CottonInfo **Information** *when you need it*

Southern NSW crop check

	Southern Valleys 9th December 2022
Crop Stage	Resow 2 -3 leaf, majority of crops 4-5 leaf 6 -10 nodes on most advanced crops Early squares appearing on 10 % of these crops
Irrigation	Aggressive cracking in hills in last week Crops are getting first irrigation now and crops responding.
Insects/Beneficials	Minimal activity. Low thrip numbers and no mirids
Weeds	Pre-emergent herbicide damage evident due to rain events, time of sowing and herbicide mixes Other comments that pre-emergent herbicides have worked well in later sown crops Fleabane persisting. Crops will get a light cultivation when mature enough Glyphosate resistant Annual ryegrass missed due to rain events still causing problems
Disease/Environmental	Cold Crops growing away from Alternaria leaf spot. Rhizoctonia holding back development in some fields
Comments	Fallow sprays starting. Make sure your cotton crops are on Satacrop

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

CottonInfo **Information** *when you need it*

Southern NSW crop check

GRIFFITH AIRPORT AWS

Download

Date range: 1 October, 2022 to 8 December, 2022 (69 days).

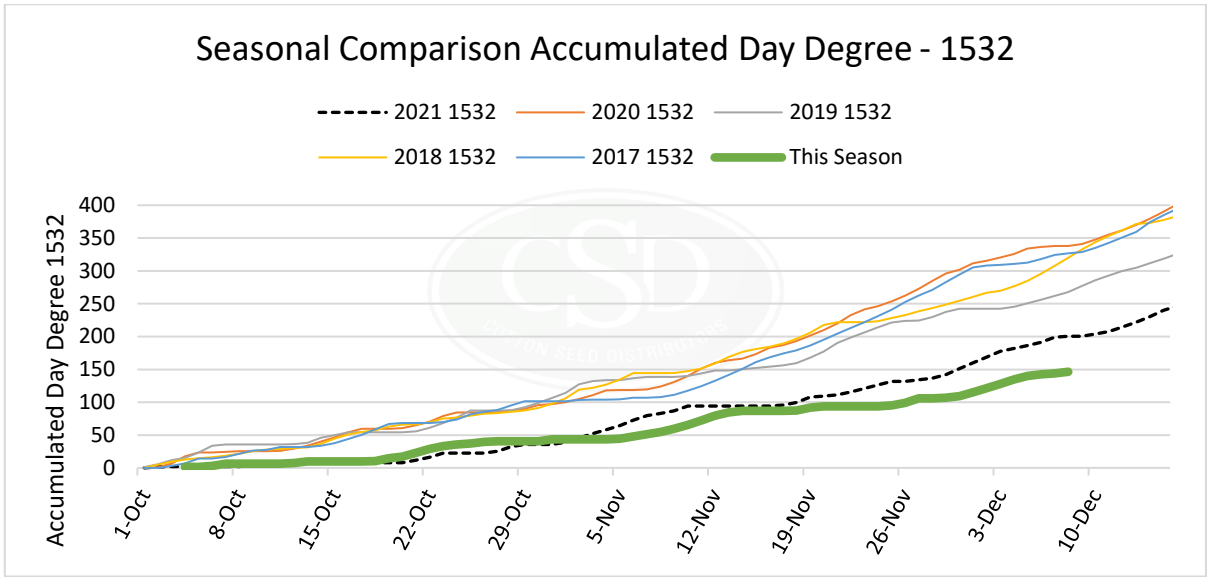
Summary | Seasonal comparison

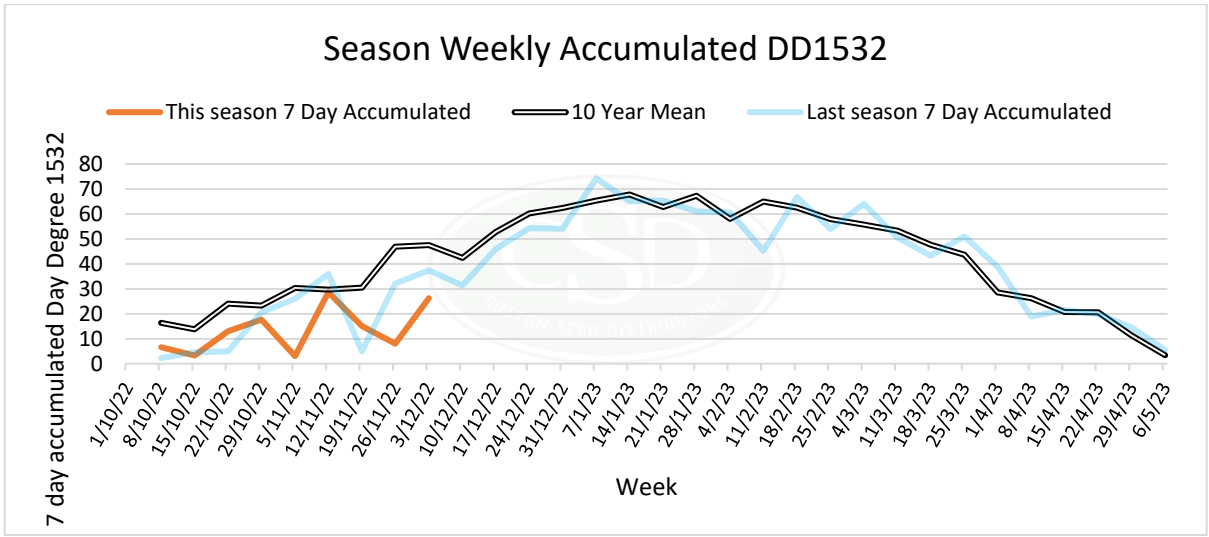
	2022	2021	2020	2019	2018	10 year mean
Base 12	423.1	485.5 ▲	661.4 ▲	600.3 ▲	627.2 ▲	597.8 ▲
DD1532*	146.4	200.2 ▲	337.9 ▲	268.0 ▲	319.9 ▲	284.1 ▲
Cold shock days (≤ 11°C)	37	36 ▼	24 ▼	40 ▲	32 ▼	32.0 ▼
Days above 36°C	0	0	9 ▲	7 ▲	5 ▲	4.8 ▲
Nights above 25°C	0	0	1 ▲	2 ▲	1 ▲	0.4 ▲
Days above 40°C	0	0	3 ▲	1 ▲	0	0.8 ▲
Total rainfall (mm)	291.5	151.4 ▼	77.2 ▼	52.2 ▼	101.6 ▼	98.1 ▼
Total radiation (MJ/m^2)	1288.9	1297.8 ▲	1543.0 ▲	1614.1 ▲	1524.0 ▲	1371.4 ▲
Average temperature (°C)	16.8	17.9 ▲	20.9 ▲	19.5 ▲	20.4 ▲	19.6 ▲

* Experimental calculation.

CottonInfo **Information** *when you need it*

Southern NSW crop check





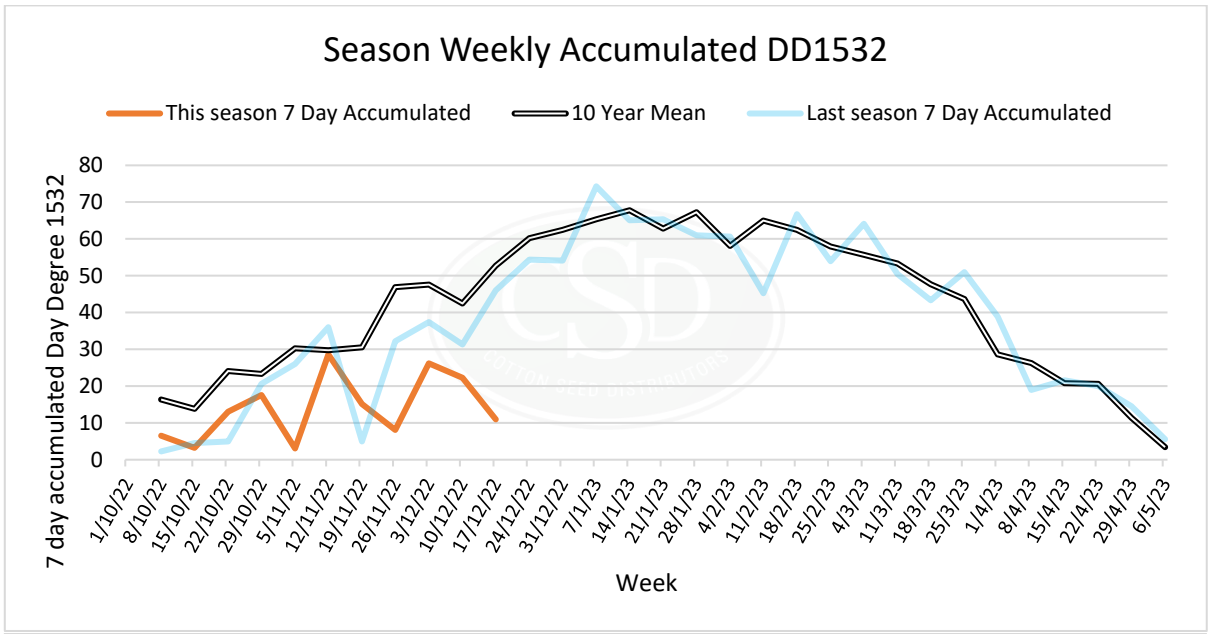
CottonInfo **Information** *when you need it*

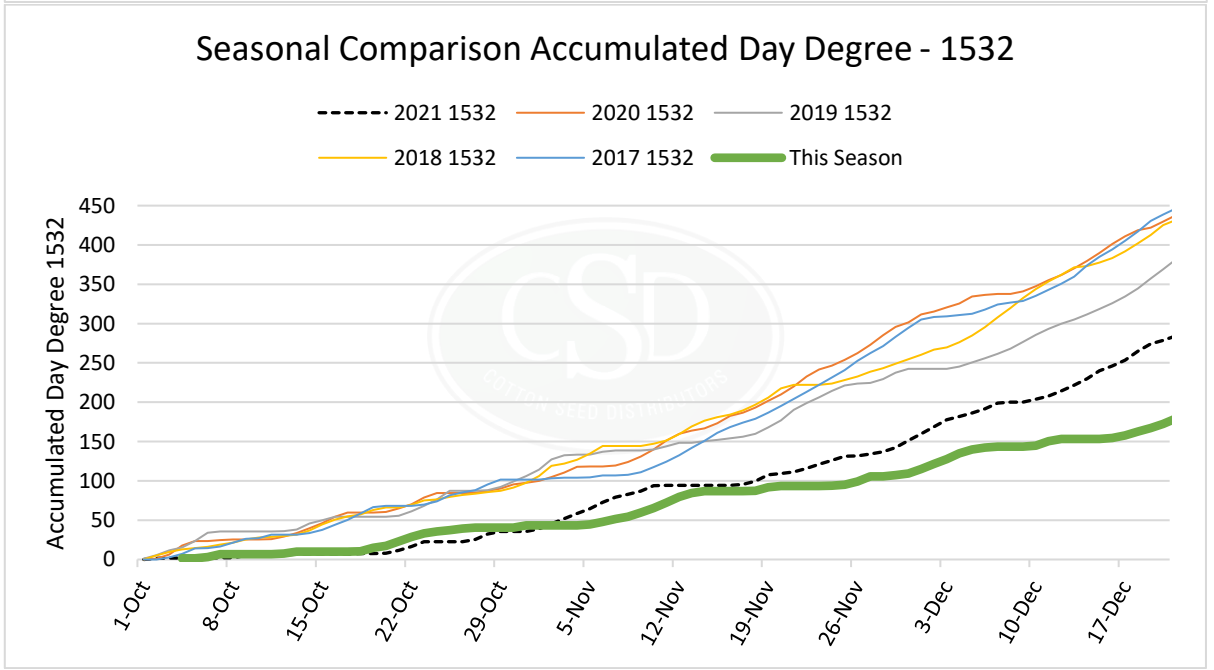
Southern NSW crop check

	Southern Valleys 22nd December 2022
Crop Stage	Big range from 2 -12 nodes, Earlier October planted crops around 10 nodes with 1 to 2 squares. Slow growth over last few weeks at 1 to 1.5 nodes/week First fruiting branch 7th to 9th node
Irrigation	2nd Irrigation about to start before predicted heat next week
Insects/Beneficials	Low to moderate mirid numbers and Apple dimple bug
Weeds	A lot of fleabane and wireweed. More weeds around where pre emergents were dropped out due to the cold start
Disease/Environmental	Pushing through disease setbacks now Some early squares flaring and expecting to see an environmental shed
Comments	Warmer weather welcome Low rate of mepiquat planned in next two weeks for more mature crops N strategy will be fluid and in line with crop potential First flower for a lot of crops mid to late January. Check out CSD | Simulated time to estimated first flower

CottonInfo **Information** *when you need it*

Southern NSW crop check





CottonInfo **Information** *when you need it*

Southern NSW crop check

HILLSTON AIRPORT

Download

Date range: 15 October, 2022 to 21 December, 2022 (68 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	483.4	601.7 ▲	757.5 ▲	722.3 ▲	736.2 ▲	706.3 ▲
DD1532*	208.7	322.0 ▲	434.4 ▲	384.2 ▲	431.3 ▲	389.6 ▲
Cold shock days (≤ 11°C)	32	19 ▼	18 ▼	22 ▼	14 ▼	20.2 ▼
Days above 36°C	0	3 ▲	10 ▲	13 ▲	11 ▲	9.9 ▲
Nights above 25°C	0	0	2 ▲	3 ▲	3 ▲	1.5 ▲
Days above 40°C	0	1 ▲	6 ▲	7 ▲	0	3.0 ▲
Total rainfall (mm)	147.1	187.9 ▲	81.6 ▼	27.8 ▼	72.0 ▼	82.8 ▼
Total radiation (MJ/m^2)	1440.6	1428.7 ▼	1634.5 ▲	1709.8 ▲	1619.9 ▲	1460.4 ▲
Average temperature (°C)	18.2	20.2 ▲	22.8 ▲	22.1 ▲	22.4 ▲	21.8 ▲

* Experimental calculation.

CottonInfo **Information** *when you need it*

Southern NSW crop check

GRIFFITH AIRPORT AWS

Download

Date range: 15 October, 2022 to 21 December, 2022 (68 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	450.7	563.1 ▲	712.8 ▲	682.2 ▲	698.7 ▲	665.8 ▲
DD1532*	169.6	277.6 ▲	398.0 ▲	335.7 ▲	395.0 ▲	350.6 ▲
Cold shock days (≤ 11°C)	37	27 ▼	16 ▼	30 ▼	23 ▼	24.5 ▼
Days above 36°C	0	1 ▲	10 ▲	13 ▲	8 ▲	7.7 ▲
Nights above 25°C	0	0	1 ▲	2 ▲	1 ▲	1.1 ▲
Days above 40°C	0	1 ▲	3 ▲	6 ▲	0	1.9 ▲
Total rainfall (mm)	206.8	130.6 ▼	73.6 ▼	49.8 ▼	113.0 ▼	85.7 ▼
Total radiation (MJ/m^2)	1409.7	1396.7 ▼	1602.2 ▲	1671.5 ▲	1584.1 ▲	1431.1 ▲
Average temperature (°C)	17.4	19.5 ▲	22.0 ▲	21.2 ▲	21.8 ▲	21.1 ▲

* Experimental calculation.

JERILDERIE (COREE STN)

Download

Date range: 15 October, 2022 to 21 December, 2022 (68 days).

Summary | Seasonal comparison

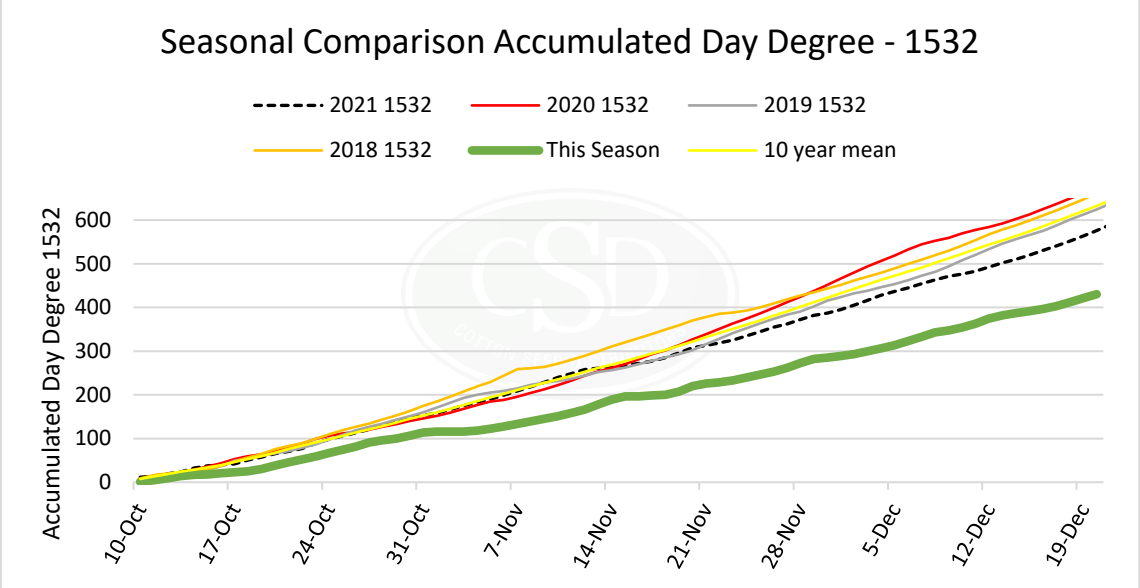
	2022	2021	2020	2019	2018	10 year mean
Base 12	443.4	531.2 ▲	657.9 ▲	622.1 ▲	651.8 ▲	616.9 ▲
DD1532*	169.3	232.1 ▲	334.7 ▲	280.2 ▲	344.4 ▲	301.6 ▲
Cold shock days (≤ 11°C)	36	35 ▼	30 ▼	36	26 ▼	30.6 ▼
Days above 36°C	0	2 ▲	8 ▲	9 ▲	5 ▲	6.5 ▲
Nights above 25°C	0	0	0	1 ▲	1 ▲	0.6 ▲
Days above 40°C	0	1 ▲	2 ▲	4 ▲	0	1.2 ▲
Total rainfall (mm)	210.0	100.8 ▼	69.1 ▼	32.7 ▼	109.8 ▼	88.0 ▼
Total radiation (MJ/m^2)	1385.0	1425.7 ▲	1577.8 ▲	1642.4 ▲	1547.1 ▲	1406.0 ▲
Average temperature (°C)	17.4	18.6 ▲	20.9 ▲	20.1 ▲	20.9 ▲	20.2 ▲

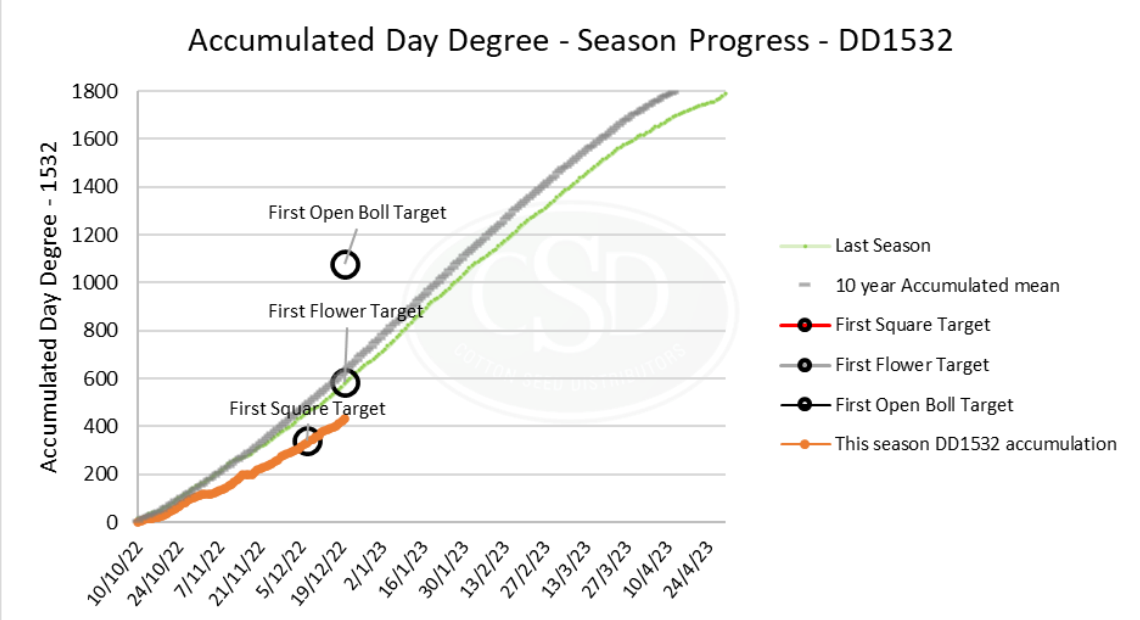
* Experimental calculation.

CottonInfo **Information** *when you need it*

Balonne crop check

DATE – 20 December 2022





Balonne crop check

ST GEORGE AIRPORT

Download

Date range: 10 October, 2022 to 20 December, 2022 (72 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	718.1	878.4 ▲	1053.4 ▲	1019.9 ▲	1009.4 ▲	966.0 ▲
DD1532*	430.4	576.2 ▲	674.9 ▲	624.3 ▲	661.5 ▲	615.5 ▲
Cold shock days (≤ 11°C)	8	5 ▼	3 ▼	10 ▲	1 ▼	5.2 ▼
Days above 36°C	2	4 ▲	27 ▲	28 ▲	20 ▲	17.4 ▲
Nights above 25°C	0	0	8 ▲	6 ▲	4 ▲	3.8 ▲
Days above 40°C	0	1 ▲	9 ▲	7 ▲	5 ▲	4.6 ▲
Total rainfall (mm)	149.0	175.8 ▲	88.5 ▼	18.4 ▼	102.2 ▼	83.2 ▼
Total radiation (MJ/m^2)	1574.6	1567.1 ▼	1703.7 ▲	1824.3 ▲	1688.7 ▲	1558.5 ▼
Average temperature (°C)	21.8	24.1 ▲	26.6 ▲	26.0 ▲	26.0 ▲	25.3 ▲

* Experimental calculation.

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

Feedback for this report included concern due to early signs of possible spray drift damage on crops. This is yet to be confirmed however provides a timely reminder to ensure all crops are loaded into Satacrop and that the WAND inversion tower network is now active to assist spray operators with determining the presence of hazardous inversion conditions.

Day degree accumulation for the season continues to be slow and is well behind recent seasons and the 10-year average. Cold shocks (8) are above the 10-year average (5.2) and average temperature more than 3°C below it. Solar radiation accumulation has risen above the 10-year average after being below it in mid-November. Warming conditions, the absence of heat shocks and plentiful water is seeing some crops starting to grow rapidly. The BOM temperature outlook continues to suggest average to cooler than average temperatures through until March with a hotter spell in the second week of January.

CottonInfo **Information** *when you need it*

Balonne crop check

AREA	Balonne
Crop Stage	• Crops range from around 4 nodes to 15 nodes with some flowers starting to open
Irrigation	• Plenty of water. • Most crops at 2nd irrigation with early crops at 3rd irrigation
Insects/Beneficials	• Mirid presence fairly constant although up and down in numbers – some control measures implemented where deemed necessary. • GVBs and brown stink bugs around • Helicoverpa egg lays at up to 20/m and causing some square loss. Bollgard genetics controlling population.
Weeds	• OTT sprays and cultivation being used effectively.
Disease	• Fusarium is main concern and severe in fields with history and/or back-to-back. Plant loss occurring. • Crops starting to grow through BRR and rhizoctonia.
Environment	• Reports of possible drift incidents but too early to confirm or gauge severity
Comments	• Heavier country is slower to respond to warming conditions.

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

CottonInfo **Information** *when you need it*

Darling Downs crop check

DATE – 9th December 2022

By request, I will be including Brookstead in my graph and table reports going forward. Enjoy.

DALBY AIRPORT

Download

Date range: 10 October, 2022 to 9 December, 2022 (61 days).

Summary | Seasonal comparison

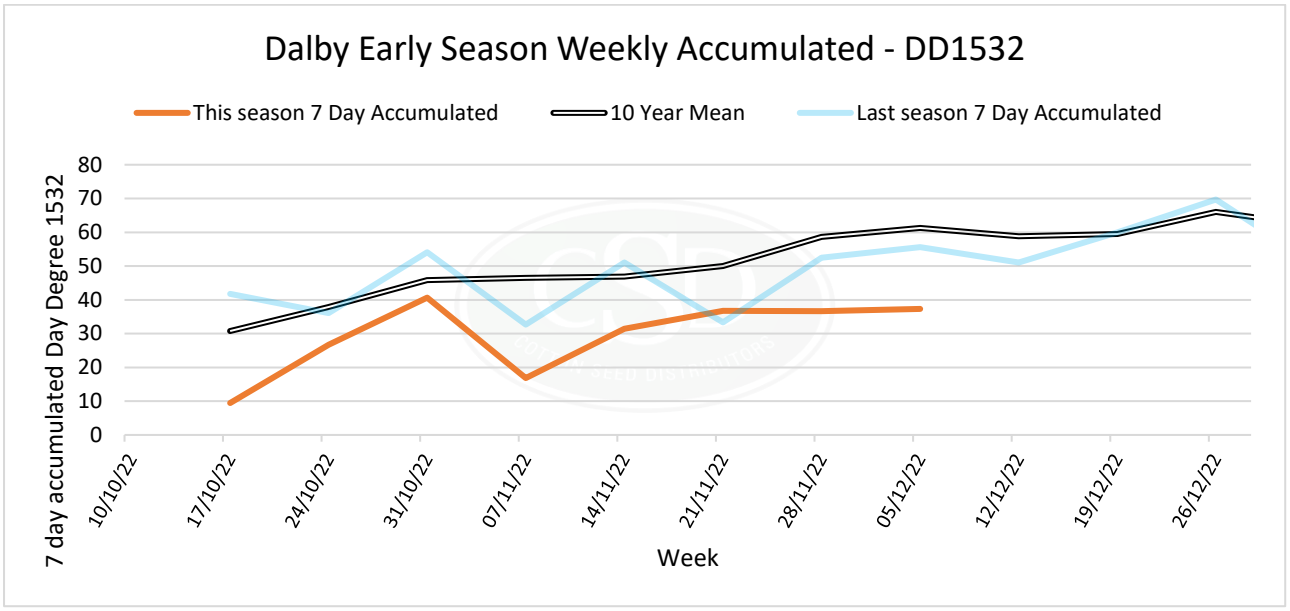
	2022	2021	2020	2019	2018	10 year mean
Base 12	530.4	630.8 ▲	747.6 ▲	749.4 ▲	661.7 ▲	676.7 ▲
DD1532*	270.8	395.9 ▲	452.8 ▲	435.3 ▲	407.4 ▲	406.7 ▲
Cold shock days (≤ 11°C)	21	7 ▼	9 ▼	13 ▼	4 ▼	9.6 ▼
Days above 36°C	2	0 ▼	16 ▲	15 ▲	6 ▲	6.7 ▲
Nights above 25°C	0	0	0	0	0	0.0
Days above 40°C	0	0	4 ▲	2 ▲	0	0.8 ▲
Total rainfall (mm)	112.2	389.0 ▲	83.2 ▼	13.6 ▼	158.8 ▲	112.8 ▲
Total radiation (MJ/m²)	1238.9	1157.3 ▼	1419.3 ▲	1531.8 ▲	1364.2 ▲	1248.2 ▲
Average temperature (°C)	20.2	22.2 ▲	24.1 ▲	23.9 ▲	22.7 ▲	22.8 ▲

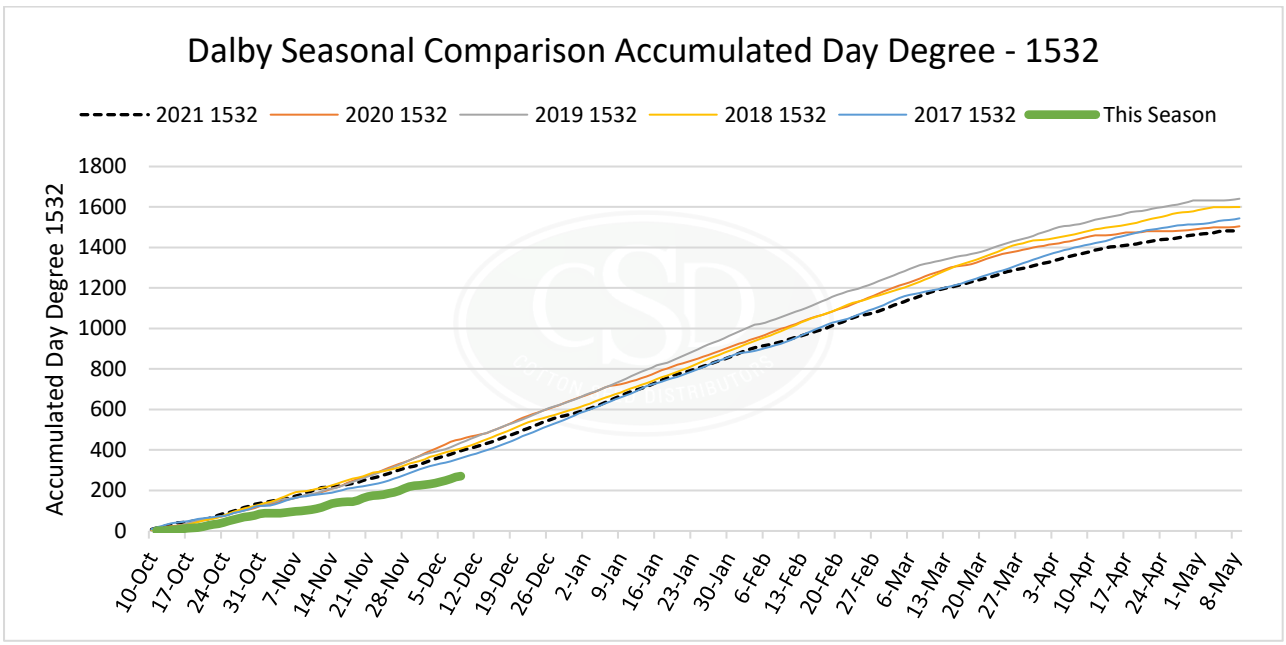
* Experimental calculation.

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

CottonInfo **Information** *when you need it*

Darling Downs crop check





CottonInfo **Information** *when you need it*

Darling Downs crop check

AREA	Darling Downs
Crop Stage	• 4-11 nodes • Cotyledon-12 nodes (majority 3-6 nodes) • Cotyledon - squaring
Irrigation	• May irrigate before Christmas if we don't get forecasted rain • Rain needed especially for dryland • Overhead has had 40mm and will flush furrow blocks soon
Insects/Beneficial	• Mirids building in numbers • Thrips continue to be a problem • Mirid numbers increasing in well growing cotton. Thrip numbers low but damage is visible due to slow growth. Aphids found on regrowth • High levels of thrip activity
Weeds	• Milkthistle, gooseberry, sesbania and red pigweed • Fleabane continues to be a problem as well as vines • Feather top Rhodes grass
Disease	• Black root rot • Fusarium bad in seedlings • Alternaria, rhizoctonia, fusarium, black root rot
Comments	• Some rain has been helpful but not enough with the hot days • Crop development is slow until 6-7 nodes then it takes off • Starting to cultivate • Cotton still slow in areas and other areas growing well. Can't work out why such a difference • Wet then cold then very hot!!!! • Large areas of cotton have been affected by phenoxy herbicide. Likely to be yield limiting • Loosing a few squares most likely from cool change a week ago. Mirids may also be causing some to drop • Retention sitting at around 70-80% • Phenoxy damage around

CottonInfo **Information** *when you need it*

Darling Downs crop check

BROOKSTEAD POST OFFICE

Download

Date range: 10 October, 2022 to 9 December, 2022 (61 days).

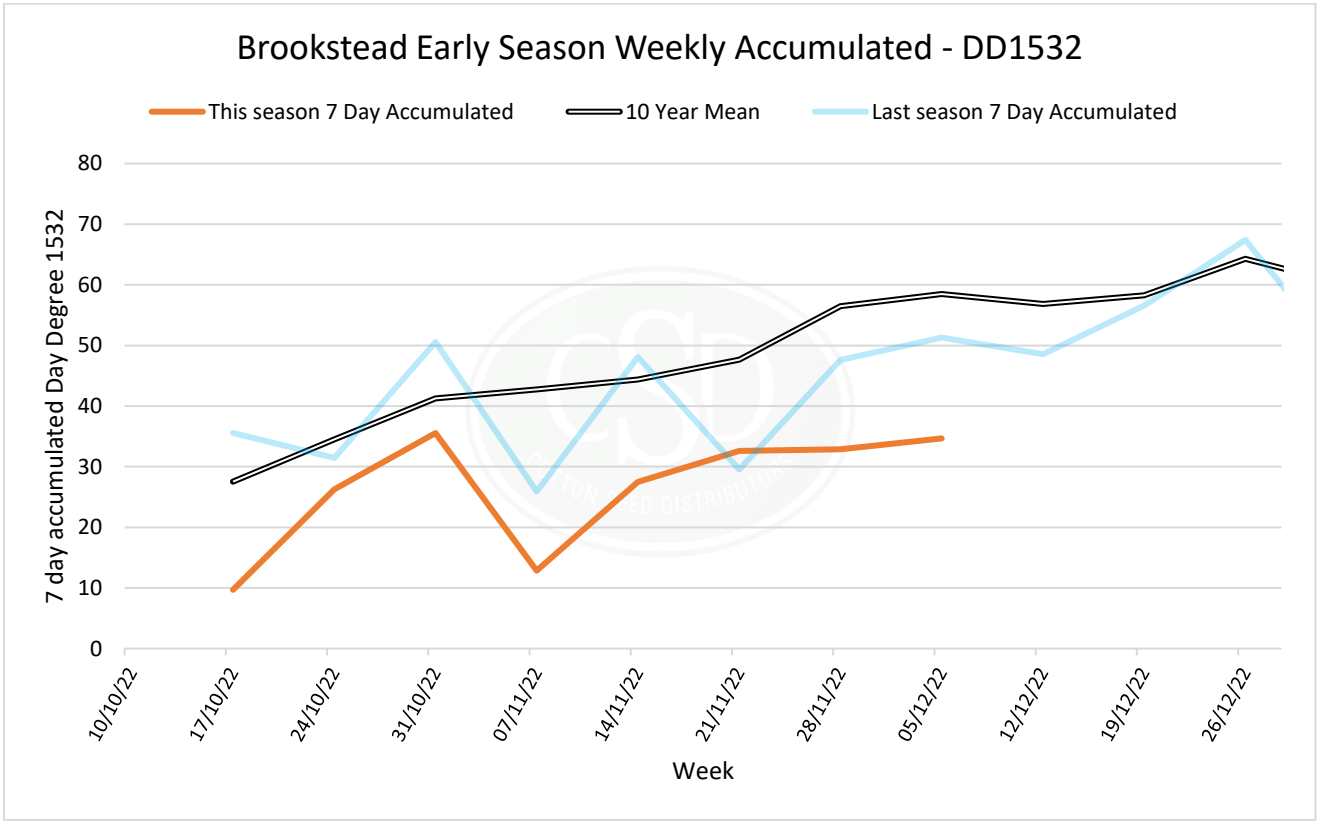
Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	501.8	592.8 ▲	706.6 ▲	708.9 ▲	632.9 ▲	640.3 ▲
DD1532*	245.4	357.8 ▲	422.4 ▲	410.3 ▲	389.2 ▲	380.1 ▲
Cold shock days (≤ 11°C)	26	8 ▼	8 ▼	16 ▼	4 ▼	10.4 ▼
Days above 36°C	0	0	12 ▲	13 ▲	5 ▲	5.1 ▲
Nights above 25°C	0	0	0	0	0	0.1 ▲
Days above 40°C	0	0	1 ▲	0	0	0.2 ▲
Total rainfall (mm)	176.1	390.2 ▲	88.2 ▼	28.6 ▼	131.8 ▼	122.6 ▼
Total radiation (MJ/m^2)	1242.0	1144.8 ▼	1421.8 ▲	1538.4 ▲	1370.0 ▲	1249.0 ▲
Average temperature (°C)	19.7	21.5 ▲	23.4 ▲	23.2 ▲	22.3 ▲	22.2 ▲

* Experimental calculation.

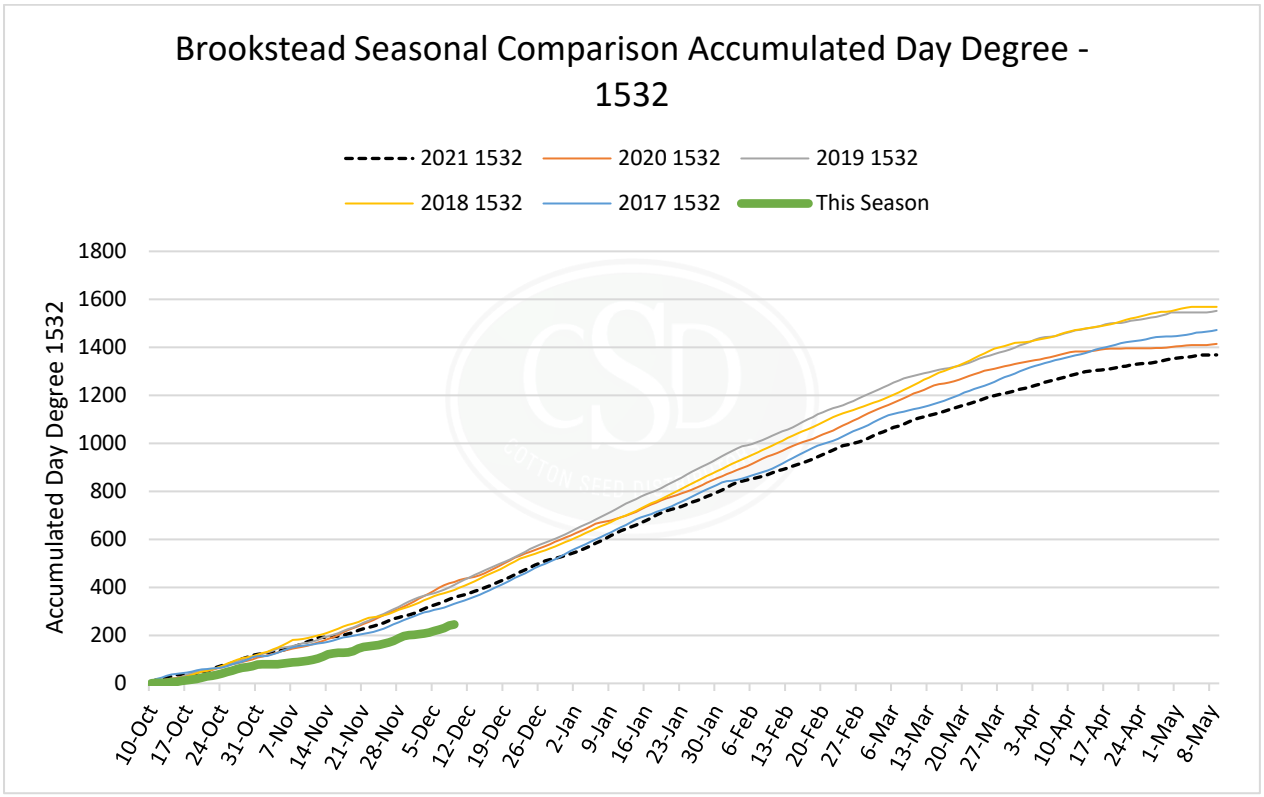
Climate observations and data are obtained via the State of Queensland SILO patched point dataset.

Darling Downs crop check



CottonInfo **Information** *when you need it*

Darling Downs crop check



Darling Downs crop check

DATE – Thursday 22 Dec (CC 4)

AREA	Darling Downs
Crop Stage	• Cotyledons – 12 nodes • 4 – 15 nodes • 4 leaf – 15 nodes • 4-10 nodes
Irrigation	• Watering to get seeds up • Watering to cool soil down (Maryborough) • Starting before Christmas • Early watering due to weak seedlings and late seed bed prep • Laterals have run again but little flood done yet
Insects/Beneficial	• Starting to find mirids • Predators building • Mirids heavy in some areas but generally low-moderate pressure • Thrips still a problem • Mirids and thrips increasing in better cotton areas • Heliothis eggs being spotted • Lady beetles
Weeds	• Flaxleaf fleabane, barnyard grass, feathertop Rhodes grass, weird and wonderful weeds after the floods • Vines • Fleabane, fleabane, fleabane causing headaches everywhere
Disease	• Black root rot and Rhizoctonia • Some concerns about bonsai bunchy top • Fusarium • Black root rot holding back growth in some blocks

CottonInfo **Information** *when you need it*

Darling Downs crop check

Comments	• Loosing some early fruit. Retention low • Lovely days but cools nights and dry • Some blocks still struggling. Likely the combination of long fallow disorder and cool nights • Squares from node 9 • Day degrees is low • Some areas getting rain from storms but generally dry • 24D damage becoming evident, but slowly improving • Hail in some areas (Munduberra and Maryborough) Replanting • Been a trying start to the season • Growers replanting or destroying crops and reverting to other summer crops (Fraser Coast)

DALBY AIRPORT

Download

Date range: 10 October, 2022 to 20 December, 2022 (72 days).

Summary | Seasonal comparison

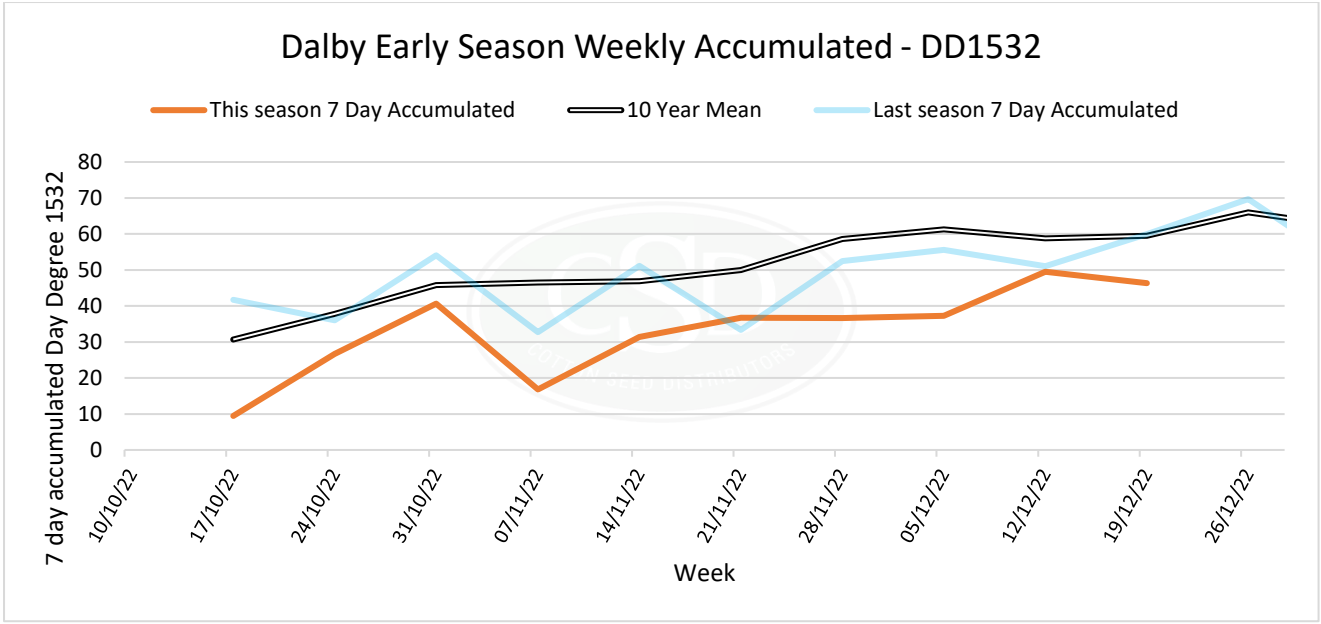
	2022	2021	2020	2019	2018	10 year mean
Base 12	645.3	763.4 ▲	889.7 ▲	926.9 ▲	813.3 ▲	818.2 ▲
DD1532*	342.6	486.1 ▲	547.0 ▲	541.4 ▲	514.0 ▲	499.0 ▲
Cold shock days (≤ 11°C)	23	8 ▼	9 ▼	13 ▼	4 ▼	9.9 ▼
Days above 36°C	2	0 ▼	18 ▲	23 ▲	6 ▲	8.4 ▲
Nights above 25°C	0	0	0	0	0	0.0
Days above 40°C	0	0	4 ▲	3 ▲	0	0.9 ▲
Total rainfall (mm)	112.4	390.8 ▲	110.6 ▼	19.4 ▼	292.0 ▲	133.5 ▲
Total radiation (MJ/m^2)	1498.0	1445.5 ▼	1615.5 ▲	1820.6 ▲	1598.9 ▲	1485.7 ▼
Average temperature (°C)	20.5	22.5 ▲	24.2 ▲	24.5 ▲	23.2 ▲	23.1 ▲

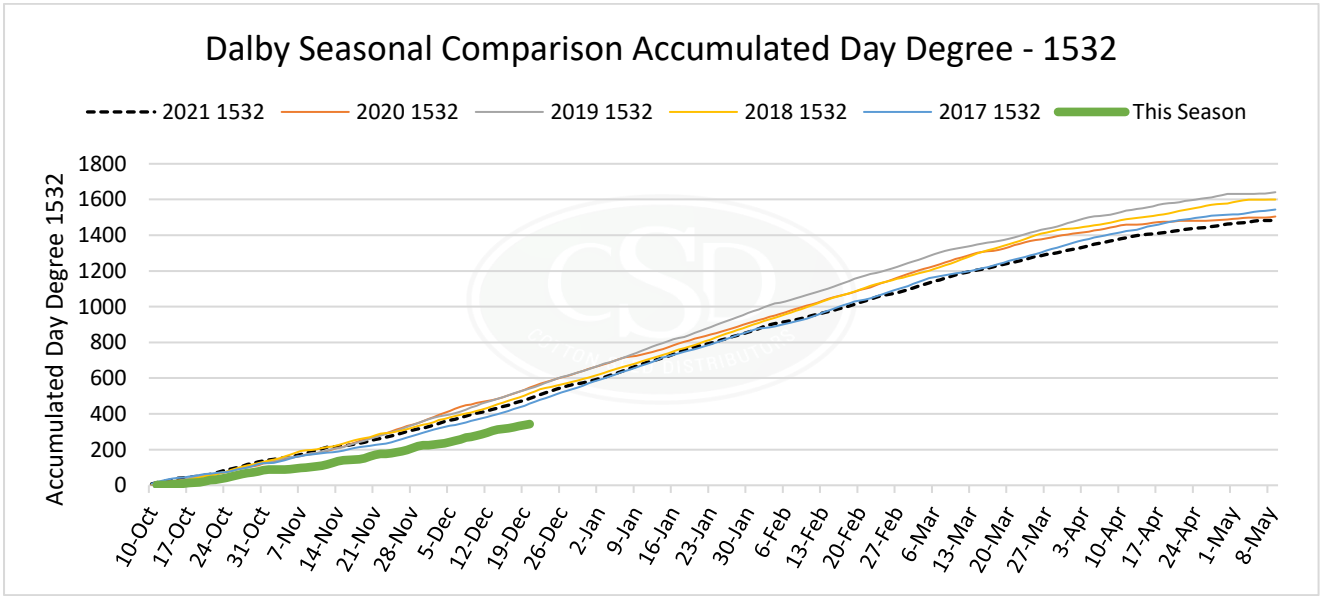
* Experimental calculation.

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

CottonInfo **Information** *when you need it*

Darling Downs crop check





CottonInfo **Information** *when you need it*

Darling Downs crop check

BROOKSTEAD POST OFFICE

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Date range: 10 October, 2022 to 21 December, 2022 (73 days).

Summary | Seasonal comparison

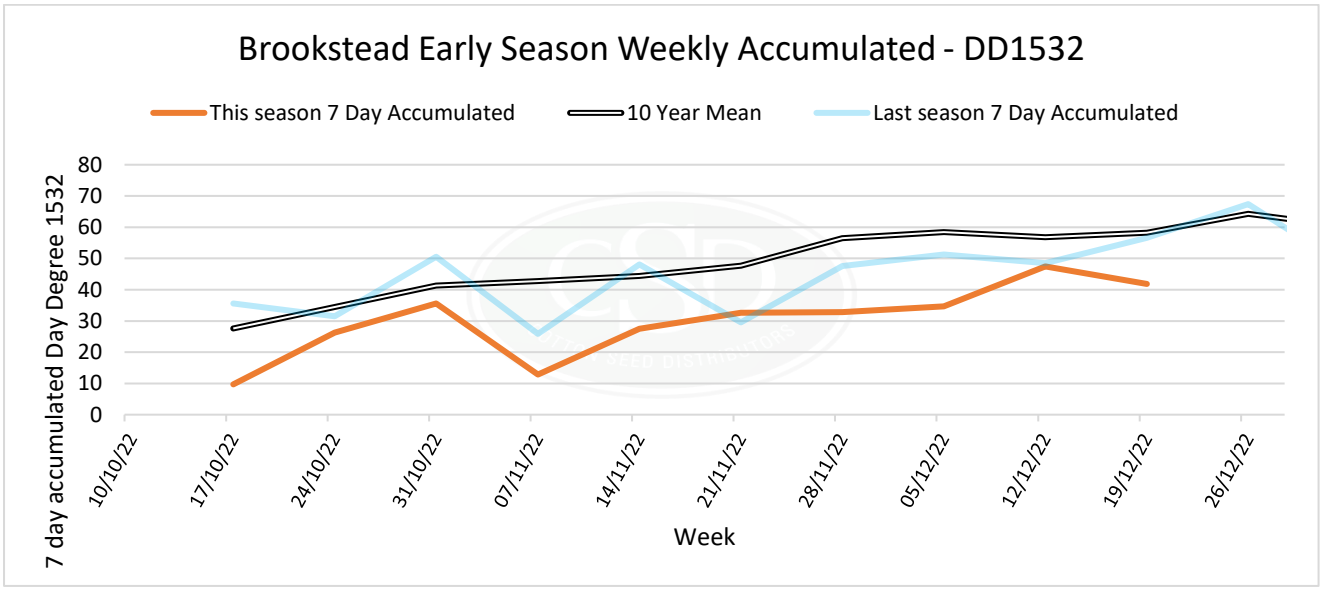
	2022	2021	2020	2019	2018	10 year mean
Base 12	617.8	735.0 ▲	856.2 ▲	899.3 ▲	804.1 ▲	791.8 ▲
DD1532*	316.1	453.7 ▲	523.3 ▲	526.1 ▲	508.2 ▲	479.6 ▲
Cold shock days (≤ 11°C)	28	9 ▼	8 ▼	16 ▼	4 ▼	10.7 ▼
Days above 36°C	0	0	12 ▲	21 ▲	7 ▲	6.7 ▲
Nights above 25°C	0	0	0	0	0	0.1 ▲
Days above 40°C	0	0	1 ▲	1 ▲	0	0.3 ▲
Total rainfall (mm)	198.9	414.4 ▲	135.0 ▼	28.6 ▼	246.6 ▲	154.4 ▼
Total radiation (MJ/m^2)	1534.4	1461.6 ▼	1631.4 ▲	1857.7 ▲	1636.0 ▲	1511.0 ▼
Average temperature (°C)	20.0	21.9 ▲	23.6 ▲	24.0 ▲	23.0 ▲	22.6 ▲

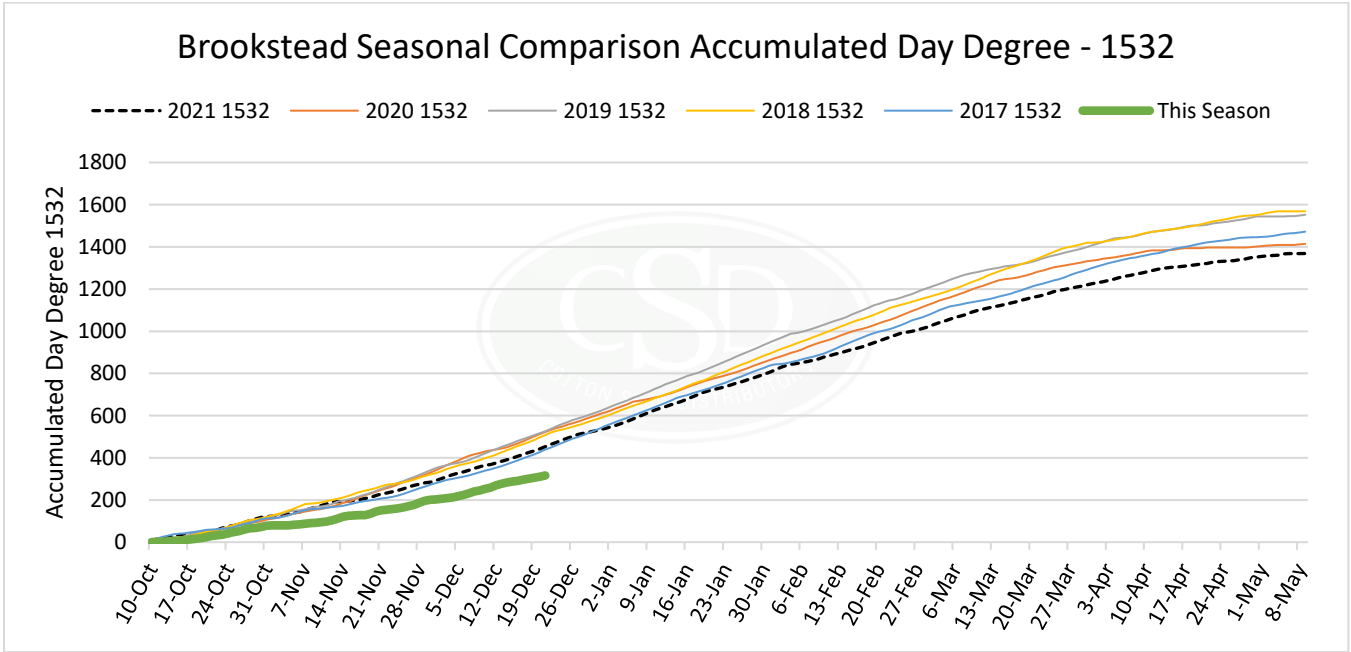
* Experimental calculation.

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

CottonInfo **Information** *when you need it*

Darling Downs crop check





CottonInfo **Information** *when you need it*

Darling Downs crop check

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CottonInfo **Information** *when you need it*

Gwydir crop check

18th December 2022

Day Degree

Table 1: **Seasonal Information based on 10th November planting date (Source: Cotton Seed Distributors)**

	2022	2021	2020	2019	2018	10 year mean
Base 12	387.6	443.1 ▲	604.2 ▲	554.6 ▲	486.7 ▲	511.9 ▲
DD1532*	228.3	286.1 ▲	386.7 ▲	337.5 ▲	324.4 ▲	327.9 ▲
Cold shock days (≤ 11°C)	9	5 ▼	1 ▼	3 ▼	1 ▼	2.6 ▼
Days above 36°C	0	0	19 ▲	22 ▲	1 ▲	9.6 ▲
Nights above 25°C	0	0	1 ▲	2 ▲	0	0.9 ▲
Days above 40°C	0	0	6 ▲	4 ▲	1 ▲	2.1 ▲
Total rainfall (mm)	10.8	160.4 ▲	61.8 ▲	30.6 ▲	72.8 ▲	54.4 ▲
Total radiation (MJ/m^2)	920.4	806.5 ▼	938.4 ▲	996.0 ▲	938.2 ▲	852.1 ▼
Average temperature (°C)	21.8	23.4 ▲	27.9 ▲	26.5 ▲	24.8 ▲	25.4 ▲

* Experimental calculation.

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

Accumulated day degree 'targets' after seed imbibed

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

^ 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 specfic developmental events.

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

Gwydir crop check

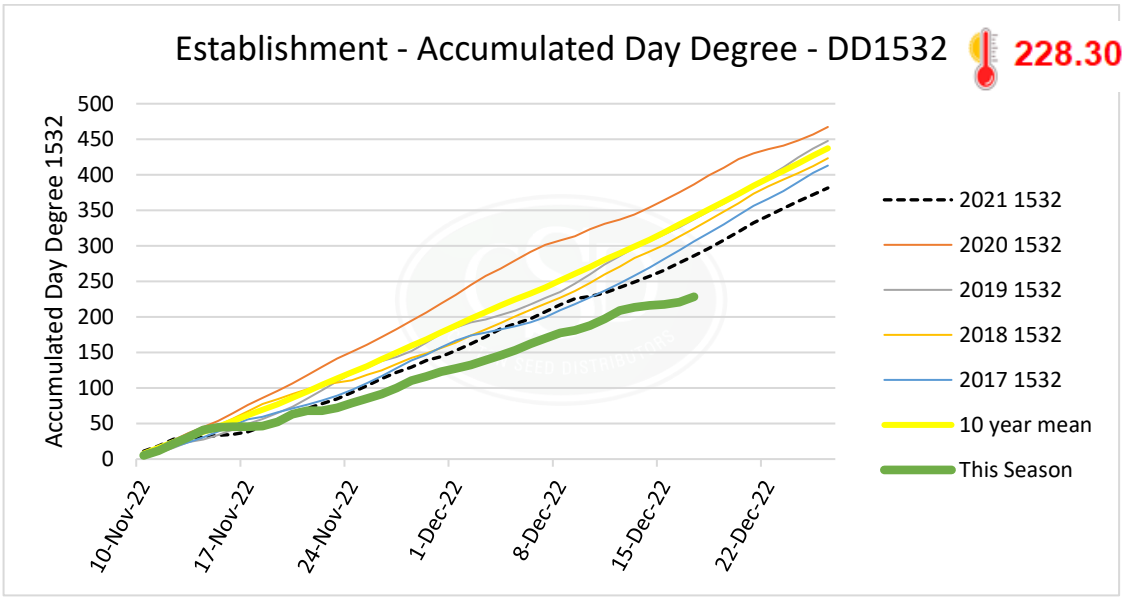


Figure 1: Day Degree comparison using the DD 1532, planting date 10/11/22 Source www.csd.net.au/ddc

AREA	Gwydir Valley
Crop Stage	**Irrigated Cotton:** • 3 leaf to 12 nodes • Crops sown before the flood are starting to take off and fruiting at 5th – 6th node. • Retentions 85%+ • Later planted cotton slow to establish
Irrigation	• 1st irrigation completed and 2nd irrigation underway on early cotton this week.
Insects/Beneficial	• Some fields have had mite sprays • Mirids building slowly. • Apple dimpling bugs about • Green vege bugs • Low level of beneficial insects – lady beetles, spiders, lacewings
Weeds	• Fleabane, Barn Yard Grass, Feather Top Rhodes Grass, Peachvine and Sow Thistle

CottonInfo **Information** *when you need it*

Gwydir crop check

Spray Drift	• Some reports of spray drift (2, 4-D) onto Cotton has been reported in the Gwydir • Consultants concerned its happening already and worried about the coming weeks as harvest is finished and fallow sprays ramp up. • WAND Inversion towers for identifying "Hazardous Inversions" are up and running https://app.wand.com.au/ • Satacrop to identify sensitive crops areas https://satacrop.com.au 
Disease	• Black root rot • Rhizoctonia • Fusarium
Comments	• "Usual peachvine, fleabane and FTRG and BYG in areas that missed residual" • "Mites flaring near sorghum & durum and riparian areas"

The 2nd Gwydir AWM meeting was held on the 14/12/22 at Mallawa. The key discussion was around early season establishment, mite management, spray drift, come clean go clean. Ali Kuchel from CA was also there as she has been visiting the Cotton Circularity trial sites. These trials return cotton fabric waste back to cotton soils. The soil health is being monitored by Dr Oliver Knox, UNE.

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

CottonInfo **Information** *when you need it*

Gwydir crop check

2nd December 2022

Day Degree

Table 1: **Seasonal Information based on 10th November planting date (Source: Cotton Seed Distributors)**

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	221.4	241.8 ▲	370.9 ▲	300.2 ▲	251.7 ▲	284.4 ▲
DD1532*	131.6	152.6 ▲	230.9 ▲	185.3 ▲	164.0 ▲	181.0 ▲
Cold shock days (≤ 11°C)	5	4 ▼	0 ▼	2 ▼	1 ▼	1.6 ▼
Days above 36°C	0	0	15 ▲	10 ▲	0	5.1 ▲
Nights above 25°C	0	0	0	0	0	0.4 ▲
Days above 40°C	0	0	5 ▲	1 ▲	0	1.2 ▲
Total rainfall (mm)	8.6	152.2 ▲	0.2 ▼	30.4 ▲	49.0 ▲	35.2 ▲
Total radiation (MJ/m²)	512.7	419.3 ▼	588.1 ▲	577.7 ▲	549.8 ▲	490.6 ▼
Average temperature (°C)	21.7	22.6 ▲	28.9 ▲	25.5 ▲	23.4 ▲	24.8 ▲

* Experimental calculation.

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

Accumulated day degree 'targets' after seed imbibed

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

^ 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).

Gwydir crop check

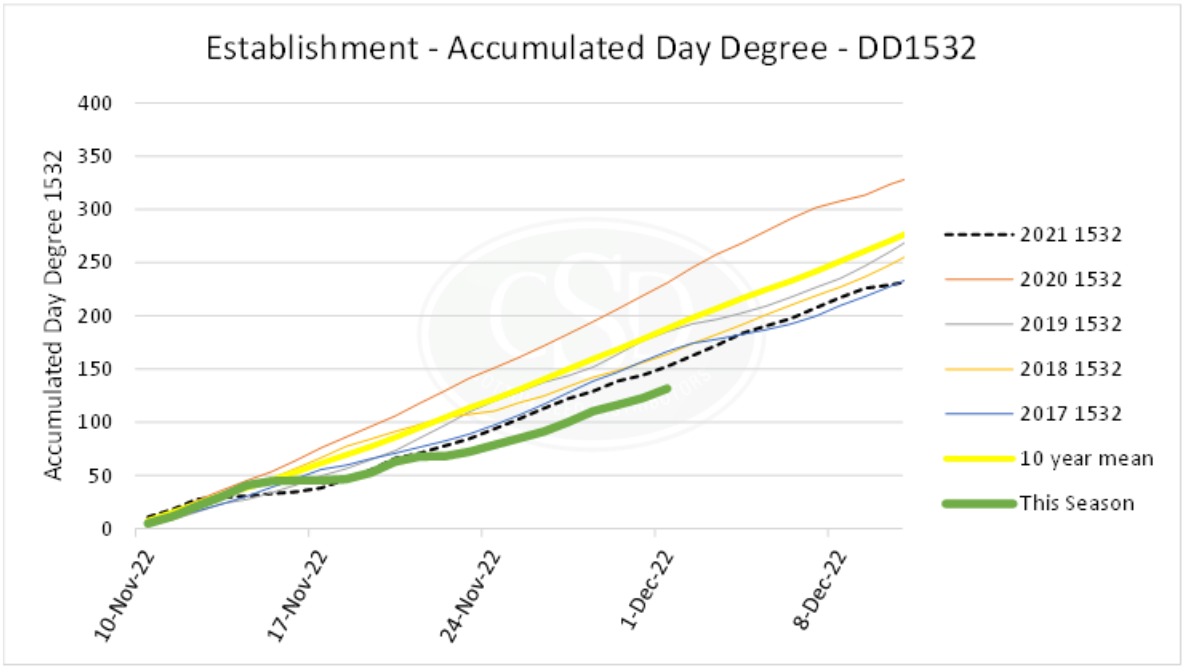


Figure 1: Day Degree comparison using the DD 1532, planting date 10/11/22 Source www.csd.net.au/ddc

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 5 cold shocks (≤ 11°C and 3 times the 10-year average of 1.6) has made for slow growing conditions.

Around 15-20% of the Gwydir area was planted early Oct, before the flood, with a planting opportunity between 10th and the 19th October. The flooding in Moree occurred from 22/10/22 – 25/10/22, some people were back planting within leveed areas closer to Moree from the start of November onwards, with the largest area of irrigated cotton planted in the fortnight from the 10th November.

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 needing a drink at present. Dryland area may back due to these conditions and time is running out.

As you know cotton need 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

Gwydir crop check

first flower) Tool to estimate the date of first flower. Assuming your crop was planted into rain moisture on the 10th November, the estimated time to first flower is 15th January (usually we would reach first flower by 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	Gwydir Valley
Crop Stage	**Irrigated Cotton:** • Emerging to 10 nodes and squaring **Dryland:** • Dry seed to 6 nodes • Still a lot to go in, but logistics with harvest and labour shortages has been challenging • Some fields now too dry to plant • 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	• Much of the cotton was planted on rainfall, but the warm winds and a few hot days have dried things out and most crops have received their 1st irrigation in the last fortnight and the later sown crops watered up.
Insects/Beneficial	• The wet year has provided a "green bridge" supporting a range of insect pests. • There has been high incidence of heliothis egg lays on some of the early cotton, but of no consequence in the Bollgard varieties. • Mites have been commonly observed across the valley, but moderate thrip numbers are keeping them in check (mostly). Remember we do have moderate level resistance to Abamectin in the Gwydir - 30% of mite populations surviving in 2021/22. • If you have used Abamectin for mite control, subsequent monitoring will be important. The IRMS (Insect Resistance Management Strategy 2021/22) states no more than 2 applications in a season. • Generally, mites are controlled by beneficial insects such as thrips, big-eyed bugs, lady beetles, damsel bugs, so early season chemical choice is important.

CottonInfo **Information** *when you need it*

Gwydir crop check

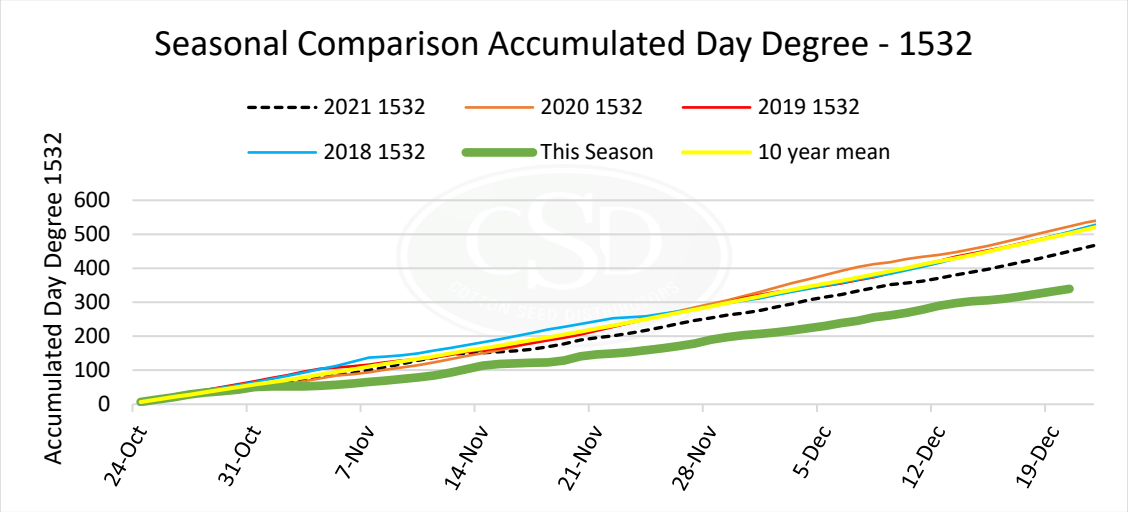
Insects/Beneficial	• Mirid nymphs numbers building. • Apple dimpling bugs about • Low level of beneficial insects
Weeds	• Fleabane, Barn Yard Grass, Feather Top Rhodes Grass and Sow Thistle
Spray Drift	• Some reports of spray drift (2, 4-D) onto Cotton has been reported in the Gwydir
Disease	• Black root rot • Rhizoctonia • Fusarium
Comments	• "Growth very slow, we are way behind where the crop needs to be" • "Mites and mirids are coming from the Canola Stubble"

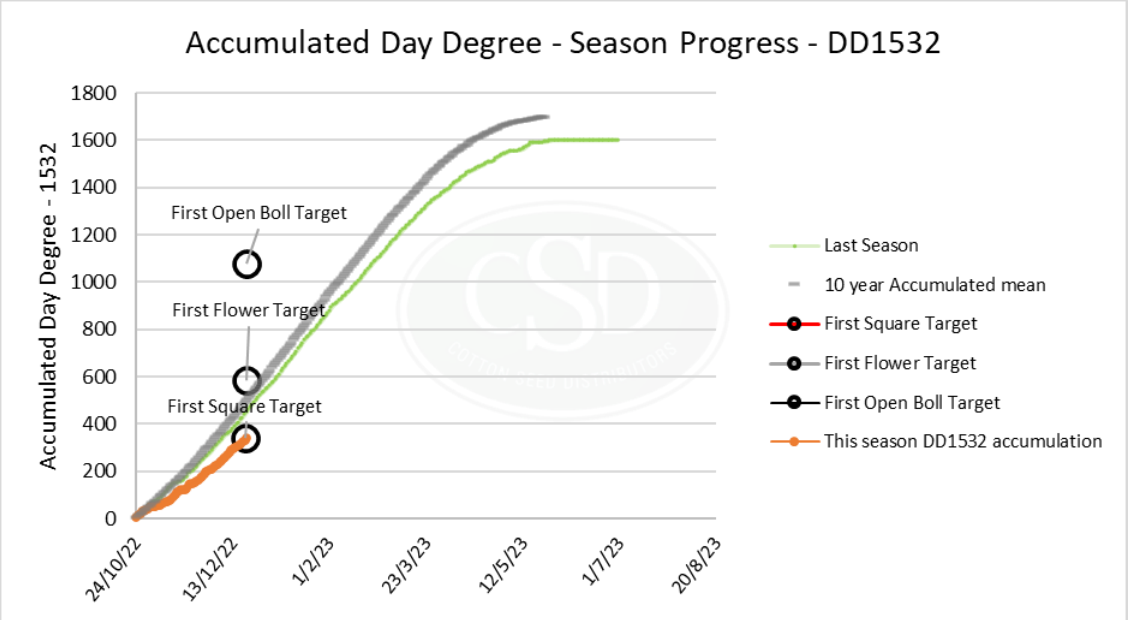
Seasonal Day Degree and historical data is sourced from Cotton Seed Distributors Day Degree Calculator found at www.csd.net.au/ddc. For more specific day degree and crop management detail for your farm, field and variety check out CottonTracka® at www.cottontracka.com.au

CottonInfo **Information** *when you need it*

Macintyre crop check

DATE – 14 December 2022





Macintyre crop check

GOONDIWINDI AIRPORT

Download

Date range: 24 October, 2022 to 20 December, 2022 (58 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	575.3	682.2 ▲	829.2 ▲	828.4 ▲	781.3 ▲	760.7 ▲
DD1532*	339.4	449.5 ▲	523.8 ▲	505.1 ▲	507.1 ▲	485.2 ▲
Cold shock days (≤ 11°C)	11	5 ▼	2 ▼	6 ▼	2 ▼	4.2 ▼
Days above 36°C	1	2 ▲	24 ▲	28 ▲	10 ▲	13.0 ▲
Nights above 25°C	0	0	1 ▲	1 ▲	0	0.6 ▲
Days above 40°C	0	0	6 ▲	5 ▲	3 ▲	2.7 ▲
Total rainfall (mm)	57.5	305.3 ▲	133.9 ▲	32.8 ▼	109.4 ▲	99.4 ▲
Total radiation (MJ/m^2)	1359.3	1216.7 ▼	1372.8 ▲	1489.8 ▲	1399.6 ▲	1267.4 ▼
Average temperature (°C)	21.6	23.7 ▲	26.2 ▲	26.1 ▲	25.4 ▲	25.0 ▲

* Experimental calculation.

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

Day degrees (1532 system) for the season continue to be slow to accumulate, with the average temperature being 3°C below the 10-year average. This, when combined with the 11 cold shocks (below 12°C) which is over double the 10-year average of 4, is perpetuating the slow growing conditions. Solar radiation remains above the 10-year average which, with warming conditions but the absence of heat stress, provides a platform for better growing conditions for the crop. The BOM temperature outlook continues to suggest average to cooler than average temperatures through until March with a hotter spell in the second week of January.

CottonInfo **Information** *when you need it*

Macintyre crop check

AREA	Macintyre Valley
Crop Stage	• Crops range from germinating to around 17 nodes. As at mid last week no flowers were reported as open although early crops are likely to be doing so now.
Irrigation	• Irrigations have commenced with no rain and beds drying out under windy conditions.
Insects/Beneficial	• Mirids scattered and building in areas with control measures undertaken for some crops. • Occasional GVB • Beneficials on the rise
Weeds	• Being managed with in-crop sprays and cultivations. Persistent species reported include polymeria, peach vine, sesbania and volunteer cotton.
Disease	• Plants starting to grow through rhizoctonia and pythium from early season • Fusarium causing seedling loss in some cases (ie. back-to-back with history of FOV). • Isolated cases of unconfirmed wilt in some back-to-back country.
Environment	• Mild and cool start still equating to slow growing conditions • Some reports of drift symptoms starting to show in a few isolated crops
Comments	• "Long fallow fields have been slow" • "Lack of labor has made recent weeks constant and full on for growers trying to get things done"

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

Macquarie crop check

DATE – 14th – 30 Nov 2022

Please note Day Degree Calculations are in 1532 format to better reflect the DD the plant can use. Please email with any questions or further information you would like to see.

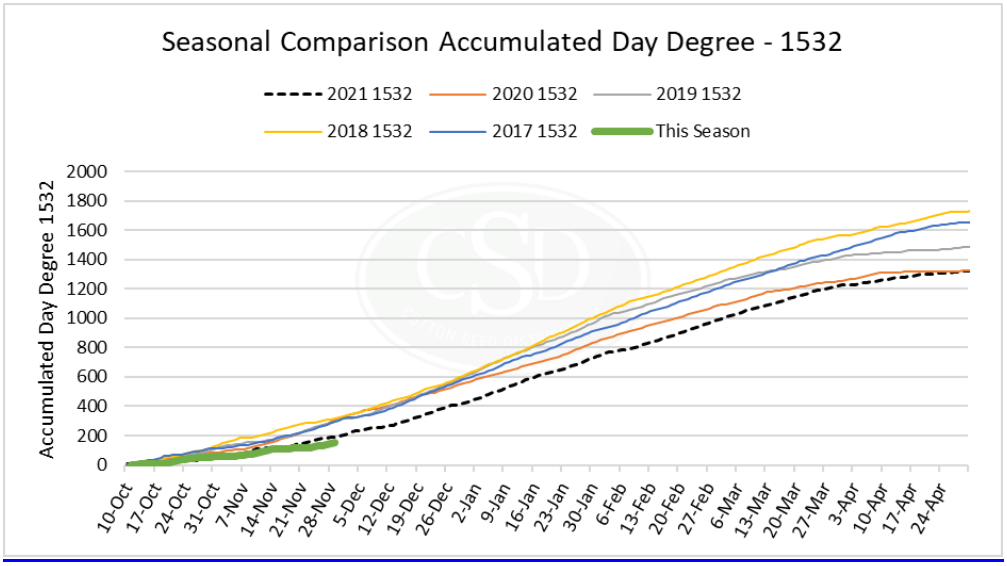
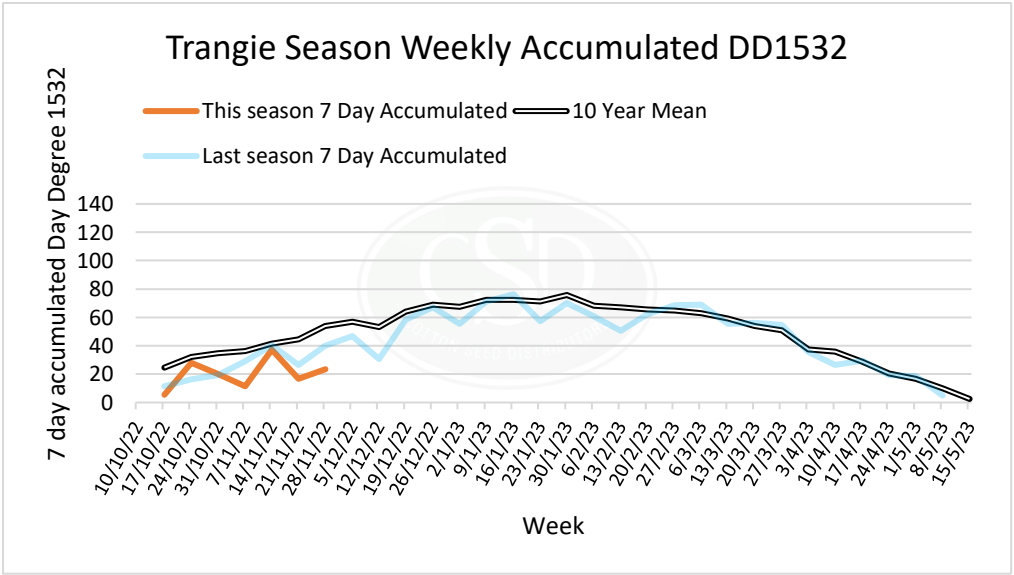


Fig 1 : Trangie accumulated DD 10th of October planting



Macquarie crop check

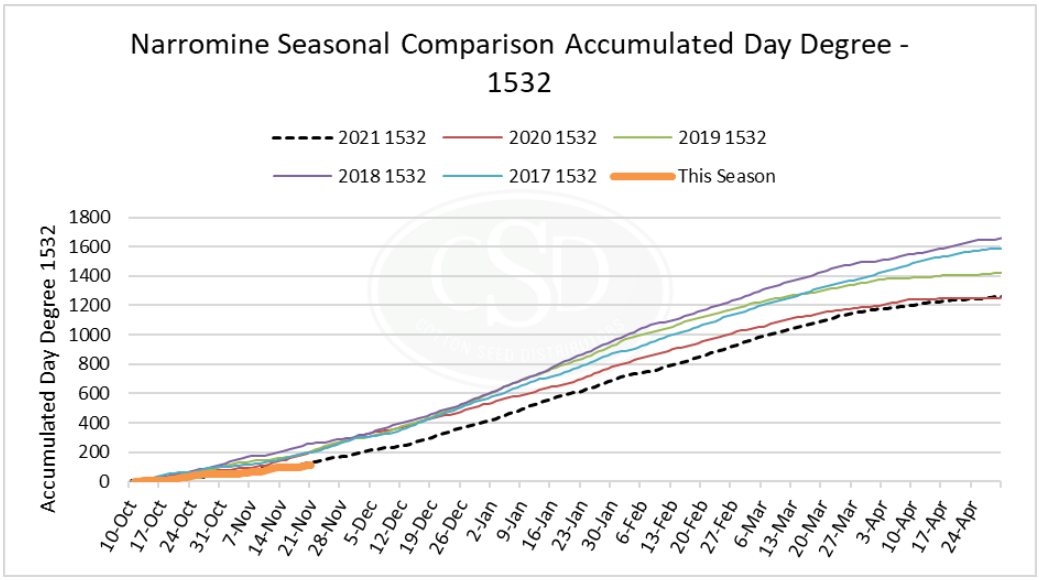


Figure 3: Day Degree comparison Source www.csd.net.au/ddc

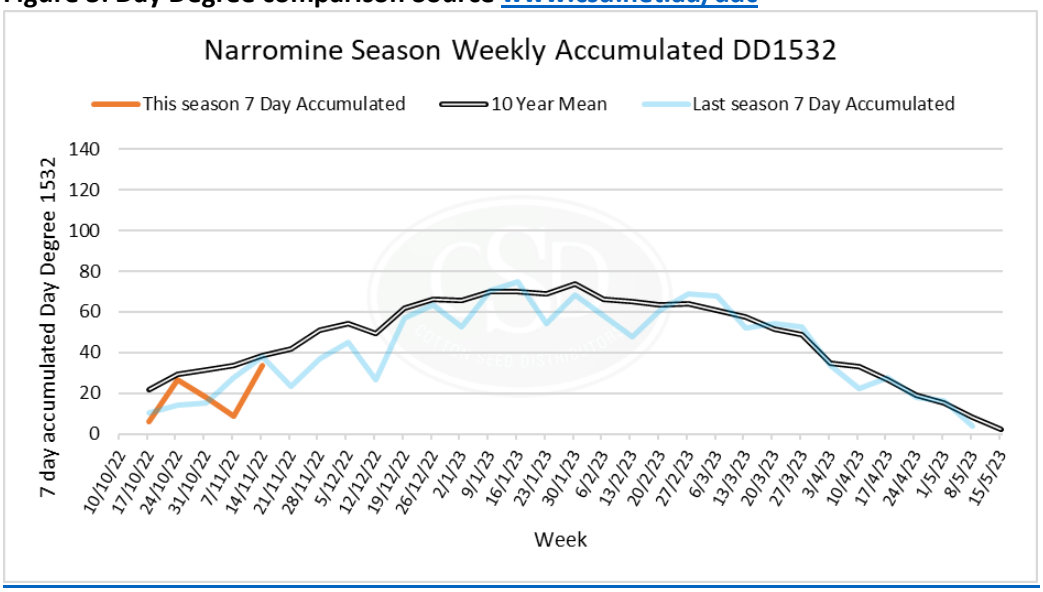


Fig 4: 7 day accumulated DD Source www.csd.net.au/ddc

Macquarie crop check

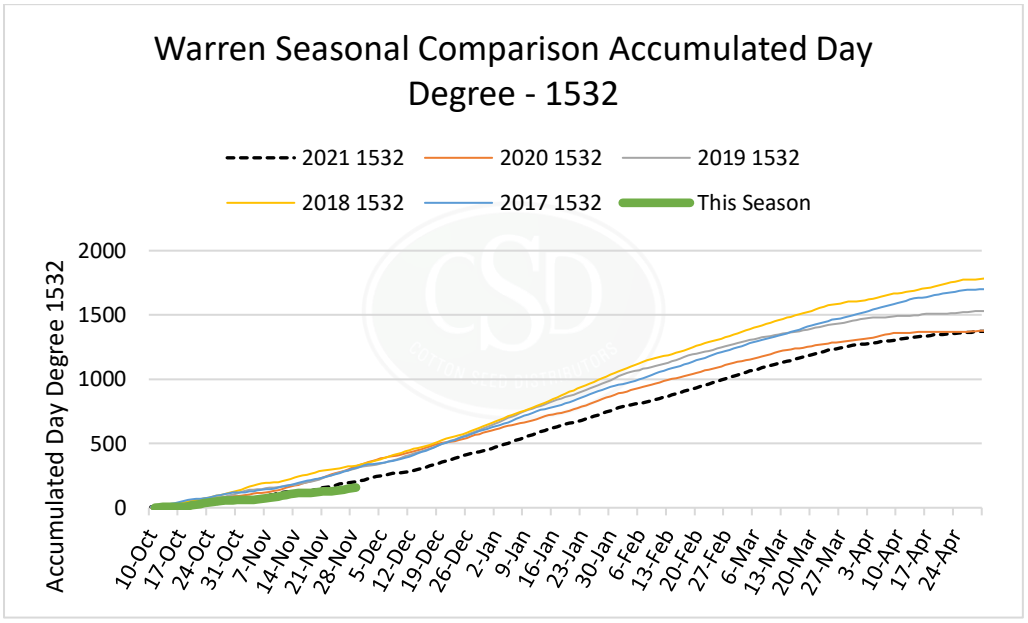


Figure 5: Day Degree comparison Source www.csd.net.au/ddc

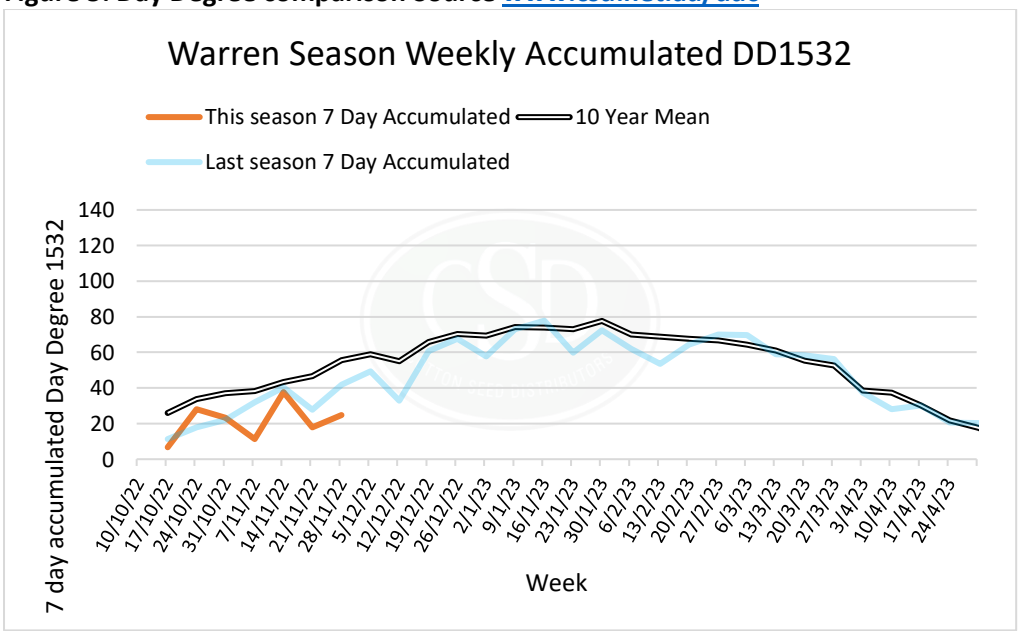


Fig 6: 7 day accumulated DD Source www.csd.net.au/ddc

CottonInfo **Information** *when you need it*

Macquarie crop check

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

OFF TARGET DRIFT EVENT

There has been a major off target drift event covering a large area of the Macquarie valley.
Early planted cotton has been affected – the pattern is sporadic and varies in severity from mild to severe.
7-8 leaf cotton is expressing from 3- 4th node and 4-6 leaf cotton from the second node.
The area covers from North and West of Warren through to Trangie according to reports so far.
At this point 2/12/22 there is estimated 7000ha affected to some degree.
The patters and occurrence rates suggest its not residual herbicide or condemnation but a widespread drift event.
Please be sure to report affected Ha to Cotton Australia and to start awareness campaigns in earnest as we come up to the most critical two weeks for drift event each season.
The next two weeks will be very telling as to how widespread and how bad the damage has been. As you can see from pic plants may grow out of it and some will be very affected.
I will be compiling info to pass onto researchers and possibly testing some plants – keep your eyes open and report all areas affected.

AREA	MACQUARIE - Trangie Nevertire Narromine Warren
Crop Stage	• 0-8 leaf (Trangie) • 0 – 8 leaf (Nevertire) • 0 – 6 leaf (Narromine) • 4 – 8 leaf advanced is starting to square (Warren) • 4 – 8 nodes
Irrigation	• Lots of cotton established on moisture • Looking to irrigate around 18th of Dec (first in crop) • First in crop irrigation happening now

CottonInfo **Information** *when you need it*

Macquarie crop check

Insects/Beneficial	• Thrips • Thrips building • Mites in some fields starting to build – thrips should battle them out
Weeds	• 2nd OTT Glyphosate occurring • Clethodim applied where windmill grass present • Cultivation in back-to-back and where fleabane is a problem •
Disease	• Alternaria in back-to-back early season • Black root rot present where there is a history. • Lots of seedling disease present early season. • Rhizoc like symptoms on most seedlings due to conditions • Growing out of it in most cases
Comments	• Evidence of Group I damage in a large areas affecting plants sporadically

CottonInfo **Information** *when you need it*

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 (≤ 11°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.

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^	339
First flower	777^	584
First open boll	1527^	1077

^ 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).

Mungindi crop check

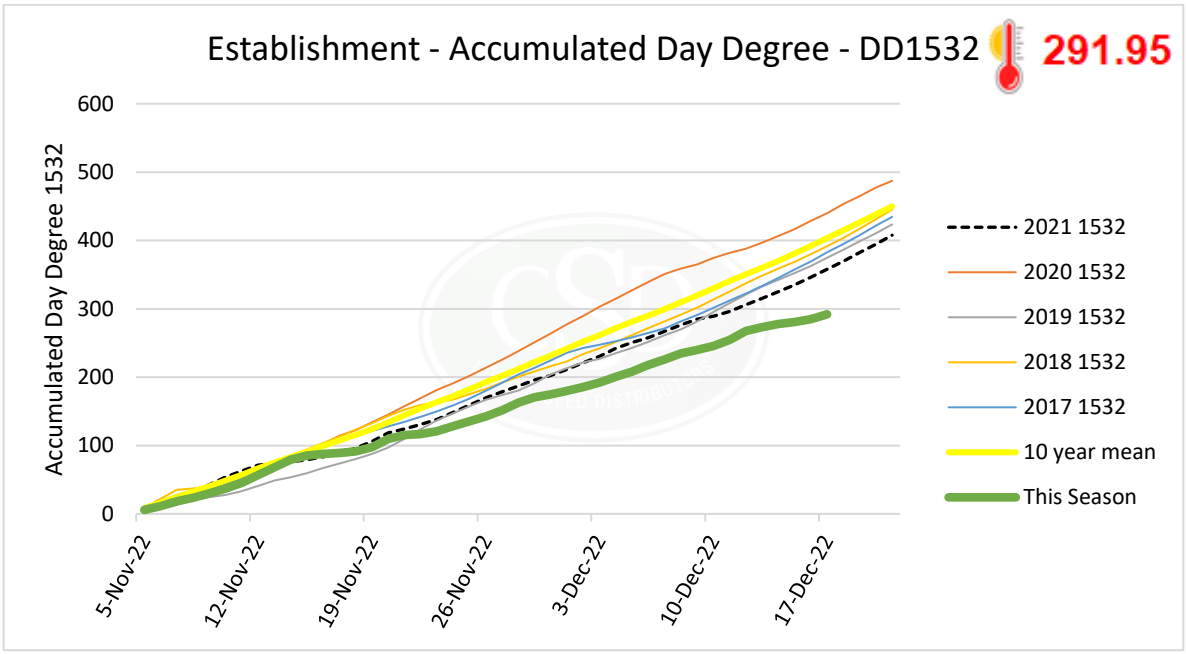


Figure 1: Day Degree comparison using the DD 1532, planting date 5/11/22 Source www.csd.net.au/ddc

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. 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

Mungindi crop check

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	Gwydir Valley
Crop Stage	**Irrigated Cotton:** • Cotyledon to 14 nodes and squaring **Dryland:** • Dry seed to 6 nodes • 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	• Cotton crops have received their 1st irrigation. The earlier plant will get their 2nd irrigation this coming week.
Insects/Beneficial	• 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	• Fleabane, Barn Yard Grass, Feather Top Rhodes Grass and Sow Thistle
Spray Drift	• 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	• Black root rot • Rhizoctonia • Fusarium • NSW DPI early season disease surveys are completed with plant samples collected and currently being assessed in the lab.

CottonInfo **Information** *when you need it*

Mungindi crop check

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.

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

CottonInfo **Information** *when you need it*

CQ crop check

DATE:21/12/2022

AREA	Central Queensland
Crop Stage	• Crops ranging from establishment to 25 nodes • Some of the earlier crops will be nearing cut-out
Irrigation	• Second irrigation on some farms • Some lucky enough to be under rain and have been able to hold off
Insects/Beneficial	• Increasing mirid activity – insecticide still being applied in some paddocks with high mirid numbers • Increased thrips activity in some areas • Some green vegie bugs • Heliothis egg lay – medium, high in some areas with wet and cool conditions • Lady beetles, spiders, lacewings, red and blue beetles, damsel bug, big eyed bug, parasitic wasps
Weeds	• Moderate level • Milkthistle, sesbania and red pigweed • Fleabane • Feather top Rhodes grass
Disease	• Back-to-back fields and those with history showing disease • Black root rot and verticillium wilt • Not favourable wet and overcast conditions for disease
Environment	• High temps over a couple days ranging from 38 – 42 degrees • Fruit retention is sitting pretty good • High rainfall in some areas

Mirids

What Damage?

Adults and nymphs feed by piercing plant tissue and releasing a chemical that destroys cells in the feeding zone, resulting in the following symptoms:

- localised leaf damage
- terminal wilting of young plants
- deformity (broom shaped)
- shedding of squares and small bolls
- damage to bolls (up to 15 days old) by causing warty growths inside carpel which causes discoloured lint

- malformed bolls, delay of maturity
- reduced lint and fibre quality.

Monitoring and thresholds

Mirids are a very mobile pest and populations can fluctuate rapidly so sampling needs to be done every three days. The beat sheet is the most effective means for estimating mirid numbers. Monitor for number of mirids as well as for tip damage and fruit retention on cotton plants. Adults cause more damage than the first three nymphal instars while the fourth and fifth instars do similar levels of damage as the adults. Heavy tip damage and fruit retention levels can also have an impact on control decisions.

Thresholds based on beat sheet sampling vary between warm and cool areas due to the cotton plant's ability to compensate for damage.

Warm areas - Early season: 4 mirids per metre. Mid season: 3 mirids per metre.

Cool areas - Early season: 2 mirids per metre. Mid season: 1.5 mirids per metre.

Management

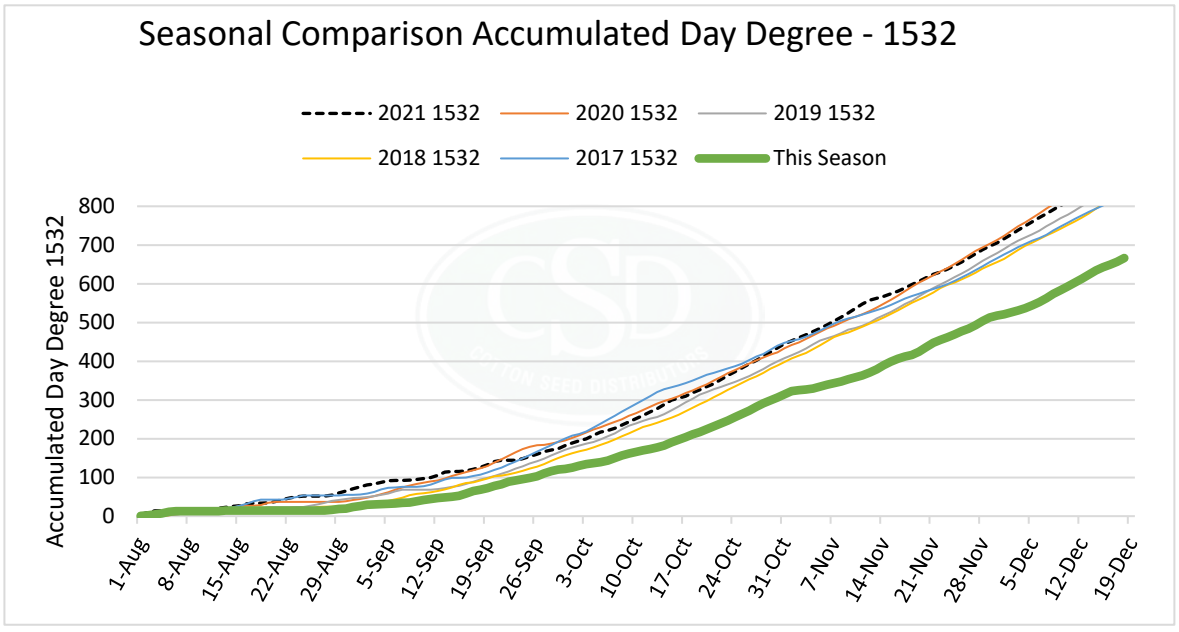
Control alternative hosts including native weeds before crop establishment.

Avoid broad-spectrum insecticides.

Spray only when both insects and damage are at threshold levels.

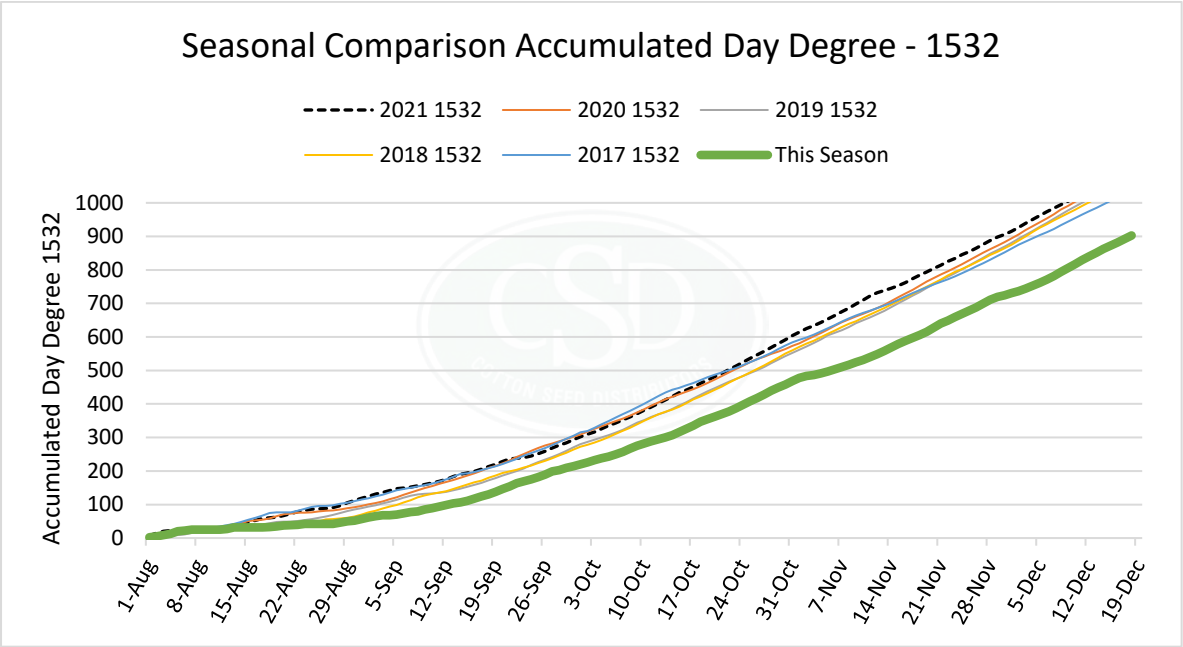
For chemical control options, read the Cotton pest management guide.

Callide Dawson



CQ crop check

Central Highlands



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