



NORTHERN NEWSLETTER

POST SEASON

Welcome to the latest issue of the Northern Newsletter, brought to you by **Acres of Opportunity**, a collaboration between Cotton Seed Distributors (CSD) and Bayer Crop Science, with contributions from Cotton Australia, CSIRO, the Cotton Research & Development Corporation (CRDC), the Department of Agriculture & Fisheries, Queensland (DAF) and Ag Econ.

In the final issue for the 2020 cotton season, we will review trial results and reflect on learnings from the challenges of the season.

Trials overview

A number of variety trials were run across Northern Australia this season, stretching from Far North Queensland, through the Northern Territory and across to Kununurra in Western Australia's Ord River district. Dryland variety trials were planted near Georgetown, QLD and also near Katherine, NT. Unfortunately, due to minimal wet season rainfall, seasonal constraints and in one case; the impact of spray drift, neither trial was able to be picked for yield and quality results.

Three irrigated variety trials were conducted in the north this season, located in Mareeba QLD, Katherine NT and Kununurra WA. All of these trials were planted or established under somewhat challenging conditions, ranging from hot and baking soil temperatures at planting, to deluges of wet season rainfall during establishment. As a credit to the trial co-operators, all three trials were picked and ginned for yield and quality data.

CSD would like to take this opportunity to thank a number of our agents in the northern regions, who collected data and co-ordinated trial picking this season. Travel restrictions limited the number of visits to trial sites by CSD staff, however our agents were more than capable in monitoring trials and collected data with very high integrity.

Trial results are still being finalised at this time, but as the completed trial information becomes available, it will be posted to the CSD website, along with trials from other regions within the industry. There will also be a summary video put together looking at trial results and seasonal conditions for the north. CSD members can access these

results from the **Variety Trials** section on CSD's website in due course.

CSD encourages all growers and industry to become a member of CSD and are working hard to provide value for our members. If you are not a CSD member, you can sign up via **CSD's website**. This will allow access to trial results, as well as much more information and a number of useful online tools.

Agronomist's comment

*Below is a brief seasonal summary from Olivia Borden, an agronomist with **EE Muir & Sons**, based in Katherine and servicing the NT and WA regions.*



As the last of the 2020 cotton modules are being strapped down and heading south for ginning, the first showers of the predicted early wet have started rolling in and our local NT cotton growers shift focus to plans for the coming season, which now feels as though it is just around the corner.

With a challenging 2019-20 wet season where the tap turned off early, dryland cotton yields ranged from 1.5 to 6 bales/ha, depending on soil type and rainfall conditions. Irrigated cotton in the NT and Kununurra on drip, sprinkler and furrow irrigation ranged from 6 to 13 bales/ha, again depending on soil and field conditions. The range in yields shows that there is still much to learn, but higher yields can be achieved with good management and conditions.

Establishment was challenging, as cotton can struggle when germinating in soil temperatures above 40 degrees. With soil surface temperatures reaching up to 70°C, some replant was required to achieve a good stand. Over the border, Kununurra farmers also had some replants as they endured heavy rains through establishment, resulting in plants spending three to four days in or under water. These are the kind of issues we will battle with up here.

Planting into good ground cover is a big advantage for cotton establishment, as uniform plant population is key to high yields. We will also be focusing on ways to enhance root development, reducing sowing rates and investigating technology available to assist in making accurate decisions



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based around watering, to avoid moisture stress events and pollen dilution due to humidity this coming season.

With cotton growers planning to increase areas grown next year, new growers coming on board and a grower owned cotton gin in the pipeline, cotton appears to have an exciting future in the north. **E.E Muir & Sons** would like to thank everyone from across the industry who has assisted the northern cotton growers this year. The cotton industry is a friendly community and we welcome them to the north. Most importantly we would like to thank our local growers. Here's to a successful season in 2021!

Weather Comment

- For more analysis and fortnightly updates, join our e-news at www.agecon.com.au/subscribe.
- Watch the recent climate webinar presented by Jon Welsh [here](#).

With the La Niña declaration making headlines in rural media, most are wondering when the patterns are going to shift towards cooler and wetter, with Kununurra and Katherine having at least seen some early moisture. Since July, warm ocean waters in both the tropical Pacific and Indian Ocean has created confidence for wetter spring conditions, although the atmosphere has been slow to 'couple' with the signal from the oceans. The atmosphere remains obstructed by drier air masses in our north and a benign MJO stalled over Indonesia. For Queensland growing areas, a warming Niño 4 region has a strong negative correlation with rainfall in November and it may take another 3 weeks before we see proper rain in the gulf and across the eastern tropics. The barometric pressure in Darwin is still only average and is dragging the chain, even though the SOI is positive (thanks to high pressure in Tahiti tipping the scales). The latest NCEP (US) analysis shows the Walker Circulation in the Pacific exhibiting characteristics more consistent with La Niña - which means broad scale moisture is coming.

For more information, contact CottonInfo's Climate Technical Lead, Jon Welsh from AgEcon:

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Or visit the [BOM website](#).



Please see below a link to a short survey which we would like our readers to participate in. This will allow us to improve future editions of the publication.

[TAKE THE SURVEY NOW](#)

Post crop control

DOZEN DEEDS FOR NORTHERN AUSTRALIA

Rule 12. Post crop controls

Ensure your crop is destroyed post picking. Cotton can regrow into ratoon plants post defoliation or picking.

There are a number of post crop requirements for Northern Australia cotton crops, in order to comply with the Bollgard® 3 Resistance Management Plan (RMP):

CROP DESTRUCTION

All Bollgard 3 crops must be slashed or mulched and controlled to prevent regrowth within 4 weeks of harvesting, so that they do not continue to act as hosts for *Helicoverpa* spp.. Growers must make all reasonable efforts to remove volunteer and ratoon plants as soon as possible from all fields - including fallow areas, Bollgard 3 crops, conventional cotton crops and all refuges.

END OF SEASON MANAGEMENT OF REFUGES/TRAP CROPS

A late summer trap crop (pigeon pea) must be planted for all Bollgard 3 cotton grown in Northern Australia. The planting configuration of the trap crop should be the same as that of the Bollgard 3 crop. Irrigated Bollgard 3 must have an irrigated trap crop. Dryland Bollgard 3 growers who do not have any irrigated cotton on their farm should contact Bayer for alternative options.

TRAP CROP DESTRUCTION

The trap crop must be destroyed 2-4 weeks (but not before 2 weeks) after final defoliation of the Bollgard 3 cotton crop, (slash and pupae bust - full soil disturbance to a depth of 10 cm across the entire trap crop area).

In some cases, cultivation will be the best method for removal of cotton, post picking. This pass can be utilised for additional purposes such as remedial action to repair soil constraints like compaction, or to replace hills or beds in fields, in preparation for the next crop. In some cases, particularly in dryland systems where soils are unable to be cultivated in the dry season or where erosion can become a problem, growers should undertake additional tactics, such as root cutting or the application of herbicides, to prevent and control any ratoon and volunteer cotton growth.

Ratoon and volunteer cotton plants will provide a green bridge for difficult to control pests such as mealybugs. Mealybugs have been observed on ratoon and volunteer plants throughout northern Australia (Mareeba to Kununurra) even after just one crop cycle. Ensuring your crop destruction is 100% effective and that any volunteers are subsequently controlled is paramount for the control of this pest, particularly if fields are re-sown with cotton during the following season. The control of volunteer cotton



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is especially difficult in pulse crop rotations and therefore the growing of grain legumes are not a preferred option as a break crop between back to back cotton production in northern Australia. Better options include millet, sorghum or maize as volunteers are much more easily controlled in these monocot crop types and these species are not a host for mealybugs.

For more information on ratoon and volunteer cotton control, as well as the stewardship requirements for growing cotton in Northern Australia, view the [Bollgard 3 Resistance Management Plan \(RMP\) for Northern Australia](#).

Pre-season considerations

A new season begins with the harvest of the previous crop. Pre-season preparation will be covered in more detail in the next issue of the Northern Newsletter, but it's worth speaking to your CSD Agent to organise your seed orders early. The [2020 CSD Grower Information Guide](#) is also a valuable resource to use.

CSD offers an early order program to guarantee growers their preferred choice of variety and seed treatment, which includes a price incentive. This offer will close at COB Wednesday, 28 October 2020 for dispatch of seed in December 2020.

For those planning to grow dryland cotton in Northern Australia, the [Dryland Industry Support Program](#) is also available for seed ordered at regular order price. The details of this program can be found in further detail in the 2020 Grower Guide, or by contacting CSD.

The Roundup Ready PLUS program now has a northern Australia specific window

For the 2020/21 season, northern Australian cotton growers will be offered rebates for using participating products sprayed on Roundup Ready Flex cotton fields between 1 October 2020 and 31 April 2021*.

Find out more at www.roundupreadyplus.com.au.



Planting windows in Northern Australia

WHAT IS A PLANTING WINDOW?

A planting window is a resistance management technique that restricts the period in which planting can occur, with the aim of restricting the number of generations of *Helicoverpa* spp. exposed to Bollgard 3 crops each season. Planting windows are an important part of the Bollgard® 3 Resistance Management Plan (RMP), regulated by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

HOW DO PLANTING WINDOWS WORK?

Planting within a window reduces the length of time that Bollgard 3 will be in the ground and thus limits the number of generations of *Helicoverpa* spp. exposed to Bt proteins during this time.

The greater the number of generations exposed to the Bt proteins, the greater the opportunity for resistance to develop.

PLANTING WINDOW FOR NORTHERN AUSTRALIA

The table below outlines region specific planting windows, which requires all Bollgard 3 cotton crops to be watered up or planted into moisture in an 8-week window between December 1 and May 30. Valley boundaries will be determined by Bayer and TIMS. Valley boundaries for the 2020/21 season are currently being updated, Bayer will update the “Planting Windows in Northern Australia Guide” on the [Bollgard 3 website](#) which will include any new valley boundaries.

Within each valley, the start date of the planting window will be determined by Bayer and TIMS in consultation with local growers and reflected in a regionally amended “Bollgard 3 Planting Window Variation Notice” issued by Bayer.

Table 1: RMP specified Planting Windows for Northern Australia.

Area	Planting window
Valleys within Northern Australia	Planted into moisture or watered-up in an 8-week window determined by Bayer and the TIMS Committee, between 1 December and 30 May.

For further details on each valley in Northern Australia and the process for setting a planting window download the [Planting Windows in Northern Australia Guide](#).

FOR MORE INFORMATION

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RESOURCES AND TOOLS

Resources

- [CSD 2020 Grower Information Guide](#)
- [NORpak: Cotton Production and Management Guidelines for the Ord River Irrigation Area](#)
- [NORpak: Cotton Production and Management Guidelines for the Burdekin and NQ coastal dry tropics](#)
- [Tropical Cotton Production: Considerations for Northern Growers](#)
- [Growing Cotton in Northern Australia, Grower Guide](#)
- [Acres of Opportunity Irrigated Cotton Guide](#)
- [Acres of Opportunity Dryland Cotton Guide](#)
- [Australian Cotton Production Manual](#)
- [Bollgard 3 Northern Resistance Management Plan \(RMP\)](#)
- [CottonInfo defoliation fact sheet](#)
- [Cotton Australia Biosecurity Resources](#)
- [Biosecurity risk management plan for transportation of cotton modules from Western Australia and the Northern Territory to Southern Queensland for ginning 2020' for further information](#)

Tools

- [Cotton Field Weather Network](#)
- [CSD Day Degree Calculator](#)

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