



NORTHERN NEWSLETTER FAR NORTH QLD EDITION

JULY, 2023 EDITION: CUTOUT TO PICKING

www.acresofopportunity.com.au

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, the Cotton Research & Development Corporation (CRDC), the Department of Agriculture & Fisheries, Queensland (DAF) and AgEcon.

PREDICTING THE ONSET OF NORTHERN RAINFALL

A resource that may be useful in determining risk of picking moisture or interruption of in-field operations in regard to rainfall, is the BOM tool for predicting the onset of northern rainfall. This tool has been in experimental phase for a number of years and can aid in decision making.

Most recent issue was published on the 29 June 2023.

The Northern Rainfall Onset 2022 to 2023 predictions published on the BOM on the 25 August 2022 were very accurate for the 2022-23 season. Australia's 2022-23 northern wet season summary indicated that "rainfall was well above average for most northern areas with small pockets recording their highest wet season rainfall on record. The wet season rainfall was the sixth-wettest season on record with 6 tropical cyclones in the Australia region from October 2022 to April 2023.

La Niña conditions in the tropical Pacific Ocean were in place at the start of Northern Australia wet season and remained active for the majority of the season until the Bureau declared an end, moving to an El Niño WATCH in March 2023.

Multiple floods occurred in major rivers in the north, affecting widespread areas and communities in Queensland, Western Australia, and the Northern Territory".



For more information, contact CottonInfo's Climate Technical Lead, Jon Welsh - AgEcon
m 0458 215 335 email jon@agecon.com.au.

FINISHING THE CROP

Refer to acres of opportunity dryland and irrigated cotton guides:

- [Dryland Cotton Guide](#)
- [Irrigated Cotton Guide](#)



DOZEN DEEDS FOR NORTHERN AUSTRALIA

RULE 11. HARVEST/PICKING

Do not defoliate too early - ensure the crop and fibre are mature.

TIMING THE FINAL IRRIGATION

Plan the last irrigation to allow the crop sufficient time to begin natural senescence and the soil to dry without affecting yield or quality. A cotton crop can extract 75% of plant available water prior to picking without affecting yield or quality. This takes about 20 days for a soil with 100 mm (sandy / loamy textured soils or shallow root system) of total plant available water and about 30 days for a soil with 150 to 180 mm of available water (clay or deep root system in sand / loam) during May to July. If the soil has not been adequately dried there is a risk the crop will reshoot before picking and require an additional defoliation. Monitoring soil water availability using capacitance probes will greatly assist this process.

TIMING DEFOLIATION

Defoliating too early can lead to immature cotton fibres, which has the potential to downgrade fibre quality during classing and may lead to discounts in bale prices. Your consultant can assist with the timing and rates of defoliation through varying methods. It is often better to use a combination of the methods below to determine maturity:

- 4 Nodes Above Cracked Boll (NACB). Physiologically, the last harvestable boll is mature when the boll four nodes down has begun to open up (cracked).
- When the crop reaches 60% open. This is determined through simply counting the number of open bolls compared to the total number of bolls.
- Cutting bolls and looking for mature seeds. Bolls should be firm to cut even with a sharp knife; the contents of the seed should be fully formed, and the seed coat turned from translucent to tan or black.

Note: Defoliation of moisture stressed crops can be difficult.

Nodes Above Cracked Boll (NACB)



In Northern Australia, it can be common for crops to be top heavy, with a greater proportion of the fruit being within the top half/third of the plant and much less on the earlier fruiting, lower nodes. Timing of defoliation for these crops can be somewhat tricky, in that crops can appear to be more mature than they actually are. These crops require careful assessment using the NACB technique and boll cutting to determine the ideal timing to commence defoliation. If the crop is variable across the field, it may be necessary to wait a bit longer until the less mature field sections are ready. Leaf drop is readily straight forward for northern crops, but bolls can be difficult to open particularly if they are not quite ready.

DEFOLIANT APPLICATION

Speak to your consultant about the best rates and products to use when defoliating. Defoliation utilises products which cause the leaves to drop from the plant and products which encourage unopened bolls to open. It is normal for irrigated crops to have two, or sometimes even more defoliation applications, depending on the season. Depending on the plant's growth, different rates and products may be required for each application. Be cautious about rates and products that are used, in order to ensure that leaves do not 'freeze' onto the plants. Applications should not be off label or include products not registered for use at defoliation. The use of Dropp® UltraMAX has not been necessary for many research crops over the last decade in northern Australia. Do not add diuron to defoliation mixes, not only is this practice off label, but under northern conditions it has been observed to cause serious leaf freezing, resulting in greater trash contamination of picked lint.



Refer to the [CSD fact sheet on defoliation preparation](#) for further details.



DOZEN DEEDS FOR NORTHERN AUSTRALIA RULE 11. HARVEST/PICKING

Do not pick if seed cotton moisture is greater than 12%. This can cause ginning fibre quality issues which could lead to discount penalties.

PICKERS VS STRIPPERS

It may be necessary to consider using a cotton stripper, rather than a picker when yields are low, and bolls are tight. A stripper will take almost everything off the plant, even bolls which are tight and likely to be missed by a picker, however this may also be detrimental in some situations, where those remaining bolls are poor in fibre quality. Stripped cotton is also often quite trashy and harder to gin and you will also be transporting much more crop matter to the gin (e.g., stems).

TIMING PICKING

Pay attention to the upper fruiting branches and the rate of boll opening. Once ready, pick the crop on time and without delay. Cotton has the ability to weather some adverse climatic conditions but can be prone to downgrades in fibre quality.

In recent seasons, some Northern Australia cotton crops - particularly dryland crops, have also been prone to cotton locks falling out of bolls once they are open. This is another reason why timeliness of picking is important. Cotton should not be picked if there is a heavy dew or moisture from recent rainfall, or at any time when moisture levels are above 12%.

Picking wet cotton and baling or building modules under wet conditions can lead to fibre quality issues, especially if there is any length of time before the cotton is processed at the gin. Cotton, if picked too wet, can result in spontaneous combustion while in storage, and fires in machinery. Pay attention to conditions. In some locations it may not be appropriate to commence picking until late morning if there has been heavy overnight dew. Some signs that cotton is too wet to pick are:

- If moisture is evident on your vehicle/machinery
- If you can see or feel moisture at all on the bolls
- Seeds inside the lint do not crack if bitten
- You are experiencing picker head door blockages, or the picker is throwing cotton out the front
- Depending on your location and the time of year at picking, moist air and heavy dews can occur anytime between sundown and sunrise and may take some time to dry out after sunrise

The best outcome for the crop is to have good quality cotton post ginning, which has minimal downgrades and a good turnout (the percentage of lint to seed from the raw product). Well timed and effective defoliation, as well as picking under the right conditions will contribute to this.

WORKPLACE HEALTH AND SAFETY AND HARVEST

It is vital that all contractors and farm staff go through a safety induction prior to cotton harvest. The key to managing farm safety during harvest is to involve all staff in identifying potential hazards and implement a plan to manage these safety risks. This process is equally important for contractors as well as farm staff. Developing a set of procedures of how you would like the harvesting operation to progress will ensure that all involved are aware of correct and safe operation of equipment.

BIOSECURITY

Vehicles, machinery and equipment: Vehicles and equipment such as pickers and tractors can carry soil and plant material, particularly weed seeds, to other areas or other farms. Come Clean Go Clean is one of the simplest, yet most effective ways of minimising the spread of pest, weeds and diseases by ensuring vehicles and machinery are arriving onto and leaving farms mud and trash-free. It is essential that 'come clean, go clean' protocols are adhered to at all times.



PICKING CONTRACTORS

It is important to contact your picking contractor as early as possible, so they can time their arrival when your crop is ready to be picked. Communication is essential to ensure that you have a picker available, when necessary, as there may be a number of other crops in the region and limited availability for contractors. Talk to your local grower groups if you require contact details for picking contractors.

GINNING AND TRANSPORT

Access to cost effective transportation for round cotton modules can be a major impediment for cotton production at distant locations, with backloads limited in some areas. Transportation costs have ranged from \$60-\$190 per ginned bale (not module) for growers in Northern Australia depending on distances involved. If possible, it is recommended that cotton modules should be covered during transport to the gin. Locks of cotton can be dislodged by the wind in transit and can litter the roadside. This cotton in the monsoonal environment will grow unchecked and provides an excellent bridge for insect pests and diseases. This rogue cotton is also a huge biosecurity and social licence risk for the cotton industry.



CONTROLLING WEEDS, VOLUNTEER AND RATOON COTTON

Control of volunteer and ratoon cotton is a key part of the Bollgard 3 Resistance Management Plan (RMP) and is also important for disease prevention.

Ratoon and volunteer cotton plants will provide a green bridge for difficult to control pests such as mealybugs and aphids. Mealybugs and aphids have been observed on ratoon and volunteer plants throughout northern Australia even after just one crop cycle.

Cotton bunchy top disease (CBT) has also been detected in NQ crops. The presence of this disease goes hand in hand with the abundance of aphids (the vector responsible for spreading the causal virus).

Crop managers now have a critically important opportunity to focus on farm hygiene this winter and prevent a ruinous start to next season by breaking the green bridge that would otherwise allow aphids, mealybugs and CBTD to survive and infest the following crop.

Effective crop destruction coupled with the removal of cotton volunteers and ratoons from fields and adjacent farm areas is a highly effective defence against pest and disease carry-over.

Ensuring your crop destruction is 100% effective and that any volunteers are subsequently controlled is paramount for the control of these pests.

Whilst it is not feasible to eliminate all potential hosts within the broader farming landscape, controlling broad leaf weeds and feral cotton within an adjacent to fields greatly limits the opportunity for crop re-infestation the following season.

For CBT disease, earlier crop infection equals greater yield impact. Removing green bridges in the immediate cropping area better avoids early crop infestation.



INDUSTRY PROGRAMS

FASTSTART™ COTTON PROGRAM

FastStart is a collaboration between Syngenta and Cotton Seed Distributors that combines world leading cotton genetics, chemistry and technologies, resulting in strong, healthy establishment and robust growth in the early stages of a crop's life up until flowering.

Together, Syngenta and CSD developed the FastStart program to screen novel technologies and support the development of practical tools to help growers address cotton establishment challenges whilst also driving cotton yield potential and supporting the Australian cotton industry.



FastStart™ Cotton Establishment Awards: Far-North QLD Regional Winner Brett Lewis, Mareeba, Irrigated. Photo: Cameron Hassett, Brett Lewis & Rebecca Wieland (Agronomist GT Ag Services)

i Visit FastStart™ Website for further information. www.faststartcotton.com.au

THE 2022/23 ROUNDUP READY PLUS® PROGRAM FOR NORTHERN AUSTRALIA

The Roundup Ready PLUS® program aims to support and reward cotton growers who are using herbicides sustainably and helping to slow or prevent glyphosate resistance in key weed species, through product recommendations, education campaigns and financial rebates.

The Roundup Ready PLUS portal is open until 31 August 2023, for growers in Northern Australia to claim a rebate on participating products used in their cotton cropping phase in the 2022/23 season.

i Visit the portal roundupreadyplus.com.au. A guide to help growers with rebate submissions can be found [here](#).

BOLLGARD® 3 RESISTANCE MANAGEMENT PLAN (RMP)

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

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 \(RMP\) for Northern Australia](#).



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).

STAY UP TO DATE WITH ALL THINGS COTTON

A wealth of cotton industry information is just a few clicks away, covering everything including varieties, technology, agronomy, policy, advocacy, and much more. We encourage all growers to subscribe to industry updates and publications to help you stay in the loop with the latest information and opportunities within our industry.



COTTON SEED DISTRIBUTORS LTD (CSD)

CSD is a major investor in cotton breeding, research and development, having developed a long and successful partnership with the CSIRO cotton breeding program. CSD's objective is to deliver elite varieties that are bred and adapted to suit local growing conditions by delivering yield and quality outcomes. CSD Members have access to a wide range of updates and technical information.

 To learn more and apply for CSD membership visit [CSD's website](#).



COTTON AUSTRALIA

Cotton Australia is the peak representative body for the Australian cotton growing industry. It determines and drives the industry's strategic direction, with a strong focus on R&D, promoting the value of the industry, reporting on environmental credibility and implementing policy objectives in consultation with stakeholders.

 You can learn more and subscribe to updates by visiting the [contact page](#) of the Cotton Australia website.



CRDC

The Cotton Research and Development Corporation (CRDC) delivers outcomes in cotton research, development and extension for the industry. A partnership between the Commonwealth Government and the Australian cotton industry, CRDC exists to enhance the performance of the industry through investment in, and delivery of, RD&E: helping to increase the productivity and profitability of growers. CRDC publishes a quarterly magazine called Spotlight and co-publishes major publications such as the Pest Management Guide and Cotton Production Manual.

 Subscribe to any or all of the CRDC and CottonInfo publications [here](#).



COTTONINFO

CottonInfo is the Australian cotton industry's joint extension program and is a joint venture from CRDC, Cotton Australia, and CSD. CottonInfo connects growers with research, bringing you the latest news, information, events and research, and helping you achieve best practice. You can subscribe to CottonInfo's weekly emails and weather monitoring service, as well as ensuring you receive publications such as the Pest Guide and Production Manual.


 You can also access northern specific information such as analysis of gross margin [budget scenarios](#).

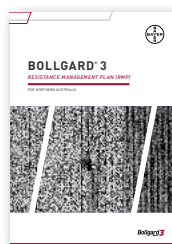


RESOURCES




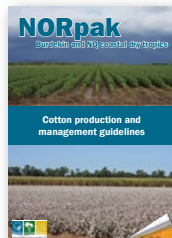
DEFOLIATION: Optimising your end of season management CottonInfo

 Access this publication [here](#).



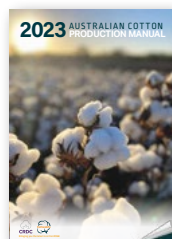
BOLLGARD 3: Resistance Management (RMP) for Northern Australia

 Access this publication [here](#).



NORPAK: Cotton Production and Management Guidelines for the Burdekin

 Access this publication [here](#).




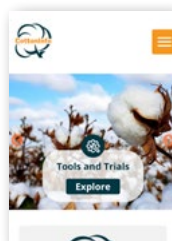
AUSTRALIAN COTTON PRODUCTION MANUAL 2023: CRDC

 Access this publication [here](#).




TROPICAL COTTON PRODUCTION: Considerations for Northern Growers

 Access this publication [here](#).




COTTONINFO: Website

 Access this publication [here](#).




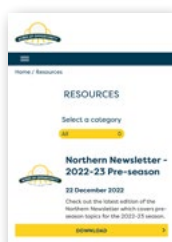
GROWING COTTON IN NORTHERN AUSTRALIA: Grower Guide

 Access this publication [here](#).



TURN OUT FACT SHEET: May 2023

 Access this publication [here](#).




ACRES OF OPPORTUNITY: Biosecurity

 Access this publication [here](#).




CSD COTTON YARNS: Defoliation


 Access this publication [here](#).

TOOLS


Cotton Seed Distributors (CSD) Tools

 Access the tools [here](#).


Cotton Field Weather Network

 Access the tools [here](#).

Canopy Temperature Network

 Access the tools [here](#).

CSD Day Degree Calculator

 Access the tools [here](#).

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*Roundup Ready herbicides refers to Roundup Ready® Herbicide with PLANTSHIELD® and Roundup Ready PL Herbicide with PLANTSHIELD Technology. Always refer to and follow product labels.