minimal (0-3 days) following the removal of fruit from fruiting branches 1-5 or 6-10. However, the rate of opening was altered, with initial opening delayed but then rapidly catching up to the undamaged treatments between 60-100% boll opening.

This research has another season to go so we can capture environmental variability. When complete, we expect to be able to make revised recommendations for industry regarding appropriate action thresholds for managing early season retention for high yielding Bollgard® 3.

This article is not advocating that mirids not be controlled. Instead, it is offering a challenge that we consider the most appropriate timing of control that becomes more critical from about a week before flowering onwards. When the need to spray does arrive, consider using products with a lower beneficial insect disruption index. The relative ranking of insecticides for mirids can be found in the [Cotton Pest Management Guide](#).

The full 2020-21 report on the research trials by Paul Grundy is attached.

Short CottonInfo videos re mirids:

- [Soft options for mirids](#)
- [Mirids in cotton - sampling and management](#)

ImapPESTS




This season I will be tracking insect activity on a farm near the IREC field station using this bit of gear. The target species will be early thrips, mirids at flowering and later in the season Silverleaf whitefly. Beneficials will also be monitored. It will be interesting to see how insect numbers work out with a soft season so far. I don't expect thrip numbers to build until winter crops hay off so numbers in cotton crops could be delayed and the crop will grow away from thrip damage.

So a few reports of insecticides and fungicides already being programmed in to spray recommendations seem to me to be unjustified. A reminder that what may seem cheap now can knock out the good insects that will be needed to keep numbers in check. Go soft early and the benefits will come.

Cotton 101

Can you tell the difference between a vegetative and a fruiting branch? This short video shows what to look for.

[Distinguishing between vegetative and fruiting branches in young crops - YouTube](#)



CRDC has engaged Ag Econ to investigate current industry **Nitrogen practices and attitudes** to help inform and improve research funding decisions.

Have your say by either;

Completing a 10 minute survey online:
<https://www.surveymonkey.com/r/CottonNitrogen>

OR

Give Ag Econ's George Revell or Janine Powell a call:
Over the phone we'll run through the survey questions (and capture any other comments you have).
Expect this to take about 15 minutes.
George: 0447 543 860, Janine: 0427 961 332

Meet Harriet Brickhill, Regional Manager -Southern NSW for Cotton Australia



Harriet Brickhill has joined the Cotton Australia team as Regional Manager for southern NSW, and will be based in Griffith.

Harriet originates from Griffith and has spent the last few years working as an Extension Officer with Rice Extension. During that time she worked closely with rice growers in the

Murrumbidgee and Coleambally Irrigation Area. Before that, she was an agronomist for Yenda Producers Cooperative, based at Yenda working with both dryland and irrigated growers. Harriet also studied a Bachelor of Agricultural Science (Hons) at Charles Sturt University graduating in 2016.

Harriet is looking forward to becoming involved in the cotton industry and taking on the challenges and opportunities in her new role.

September Quiz Answer – Well it looks like space junk but it is the original turbine out of the Tumut 1 power station. After 50 years of service, it is now located in Coleambally Lions park.



October quiz – Where is this?



Regards Kieran

Disclaimer:

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