

# the **cq cotton call**

## November 2022

### Welcome to the November Edition: What's been happening?

We have some cotton flowering and some still being planted. It is looking like another big season for CQ with the Central Highlands getting 100% water for the year. This is great news for growers and a good outlook for 2022/23 season ahead with approximately 7,500 hectares of cotton to be planted in the Callide Dawson and approximately 17,000 hectares in the Central Highlands.

I was able to attend the Callide Dawson Cotton Growers Association AGM this month and be involved with what is happening for them this season. There were updates from different industry representatives and discussions on how to celebrate their 100-year anniversary next year. They were the first Cotton Growers Association in Australia, so it's a very big deal! Originally based in Wowan, the Association has moved around the region since its inception but has its roots now in the Callide Dawson. Plans are underway to organise an event to celebrate this huge milestone for some time next year, most likely around May/June. Look out for more information in the coming months!

The Central Highlands Cotton Growers and Irrigators Association had to postpone their meeting again as the latest rain and full allocation has kept everyone busy in the paddock. Not a bad problem to have anyway! They are still planning to get together and celebrate with their annual Christmas party which will be held on the 3<sup>rd</sup> of December (**details below**).





Information when you need it



## CQ crop check

AREA	Central Queensland
<b>Crop Stage</b>	<ul style="list-style-type: none"> <li>Crops range from planting, emerging, 10 – 22 nodes</li> <li>Some earlier sown crops are well into flowering</li> </ul>
<b>Irrigation</b>	<ul style="list-style-type: none"> <li>Had first in crop irrigation in the earlier planted cotton</li> <li>Some later planted crops to be watered up.</li> <li>Water supplies have been described as “full”, “good”, “plentiful” etc.</li> </ul>
<b>Insects/Beneficial</b>	<ul style="list-style-type: none"> <li>Increasing mirid activity – insecticide being applied in some paddocks</li> <li>Small pressure of mites and aphids</li> <li>Lady beetles, spiders, lacewings, red and blue beetles</li> </ul>
<b>Weeds</b>	<ul style="list-style-type: none"> <li>Moderate level</li> <li>Volunteer sorghum and mung beans in some fallow paddocks</li> <li>Parthenium and sesbania</li> <li>Good conditions for dryland</li> <li>Cultivation and side dressing in earlier planted cotton</li> </ul>
<b>Disease</b>	<ul style="list-style-type: none"> <li>Back-to-back fields and those with history showing disease</li> <li>Black root rot and verticillium wilt</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>Wet conditions have hampered field preparation and sowing opportunities.</li> <li>Mild and cool start</li> <li>Temps below average</li> <li>Earlier crops taking 10 days to emerge</li> <li>Later planted crops taking 4 days to emerge</li> </ul>

### Increased pressure in the field for Fusarium Wilt this season: disease surveys

Linda Smith from QDAF recently visited CQ to carry out targeted Disease Surveys and has reported back her findings below:

Five fields (2 farms) were surveyed on the 28 Nov 2022 in Callide Dawson as part of our targeted surveys to support research to understand practices that support the development of disease suppressive soils. One field with a known history of Fusarium wilt disease was determined to have an average incidence of 16%. Anything that slows down germination and seedling growth, which includes cool and/or wet weather, favours infection by seedling disease and Fusarium wilt. An additional drain on cotton during the establishment phase is reniform



is a joint initiative of



Best Practice





nematode which is prevalent in cotton fields in Callide Dawson. This plant-parasitic nematode feeds on plant roots causing damage to the plant resulting in stunting and generally poor plant growth. Root samples collected from cotton during surveys confirmed infection of the parasite in seedlings (Fig 2). Unfortunately, if the cool and wet conditions continue, there is likely to be significant Fusarium wilt disease observed this season across several cotton growing regions.



Fig 1. Cotton seedlings displaying symptoms of Fusarium wilt including stunting, wilting, leaf chlorosis and necrosis

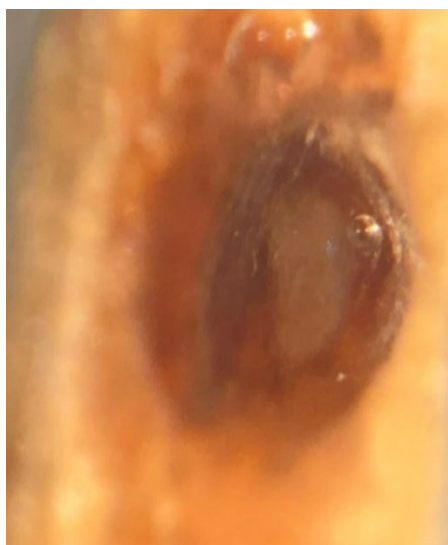


Fig 2. Reniform nematode observed (using a dissecting microscope) in a seedling cotton root. Reniform nematode is prevalent in cotton fields in Callide Dawson.

**For more information in Integrated Disease Management for Fusarium Wilt consult with the Cotton Production Manual Guide 2022.**

**Available to access and download on the CottonInfo website: [CPMG 2022 FOR WWW.pdf](http://CPMG2022FORWWW.pdf) ([cottoninfo.com.au](http://cottoninfo.com.au))**

#### DISEASES FUSARIUM WILT

##### Fusarium wilt

Pathogen: *Fusarium oxysporum* f. sp. *vasinfectum* (Fov)

##### Symptoms

External symptoms include stunted growth and dull and wilted leaves followed by leaf yellowing or browning and eventual death from the top of the plant. Some affected plants may reshoot from the base of the stem. These symptoms most commonly become apparent in the seedling phase when plants are beginning to develop true leaves, or after flowering during boll fill. Symptoms can appear as individual plants or as a small patch, often near the tail drain or low-lying areas of the field.

Internal symptoms can be checked by cutting the stem. Infected plants will reveal continuous brown discoloration of the stem tissues from the main root up into the stem. The discoloration is similar to Verticillium wilt but usually appears as continuous browning rather than flecking.

##### Favoured by

- Use of susceptible varieties.
- Stresses in the crop – e.g. waterlogging, root damage through cultivation, cool and wet growing conditions.
- Poor farm hygiene on and between farms and districts.

##### Host range

The Fov pathogen is specific to cotton but can also live in the residues of most non-host crops. Blackor helms, sesbania pea, dwarf anseraria, helveta and wild radish are alternative weed hosts that show no external symptoms. These weeds may act as an on-farm reservoir for the disease and need to be constantly managed.

##### IDM tactics

- If your farm is free from this disease, keep it that way! Ensure all staff and contractors practise good farm hygiene and Come Clean, Go Clean.
- Select varieties with a high F rank and use BION® Plant Activator.
- If possible, delay planting until soil temperatures are 16°C and rising.
- Manage this crop to avoid stresses such as waterlogging, over-fertilisation and root damage.
- Avoid mechanical inter-row cultivations if possible, as this can cause root damage that provides an entry point for the pathogen.



Fusarium wilt: Wilted and dying plants are often observed at the tail drain. (Linda Smith, Qld DPI)

- Regularly inspect fields for early detection and containment of isolated outbreaks. Send any suspect samples to Dr Linda Smith (Qld DPI).
- Isolate affected areas from irrigation flows and traffic.
- Minimise fall water from affected fields.
- After harvest, root pull and retain crop residues on the surface for at least a month (60-120 days if possible) prior to incorporation. Raking and burning the whole field is likely to spread any pathogen present.
- Fusarium can survive on non-host crop residues. Avoid green manure crops as this returns organic matter to the field which Fusarium can survive on as a saprophyte.
- Rotate with non-hosts for up to 3 years. Hosts such as legumes can potentially increase disease. A summer sorghum/maize-soybean-cotton rotation can increase cotton plant survival, reduce disease incidence and increase yield in the third year compared to continuous cotton.

Cultural rotation  
Managing Fusarium with [www.cottoninfo.com.au](http://www.cottoninfo.com.au) and [www.cottoninfo.com.au](http://www.cottoninfo.com.au)  
Post-harvest management of Fusarium with [www.cottoninfo.com.au](http://www.cottoninfo.com.au)



Dark brown discoloration observed in cross sections of cotton stems infected with Fov. (Janette Montgomery, CottonInfo)

Day degrees (1532 system) for the season have been slow to accumulate, which is not surprising with the average temperature being nearly 2-3°C below the 10-year average.

This, when combined with the 3-5 extra cold shocks has made for slow growing conditions.

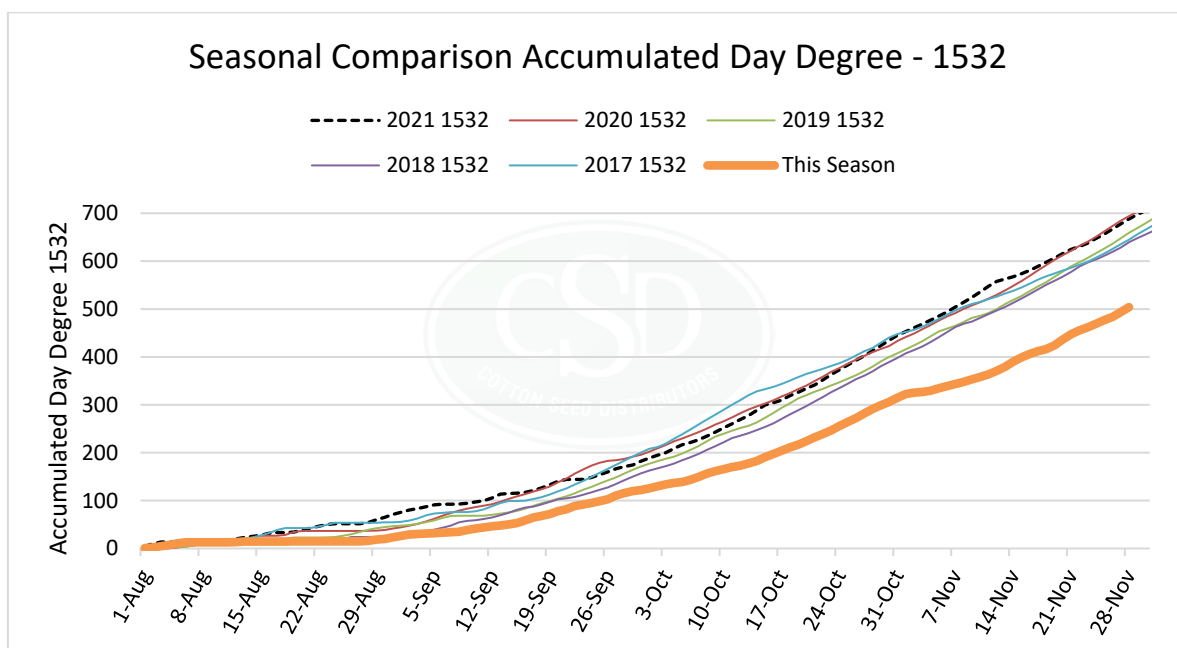
## Callide Dawson

Date range: 1 August, 2022 to 28 November, 2022 (120 days).

Summary [Seasonal comparison](#)

	2022	2021	2020	2019	2018	10 year mean
Base 12	1023.7	1237.5 ▲	1264.3 ▲	1282.2 ▲	1234.3 ▲	1215.9 ▲
DD1532*	504.0	688.2 ▲	694.1 ▲	659.3 ▲	639.4 ▲	634.7 ▲
Cold shock days ( $\leq 11^{\circ}\text{C}$ )	47	43 ▼	36 ▼	47	50 ▲	46.0 ▼
Days above $36^{\circ}\text{C}$	1	3 ▲	9 ▲	16 ▲	10 ▲	9.2 ▲
Nights above $25^{\circ}\text{C}$	0	0	0	0	0	0.0
Days above $40^{\circ}\text{C}$	0	0	0	1 ▲	0	0.6 ▲
Total rainfall (mm)	200.4	264.8 ▲	168.8 ▼	123.2 ▼	264.3 ▲	167.9 ▼
Total radiation ( $\text{MJ}/\text{m}^2$ )	2107.9	2275.8 ▲	2431.0 ▲	2561.4 ▲	2529.4 ▲	2214.1 ▲
Average temperature ( $^{\circ}\text{C}$ )	19.6	21.4 ▲	21.7 ▲	21.6 ▲	21.0 ▲	21.1 ▲

\* Experimental calculation.



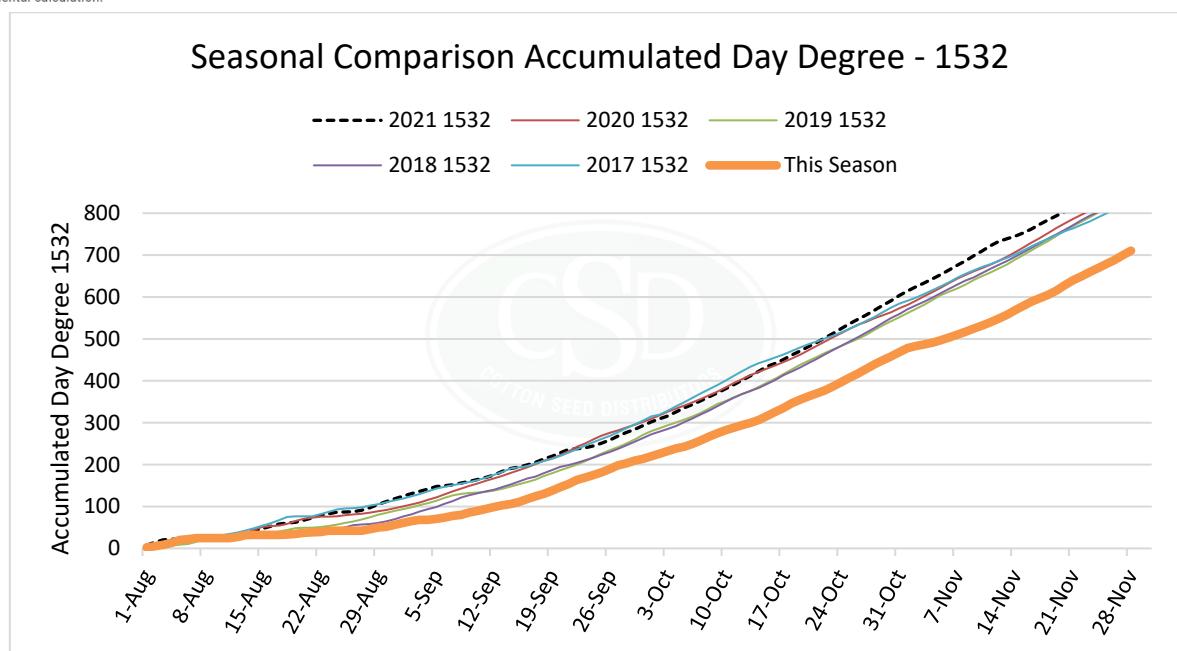
## Central Highlands

Date range: 1 August, 2022 to 28 November, 2022 (120 days).

Summary Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	1204.2	1401.9 ▲	1396.2 ▲	1415.8 ▲	1406.2 ▲	1348.1 ▲
DD1532*	710.4	887.9 ▲	862.1 ▲	848.2 ▲	844.6 ▲	813.1 ▲
Cold shock days ( $\leq 11^{\circ}\text{C}$ )	19	16 ▼	24 ▲	30 ▲	27 ▲	24.4 ▲
Days above $36^{\circ}\text{C}$	6	9 ▲	10 ▲	24 ▲	17 ▲	13.0 ▲
Nights above $25^{\circ}\text{C}$	0	0	0	0	0	0.3 ▲
Days above $40^{\circ}\text{C}$	0	0	0	2 ▲	3 ▲	0.9 ▲
Total rainfall (mm)	314.0	253.8 ▼	147.2 ▼	6.8 ▼	120.2 ▼	135.1 ▼
Total radiation ( $\text{MJ}/\text{m}^2$ )	2258.0	2361.8 ▲	2519.9 ▲	2641.7 ▲	2619.2 ▲	2286.1 ▲
Average temperature ( $^{\circ}\text{C}$ )	21.7	23.5 ▲	23.3 ▲	23.5 ▲	23.2 ▲	22.9 ▲

\* Experimental calculation.



Seasonal Day Degree and historical data is sourced from Cotton Seed Distributors Day Degree Calculator found at [www.csd.net.au/ddc](http://www.csd.net.au/ddc). For more specific day degree and crop management detail for your farm, field and variety check out CottonTracka® at [www.cottontracka.com.au](http://www.cottontracka.com.au)



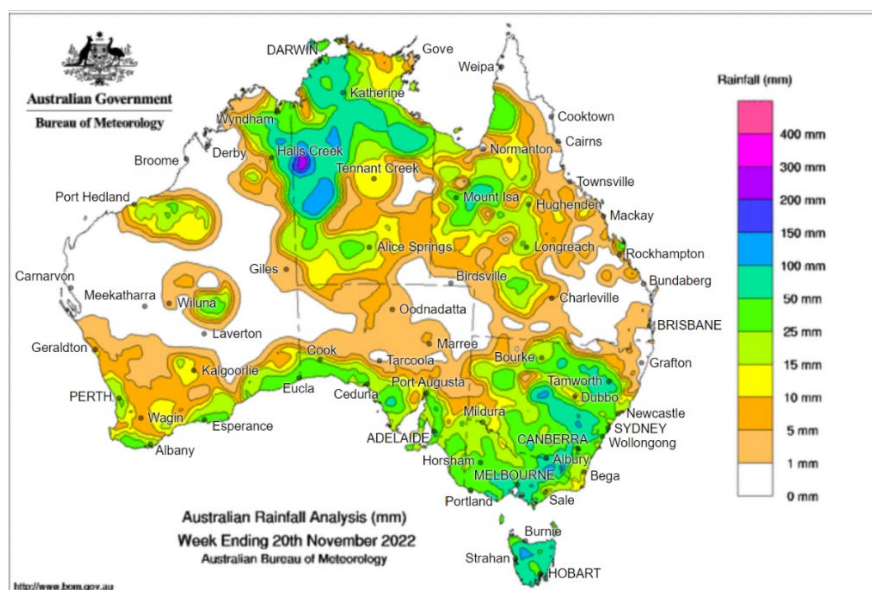
## Information and Topics of Interest

### CottonInfo Moisture Manager

[CottonInfo Moisture Manager - a cooler summer outlook and El Niño joins the conversation for 2023 \(campaign-archive.com\)](#)

### Australian rainfall (week ending 20 November)

A colourful map as the wet spring continues. The highest falls in northern Australia, the Gulf and NSW.



Map courtesy: <http://www.bom.gov.au/jsp/awap/rain/index.jsp>

### Nutrition Webinar

CottonInfo hosted a specific Nitrogen webinar earlier this month, supported by Back Paddock Company, CottonInfo and NSW DPI.

The 'Cotton Nitrogen State of the Nation' webinar featured Jon Baird, Graeme Schwenke and Chris Dowling and touched on soil processes in wet soil, case studies highlighting changes in soil N availability and profile location, and some suggested alternative seasons N management approaches.

While CQ hasn't faced the same extreme elements at the start of the season as our colleagues further south, this webinar offered a great overarching brief on a range of nitrogen issues all of industry can benefit from.

You can watch the full webinar here [CottonInfo webinar: Managing nitrogen - YouTube](#) on the CottonInfo YouTube channel. A Q+A session with the presenters was held at the end of the webinar with questions from growers and consultants.

## CSD News

### Richard Williams Research Initiative: CSD & CRDC partner on Disease & Water Research

Cotton Seed Distributors (CSD) and the Cotton Research and Development Corporation (CRDC) are partnering to support the delivery of integral research to benefit growers.

Two substantial initiatives were developed in response to feedback from growers through the cotton industry's extension network, including the CSD team and CottonInfo: a partnership of CRDC, CSD and Cotton Australia.

#### Project Goals include:

- To identify which practices can assist with on farm disease management
- Provide the catalyst for further industry research
- Provide the mechanism to test and validate findings from research
- To assess the value and cost of alternative practices across different farming production systems and environments
- Provide a regionally specific platform for research outcomes in relation to disease management
- Closely link with other industry research investment and pass on any management practices identified that may be a catalyst for further investigation



*Image: Allan Williams, Ian Taylor, and Peter Graham*

Read more here: [CSD | News and Media | CSD and CRDC partner on disease and water research](#)

## CRDC news

CRDC Directors on farm in Chinchilla

[CRDC Directors on farm in Chinchilla | CRDC](#)

Applications for CRDC-supported Horizon scholarship now open

[Applications for CRDC-supported Horizon scholarship now open! | CRDC](#)

## Cotton Australia News

Cotton exports break records and take third spot on most valuable export commodity

[Cotton Australia | Cotton exports break records and take third spot on most valuable export commodity](#)

Agricultural company powers Active Farmers search for rural personal trainers

[Cotton Australia | Agricultural company powers Active Farmers search for rural personal trainers](#)

As it is raining again as I finish this edition, I hope everyone is getting on top of things in between these rain events.

All the best in the coming weeks!

Kind Regards  
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