



Mungindi crop check

18th December 2022

Day Degree

Table 1: Seasonal Information based on 5th November 2022 planting date (Source: [Cotton Seed Distributors](#))

	2022	2021	2020	2019	2018	10 year mean
Base 12	473.3	539.8 ▲	707.3 ▲	638.5 ▲	609.2 ▲	621.8 ▲
DD1532*	292.0	357.8 ▲	439.9 ▲	374.7 ▲	391.4 ▲	389.9 ▲
Cold shock days ($\leq 11^{\circ}\text{C}$)	6	4 ▼	2 ▼	5 ▼	1 ▼	2.3 ▼
Days above 36°C	2	4 ▲	25 ▲	25 ▲	12 ▲	16.5 ▲
Nights above 25°C	1	0 ▼	3 ▲	4 ▲	0 ▼	1.6 ▲
Days above 40°C	0	0	11 ▲	9 ▲	3 ▲	5.3 ▲
Total rainfall (mm)	16.0	143.7 ▲	41.8 ▲	43.0 ▲	61.0 ▲	48.6 ▲
Total radiation (MJ/m ²)	1015.6	908.2 ▼	1087.4 ▲	1155.7 ▲	1055.0 ▲	966.9 ▼
Average temperature (°C)	22.8	24.5 ▲	28.4 ▲	26.7 ▲	26.1 ▲	26.4 ▲

* Experimental calculation.

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Climate observations and data are obtained via the State of Queensland SILO patched point dataset.

Cotton development	DD Base 12** (Industry standard)	Experimental DD 1532
Emergence	80	50
First square	505 ^a	339
First flower	777 ^a	584
First open boll	1527 ^a	1077

^a Please note that DD Base 12 targets to first square, first flower and first open boll will increase by 5.2 DD for EACH cold shock event - please adjust your target accordingly.

Targets relate to specific developmental events.

** Source: Australian Cotton Production Manual 2019 (page 8).



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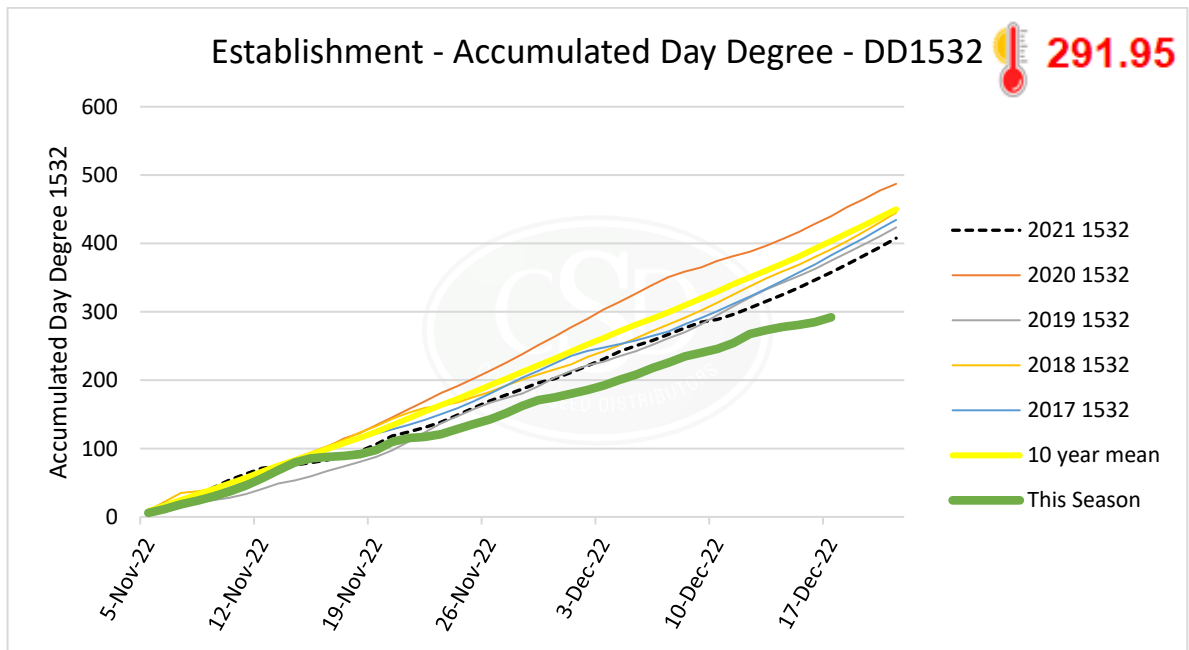


Figure 1: Day Degree comparison using the DD 1532, planting date 5/11/22 Source www.csd.net.au/ddc

Day degrees (1532 system) for the season have been slow to accumulate, which is not surprising with the average temperature being 3°C below the 10-year average. This, when combined with the 6 cold shocks (≤ 11°C and twice the 10-year average of 2.3) has made for slow growing conditions.

The average planting date for the Mungindi district is around 5th November. It started on the 4th October, but opportunities were interrupted with floods and rainfall events. There was another opportunity around 12th October and again about 27th October. The majority of Irrigated cotton planting was completed by 30th November. There is an estimated 20,000 ha irrigated cotton and 10,000-15,000 ha dryland.

Dryland has been challenging to get in with flooded country, then harvest, lack of people and short windows in between rain events during October and early November. A few hot and windy days have also dried the surface out. Establishment has been patchy, some dry seed still in the ground. Our dryland cotton crops/fields are desperate for a drink.

As you know cotton needs heat units to drive growth and development and this season we are below average (Figure 1). This will push back our 1st flower date. You can use the [CSD STEFF](#) (Simulated time to estimated



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first flower) Tool to estimate the date of first flower. Assuming your crop was planted into rain moisture or watered up on the 5th November, the estimated time to first flower is 11th January (usually we would reach first flower before Christmas). Open the STEFF webpage (you will need to be a [CSD member](#) to access STEFF), select your location and imbibition date (time when seed absorbs soil or irrigation water) and the first flower date for your crop will be estimated. Further information: [STEFF fact sheet](#).

AREA	Mungindi
Crop Stage	<p>Irrigated Cotton:</p> <ul style="list-style-type: none"> Cotyledon to 14 nodes and squaring <p>Dryland:</p> <ul style="list-style-type: none"> Dry seed to 6 nodes <ul style="list-style-type: none"> Establishment variable – some fields planted just prior to the flood have required a replant, whereas other dried down and the seed has germinated with a reasonable establishment! The later sown cotton that coincided with some warmer days is up and away. The quick turn around, a lot of back to back and poor seed bed preparation in some fields along with the cooler weather has impacted establishment this year.
Irrigation	<ul style="list-style-type: none"> Cotton crops have received their 1st irrigation. The earlier plant will get their 2nd irrigation this coming week.
Insects/Beneficial	<ul style="list-style-type: none"> The wet year has provided a “green bridge” supporting a range of insect pests. There has been some heliothis egg lays, but of no consequence. Low levels of Mirids Low level of beneficial insects
Weeds	<ul style="list-style-type: none"> Fleabane, Barn Yard Grass, Feather Top Rhodes Grass and Sow Thistle
Spray Drift	<ul style="list-style-type: none"> No reports of spray drift in the Mungindi district to date. Some reports of spray drift (2, 4-D) onto Cotton has been reported in the Gwydir region.
Disease	<ul style="list-style-type: none"> Black root rot Rhizoctonia Fusarium NSW DPI early season disease surveys are completed with plant samples collected and currently being assessed in the lab.



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Comments

"Crops are delayed and we are in for another late season"
"We are determined to cutout fields early so we can prepare properly for 2023/24!"
"Cotton planted in early October now at 14 Nodes and should see first flowers between Christmas and New Year so 3 weeks slower than normal"

Thanks to all the Mungindi crop consultants for providing the information for this weeks crop check.

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Seasonal Day Degree and historical data is sourced from Cotton Seed Distributors Day Degree Calculator found at 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

