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

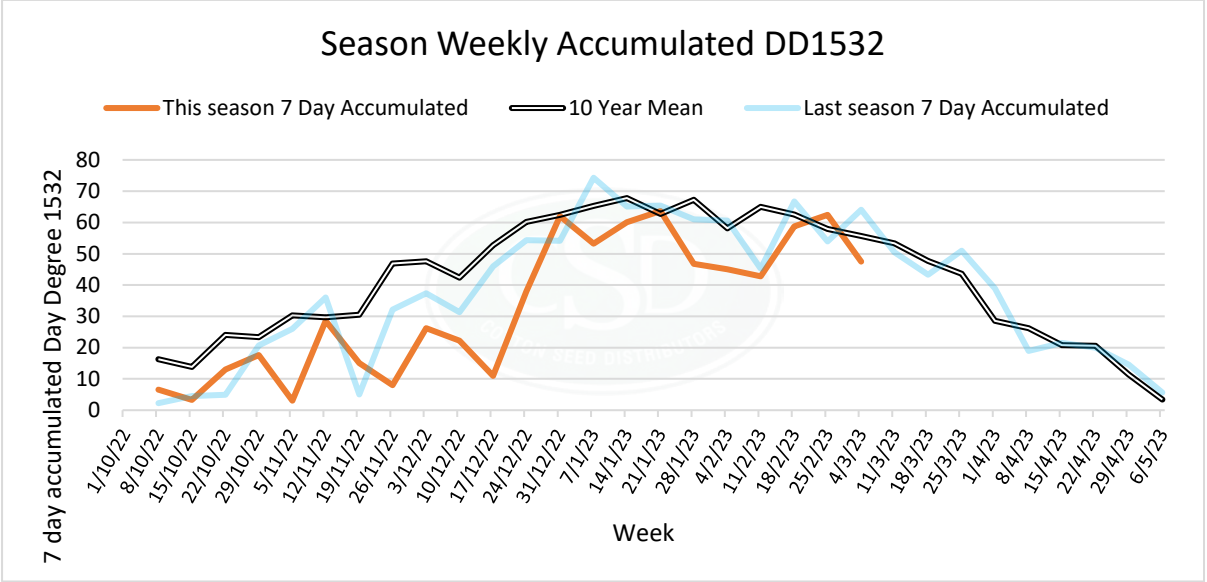
Southern NSW crop check

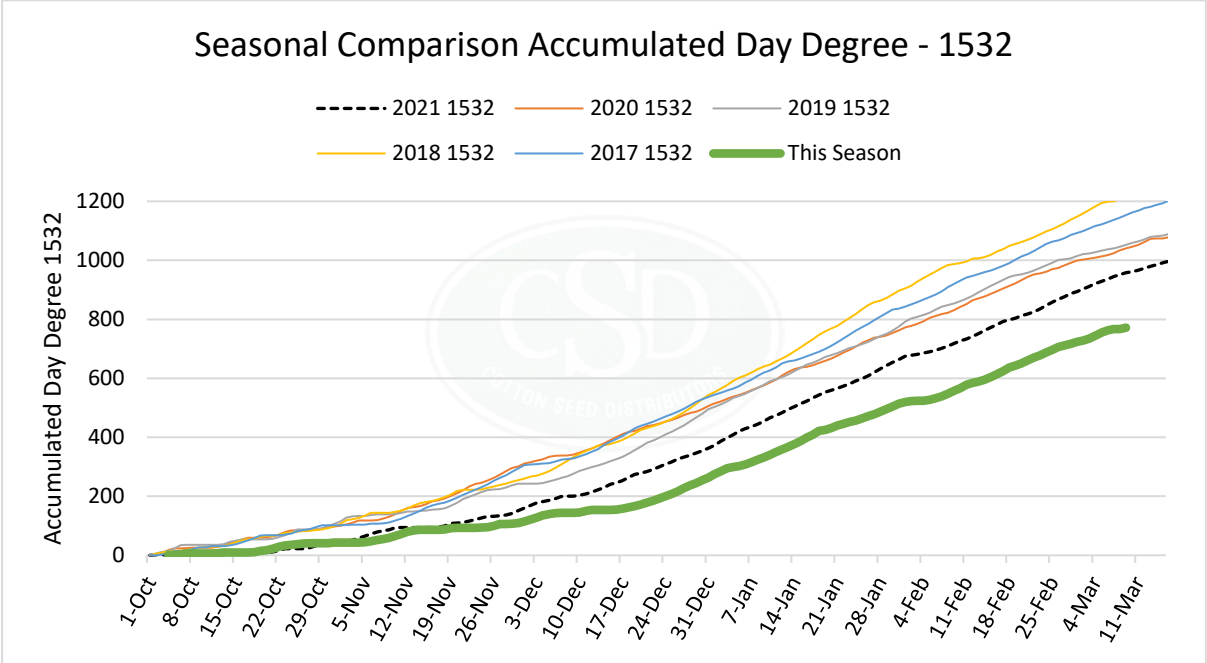
10th March 2023

Crop Stage	• Majority of crops 0 to 1.5 Nodes above white flower • Bolls mature at node 9. • 8 to 12 nodes to mature depending on Last effective flower position.
Insects/Beneficials	• Increasing mite damage but low numbers. Good thrip numbers • Some adult Silverleaf whitefly in thicker canopies but not around on most farms
Weeds	• Smaller canopies will need a glyphosate at defoliation with a range of weeds present
Disease	• A lot of verticillium expression in known fields with cooler weather over last 7 days.
Comments	• First cracked boll seen this week. • Boll counts 20 to 30 % back on typical numbers. • Last irrigations happening this week. • Some crops due to be irrigated to 20th -25th March. • Defoliation to start mid-April. • Still running 2 to 3 weeks late, kind Autumn needed

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 9 March, 2023 (146 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	1494.6	1670.9 ▲	1735.5 ▲	1831.8 ▲	2071.3 ▲	1833.6 ▲
DD1532*	837.8	1045.7 ▲	1068.1 ▲	1086.8 ▲	1270.7 ▲	1109.3 ▲
Cold shock days (≤ 11°C)	38	19 ▼	22 ▼	23 ▼	17 ▼	22.1 ▼
Days above 36°C	25	16 ▼	21 ▼	39 ▲	54 ▲	37.2 ▲
Nights above 25°C	1	2 ▲	4 ▲	10 ▲	25 ▲	8.6 ▲
Days above 40°C	2	1 ▼	10 ▲	18 ▲	25 ▲	12.5 ▲
Total rainfall (mm)	200.8	291.6 ▲	199.0 ▼	162.4 ▼	99.8 ▼	150.6 ▼
Total radiation (MJ/m^2)	3319.2	3173.2 ▼	3540.6 ▲	3454.4 ▲	3539.3 ▲	3146.4 ▼
Average temperature (°C)	21.8	23.2 ▲	23.7 ▲	24.3 ▲	26.0 ▲	24.3 ▲

CARRATHOOL MOTORS

Download

Date range: 15 October, 2022 to 9 March, 2023 (146 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	1451.2	1620.3 ▲	1664.1 ▲	1748.6 ▲	1965.9 ▲	1752.8 ▲
DD1532*	786.6	987.2 ▲	988.0 ▲	1007.5 ▲	1173.6 ▲	1033.2 ▲
Cold shock days (≤ 11°C)	42	27 ▼	30 ▼	30 ▼	25 ▼	27.6 ▼
Days above 36°C	23	13 ▼	23	36 ▲	47 ▲	33.9 ▲
Nights above 25°C	0	1 ▲	3 ▲	8 ▲	16 ▲	5.9 ▲
Days above 40°C	2	1 ▼	7 ▲	16 ▲	22 ▲	10.7 ▲
Total rainfall (mm)	243.0	247.7 ▲	161.5 ▼	142.5 ▼	117.0 ▼	140.4 ▼
Total radiation (MJ/m^2)	3289.4	3188.8 ▼	3510.2 ▲	3433.9 ▲	3493.6 ▲	3118.6 ▼
Average temperature (°C)	21.4	22.7 ▲	23.1 ▲	23.6 ▲	25.2 ▲	23.7 ▲

* Experimental calculation.

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

Southern NSW crop check

WHITTON (CONAPAIRA ST)

Download

Date range: 15 October, 2022 to 9 March, 2023 (146 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	1454.5	1564.5 ▲	1653.0 ▲	1746.0 ▲	1958.6 ▲	1736.1 ▲
DD1532*	796.6	946.7 ▲	986.9 ▲	1010.0 ▲	1186.2 ▲	1031.4 ▲
Cold shock days (≤ 11°C)	43	28 ▼	27 ▼	28 ▼	24 ▼	27.4 ▼
Days above 36°C	23	10 ▼	22 ▼	34 ▲	48 ▲	31.4 ▲
Nights above 25°C	0	0	1 ▲	6 ▲	18 ▲	5.0 ▲
Days above 40°C	2	1 ▼	9 ▲	16 ▲	22 ▲	9.8 ▲
Total rainfall (mm)	211.5	334.4 ▲	199.4 ▼	158.3 ▼	135.7 ▼	157.8 ▼
Total radiation (MJ/m^2)	3240.9	3091.4 ▼	3440.6 ▲	3354.0 ▲	3425.9 ▲	3071.4 ▼
Average temperature (°C)	21.4	22.3 ▲	23.0 ▲	23.6 ▲	25.2 ▲	23.5 ▲

* Experimental calculation.

JERILDERIE (COREE STN)

Download

Date range: 15 October, 2022 to 9 March, 2023 (146 days).

Summary | Seasonal comparison

	2022	2021	2020	2019	2018	10 year mean
Base 12	1380.9	1522.3 ▲	1533.9 ▲	1617.5 ▲	1823.2 ▲	1626.9 ▲
DD1532*	738.8	885.8 ▲	859.5 ▲	886.4 ▲	1054.3 ▲	924.9 ▲
Cold shock days (≤ 11°C)	45	37 ▼	42 ▼	40 ▼	31 ▼	36.7 ▼
Days above 36°C	18	12 ▼	20 ▲	27 ▲	43 ▲	27.8 ▲
Nights above 25°C	0	0	0	4 ▲	8 ▲	2.9 ▲
Days above 40°C	1	1	5 ▲	13 ▲	17 ▲	8.3 ▲
Total rainfall (mm)	291.6	193.4 ▼	119.6 ▼	132.3 ▼	129.4 ▼	142.0 ▼
Total radiation (MJ/m^2)	3231.3	3188.4 ▼	3429.3 ▲	3382.7 ▲	3431.5 ▲	3064.5 ▼
Average temperature (°C)	20.8	21.9 ▲	22.1 ▲	22.6 ▲	24.1 ▲	22.7 ▲

* Experimental calculation.

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

Darling Downs crop check

DATE – Wednesday 22th March 2023 CC9

BE ALERT – Reoccurring Wilt detected on Darling Downs

In late 2020, QLD DAF pathologists confirmed the cause of dying plants reported in Central Queensland cotton fields. The newly described disease called Reoccurring wilt, is caused by a new fungal pathogen, and in Queensland, has previously been detected in Central Queensland, St. George and the Border Rivers.

Unfortunately, this same pathogen has now been positively identified on the Darling Downs.

What can you do?

- Be aware of what is happening in your fields.
- Report any concerns or unusual symptoms to your local REO – Annabel Twine or your state cotton pathologist. A free diagnostic service is available to cotton growers and consultants. Please contact your state pathologist before sending samples.
- Ensure machinery and vehicles coming on farm are mud and trash-free to minimise the risk of pests, weeds and diseases being spread. See our guide to effective wash-down of vehicles and machinery.
- Develop a farm biosecurity plan to assess the biosecurity risks specific to your farm and business, and the practices that can be implemented to minimise the risk of pests, weeds and diseases spreading on and off farm. See the Farm Biosecurity Toolkit.
- Consider implementing a visitor register, asking those coming on farm about where they have been previously or additionally where your machinery is being contracted.
- For help on any of the above, contact CottonInfo biosecurity technical lead, Sharna Holman and visit the myBMP biosecurity module.

fact sheet www.cottoninfo.com.au

Reoccurring wilt: the ute guide

Have you seen these symptoms?

- The odd plant or patches of plants that wilted and suddenly died (sporadic death) with dead leaves remaining on the plant.
- Reoccurring patches of dying plants getting larger over past seasons with no explanation for plant death i.e. seasonal conditions.
- Dying plants amongst healthy plants with varying stages of plant growth affected.
- Bronzing of leaves and petioles.
- Blackening of the stem.
- Reddening of the roots and vascular tissue.
- When the stem or tap root is cut horizontally, infected tissue may have a wedge-shaped discolouration which is reddish-grey.
- Root decay i.e. if plants are pulled out of the soil, the taproot snaps due to a dry rot.

Bronzing of leaves.

Affected plants wilt and die.

Various stages of plant growth are affected.

Sporadic plant death can occur with dying plants situation amongst healthy plants.

fact sheet

Wedge-shaped discolouration of diseased vascular tissue (left) and internal reddening of the tap root (right)

Plant death occurs rapidly from onset of symptoms (left); blackening of stem (centre); dry rot of tap root (right).

If you see symptoms: collect samples to get tested.

- Collect multiple samples representing all symptoms and stages of growth affected.
- If possible include a healthy plant or plants, as well as the diseased plant material
- Collect whole plant samples including roots:
  - Dig up plants rather than pull them out, as roots may be rotten and break off.
  - Keep samples cool after collection.
- Contact your local state pathologist for details on preferred methods for sending samples:

QLD:
Linda Smith – DAF
Ph: 0457 547 617
Em: linda.smith@daf.qld.gov.au

NSW:
Duy Le – NSW DPI
Ph: 0439 941 542
Em: duy.le@dpi.nsw.gov.au

Additional resources:

- The Fast Facts: Be Wilt Aware factsheet
- CottonInfo E-alert: Reoccurring Wilt, possible new cotton disease
- CottonInfo webinar: Reoccurring wilt

Gwydir crop check

31st March 2023

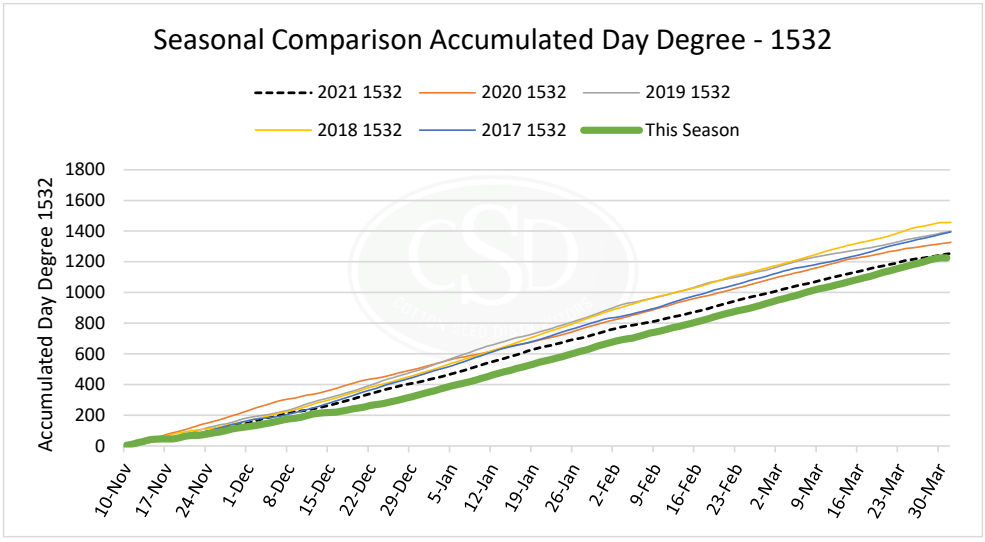


Figure 1: Day Degree comparison using the DD 1532, planting date 10/11/22 Source www.csd.net.au/ddc

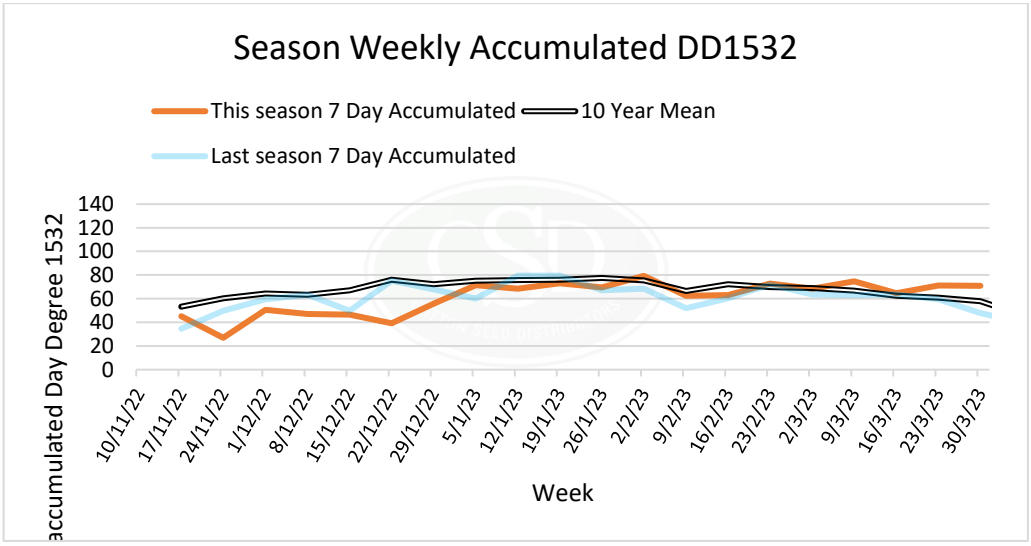


Figure 2: 7-day average Day Degree comparison using the DD 1532, planting date 10/11/22 Source www.csd.net.au/ddc

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

Gwydir crop check

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	1881.8	1887.4 ▲	2001.4 ▲	2139.3 ▲	2211.9 ▲	2074.2 ▲
DD1532*	1226.6	1251.4 ▲	1323.2 ▲	1394.2 ▲	1456.0 ▲	1366.5 ▲
Cold shock days (≤ 11°C)	11	5 ▼	1 ▼	3 ▼	2 ▼	3.0 ▼
Days above 36°C	24	22 ▼	34 ▲	59 ▲	60 ▲	43.2 ▲
Nights above 25°C	1	0 ▼	1	21 ▲	12 ▲	7.8 ▲
Days above 40°C	0	0	6 ▲	14 ▲	11 ▲	8.0 ▲
Total rainfall (mm)	256.2	433.6 ▲	532.8 ▲	342.4 ▲	117.4 ▼	256.3 ▲
Total radiation (MJ/m^2)	3163.3	2913.7 ▼	3011.8 ▼	3114.7 ▼	3346.7 ▲	2898.7 ▼
Average temperature (°C)	25.1	25.2 ▲	26.1 ▲	27.0 ▲	27.6 ▲	26.6 ▲

* Experimental calculation.

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

Gwydir crop check

AREA	Gwydir Valley
Crop Stage	**Irrigated Cotton:** • Defoliation commencing this week on early crops **Dryland:** • Needing rain badly • Defoliation starting "Defoliated some irrigation fields earlier this week and leaf coming off beautifully due to the heat" Dryland: "Late boll fill, odd paddock just cutout" "Dryland up to 26 nodes, all cutout"
Irrigation	1-2 irrigations to go "*Majority of irrigation had its last water. Some had their last a fortnight ago"* *"Applying the last irrigation on November planted cotton and still one irrigation to go in 7 days time on the very last planted fields"*
Insects/Beneficial	• Mites persisting • Aphids moderate to high, requiring sprays. • CBT Common on Aphid fields • SLW have increased significantly, but already row closure so looking at other product choices. Mites have persisted all season. The end of the season has become expensive with mites, aphids and SLW. SLW number have been greatest in western districts – warmer. *"patches of aphids, but good presence of lady beetles, red blue spiders"* *"thrips have arrived"* *"SLW remaining low"* *"Aphids turning up and flaring in some paddocks. Earlier Intruder was successful, recently used Primicard which was successful and has preserved a good number of parasitic wasps, hoverfly and lady beetle nymphs".*

Gwydir crop check

Weeds	• Fleabane, Barn Yard Grass, Feather Top Rhodes Grass, Peachvine and Sow Thistle • *" yellow vine, peach vine, red pigweed and grasses where Terbyne and Dual Gold have worn off"*
Spray Drift	• Late hit of 2,4-D a fortnight ago visible on some late crops.
Disease	• Vert starting to wreak havoc and some final waters pulled up for that reason. • Small amount of Alternaria showing up in some fields.
Comments	

Key CottonInfo Publications:

Cotton Bunchy Top: https://www.cottoninfo.com.au/publications/disease-idm-cotton-bunchy-top also CottonInfo E-News 13/03/23

Managing whitefly https://www.cottoninfo.com.au/sites/default/files/documents/SLW%20booklet%20-%20May%202018.pdf

Defoliation: Optimising your end of season management

This CottonInfo produced harvest preparation and defoliation guide will help you to better understand:

- How defoliation and boll opening works.
- Important steps for harvest preparation before you defoliate.
- The impact of environment and crop factors on harvest aid performance.
- The mode of action for defoliants, boll openers and desiccants.
- Crop maturity for timely harvest aid application.
- How to improve defoliant application efficacy.

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

Gwydir crop check

Resistance monitoring has been occurring across the valley and here are few pics from the Apexel smartphone microscope I am using.

Emgerged case of Silverleaf whitefly *Bemisia tabaci*

Emerged and Nymp stage of Greenhouse whitefly *Trialeurodes vaporariorum.*

Two Spotted Spider mites were the most common mite I have spotted this season during the resistance monitoring. I have also found quite a few aphid populations. It has been good to use a hand held microscope in the paddock (or front seat of the Ute) to work out exactly what species you have present. If anyone would like to borrow or try the lens just give me a call or collect some leaves and drop them in and I'll send you some pics. I also have a Microscope available if anyone needs it.

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

Gwydir crop check

Disclaimer - © Cotton Seed Distributors Ltd 2021. The CottonInfo Crop Check is a summary of cotton crop information gathered from consultants by each CottonInfo Extension Officer (REO) for their valley. This information is collected on a regular basis to share with growers, researchers, and other consultants. The information is just a snapshot in time and does not claim to be a report for each valley; just a summary of comments received.
This information is provided as a general guide only; not comprehensive or specific technical advice. Circumstances vary from farm to farm. To the fullest extent permitted by law, CSD expressly disclaims all liability for any loss or damage arising from reliance upon any information, statement or opinion in this document or from any errors or omissions in this document.
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 – 23rd March 2023

Fig 1: Trangie accumulated DD 10th of October planting.

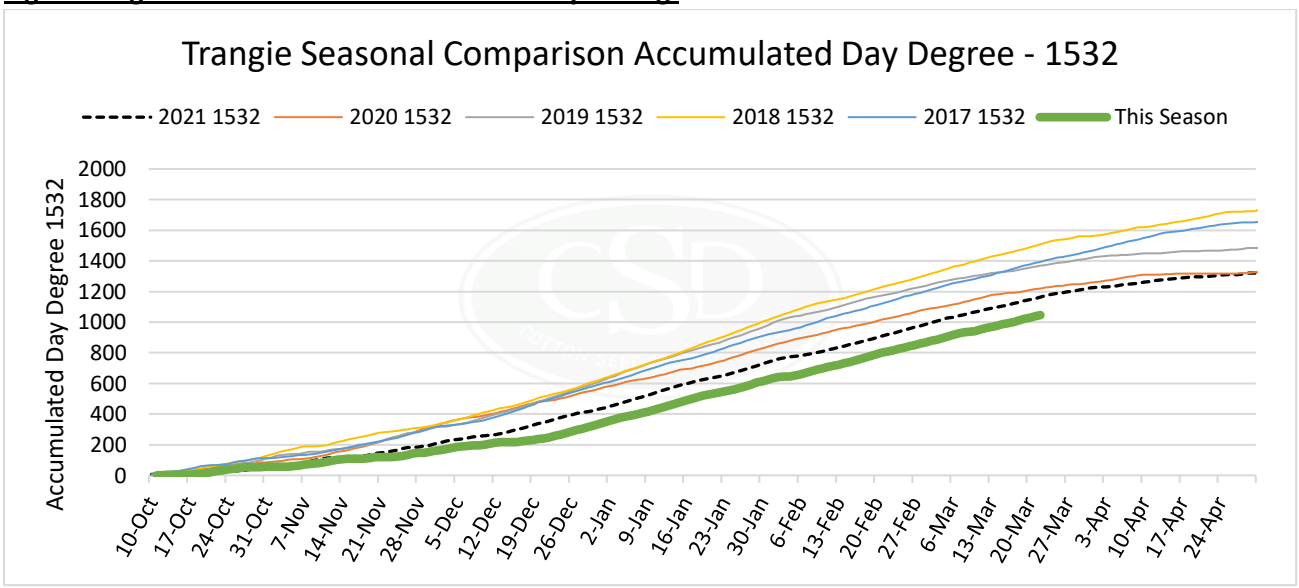
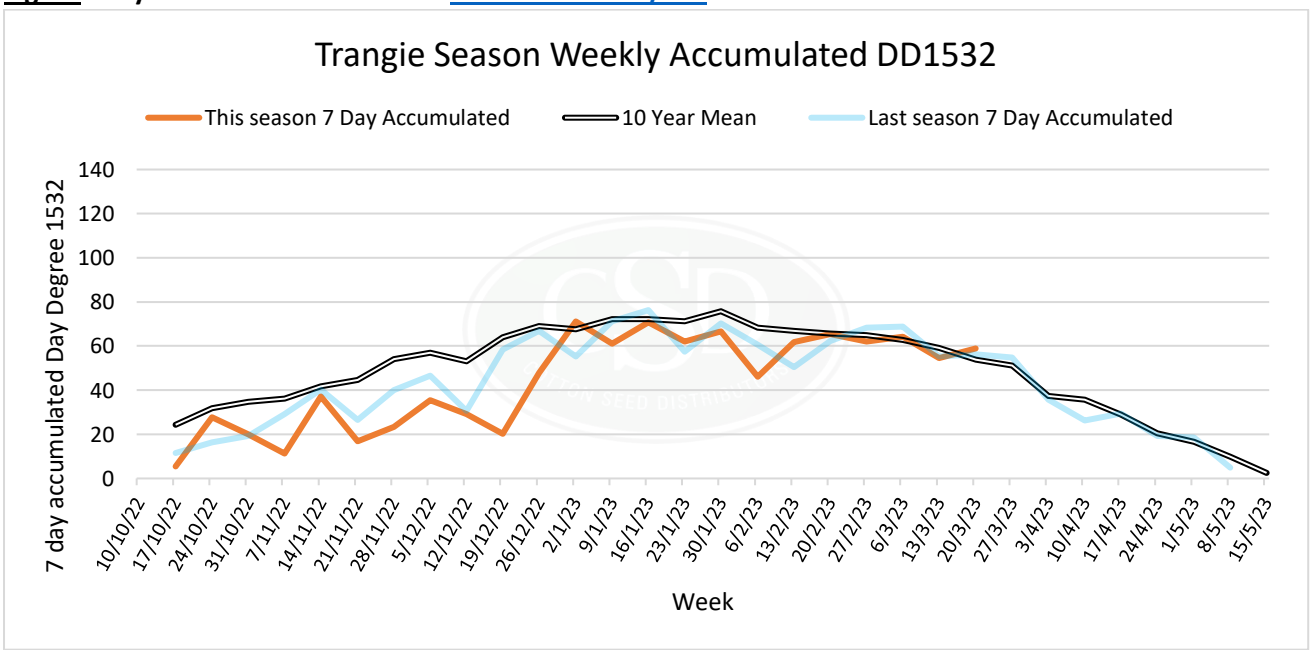


Fig 2 : 7 day accumulated DD Source www.csd.net.au/ddc



Macquarie crop check

Fig 3: 7 day accumulated DD Source www.csd.net.au/ddc

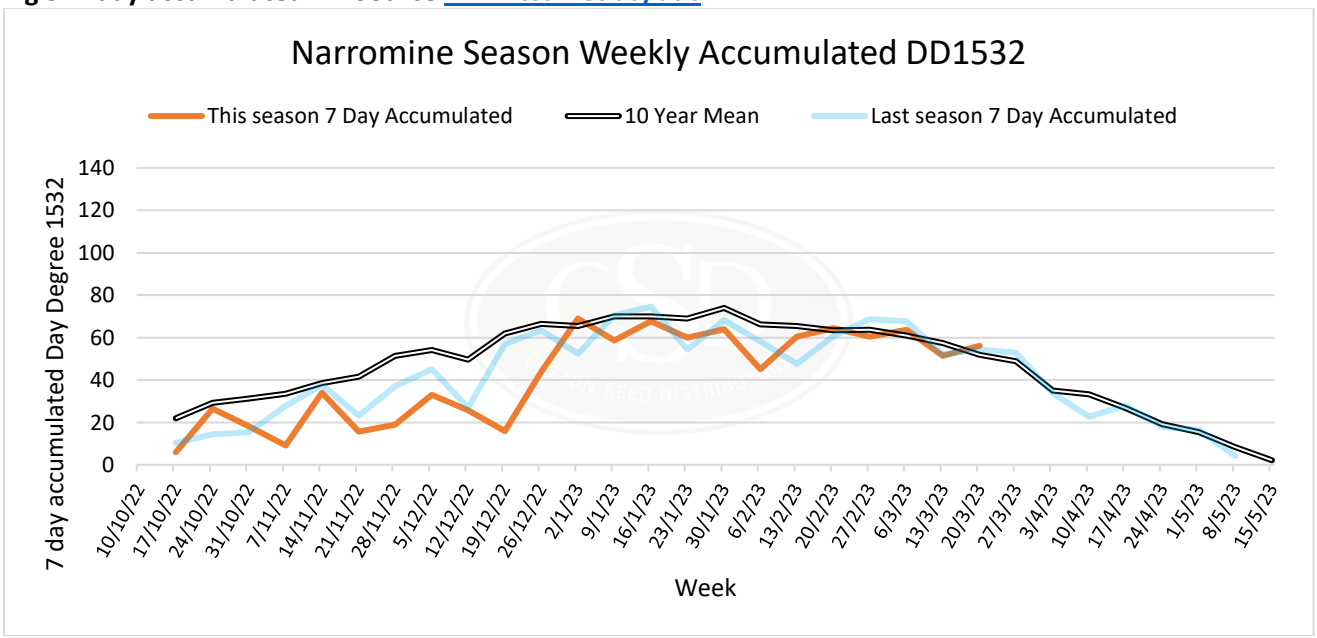
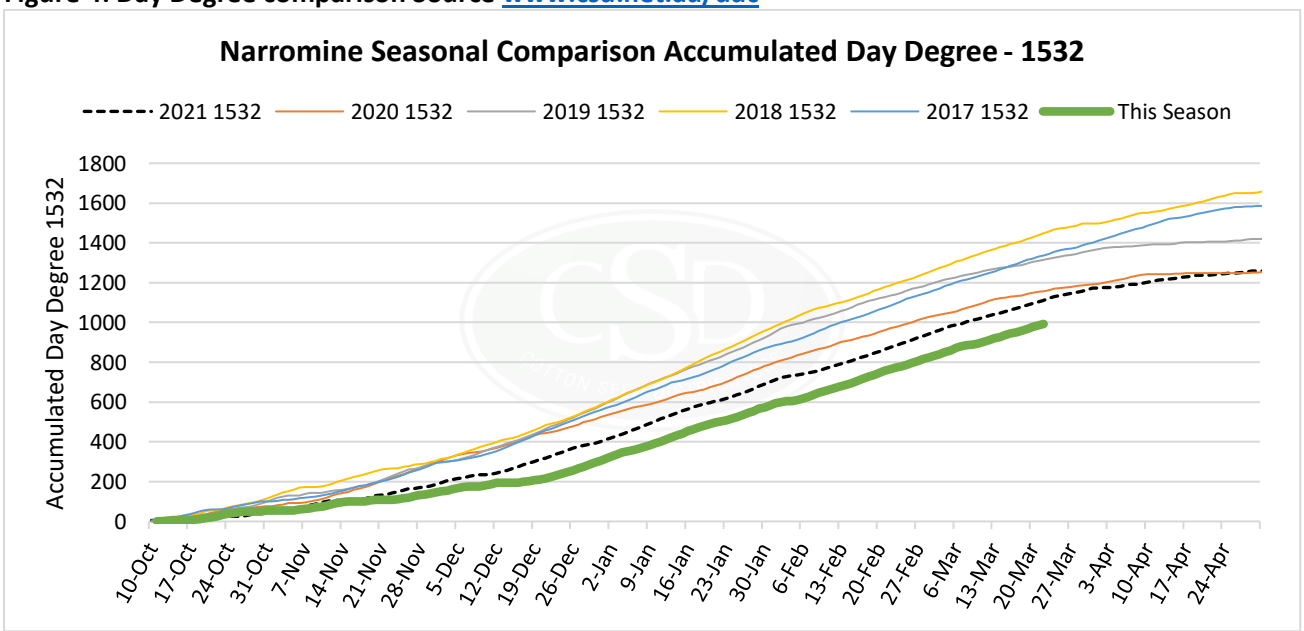


Figure 4: Day Degree comparison Source www.csd.net.au/ddc



Macquarie crop check

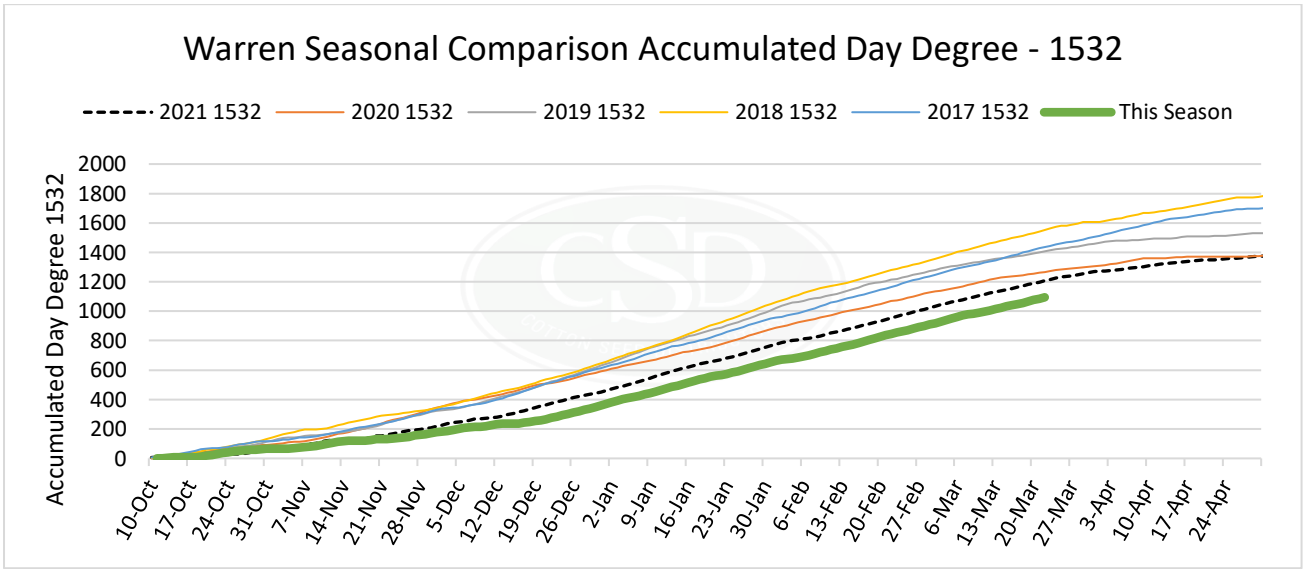


Figure 5: Day Degree comparison Source www.csd.net.au/ddc

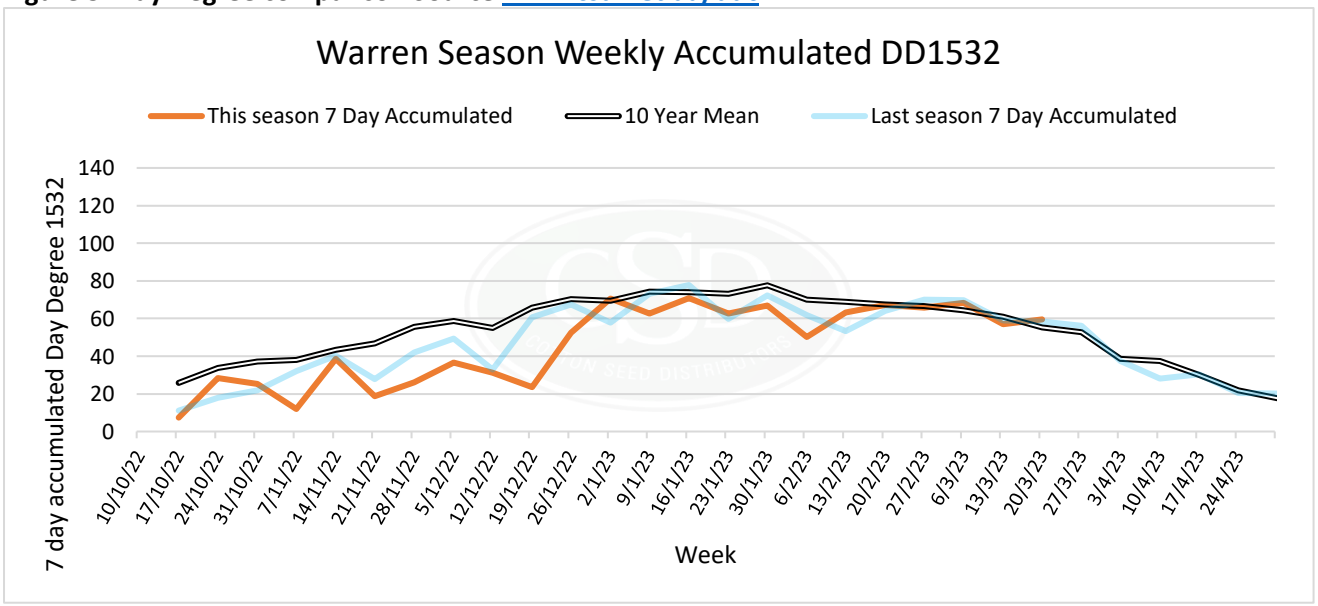


Fig 6: 7 day accumulated DD Source www.csd.net.au/ddc

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*

Macquarie crop check

AREA	MACQUARIE - Trangie Nevertire Narromine Warren
Crop Stage	• 22 – 24 Nodes • 20 – 22 Nodes • Early crops getting first defoliation north end of the valley. • 4 – 6 NAWF 80-120cm tall • 5 – 11 Nodes above cracked boll
Irrigation	• Warren – have had or getting final irrigation now. • Trangie – Final irrigation happening now. • Narromine – last water happening now
Insects/Beneficial	• Few Scattered patches of mites – strawberry mites • Some aphids present in patches. • GVB has been persistent this season seems to come in waves. • Few Brown Shield bugs about • SLW present in low numbers
Disease	• Wilt has started to occur in some cotton fields – • Suspected Verticillium has been found in multiple fields across the whole valley. • Some field with high boll load has shown heavy vert pressure expressing in plants
Comments	• Last 10 weeks have been great for stacking bolls on but hope there are not any frosts in May. • Current conditions are looking good for defoliation window • Pigs and mice are problematic in areas – perimeter baiting for mice might happen once all lower bolls are open

Macquarie crop check

Resistance monitoring has been occurring across the valley and here are few pics from the Apexel smartphone microscope I am using. Most populations we sampled were a mix of Greenhouse whitefly Trialeurodes vaporariorum and Silverleaf whitefly ((Bemisia tabaci MEAM1 (B-Biotype))). This is the second year in a row I have noticed that SLW has not been the predominate species in the populations I have sampled. Here is link to a great CottonInfo resource that has all you need to know about managing whitefly https://www.cottoninfo.com.au/sites/default/files/documents/SLW%20booklet%20-%20May%202018.pdf

Emgerged case of Silverleaf whitefly *Bemisia tabaci*

Emerged and Nymp stage of Greenhouse whitefly *Trialeurodes vaporariorum.*

Strawberry Spider mite – was the most common mite I have spotted this season during the resistance monitoring. I have also found quite a few aphid populations. It has been good to use a hand held microscope

Macquarie crop check

in the paddock (or front seat of the Ute) to work out exactly what species you have present. If anyone would like to borrow or try the lens just give me a call or collect some leaves and drop them in and ill send you some pics. I also have a Microscope available if anyone needs it.

Pig and mice damage in cotton crops

Mungindi crop check

31st March 2023

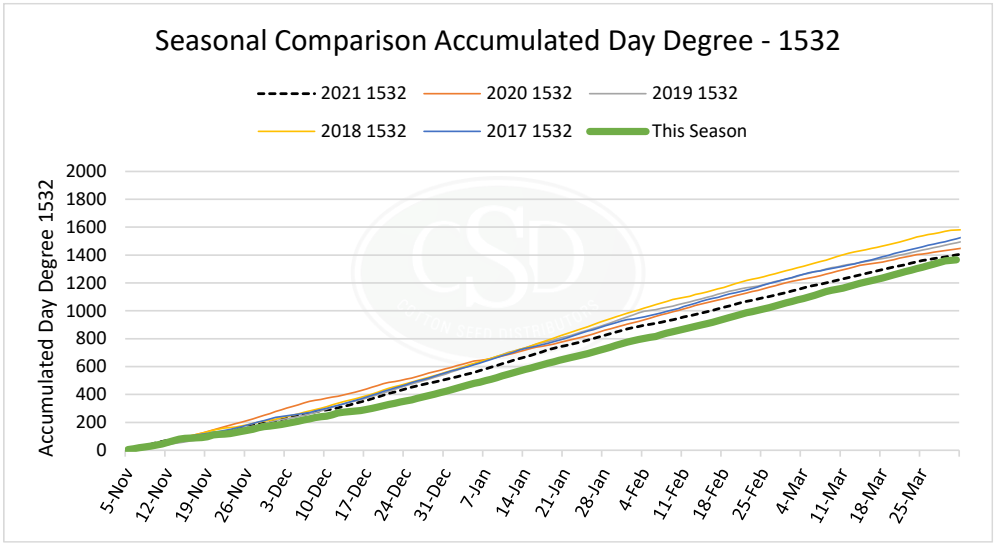


Figure 1: Day Degree comparison using the DD 1532, planting date 5/11/22 Source www.csd.net.au/ddc

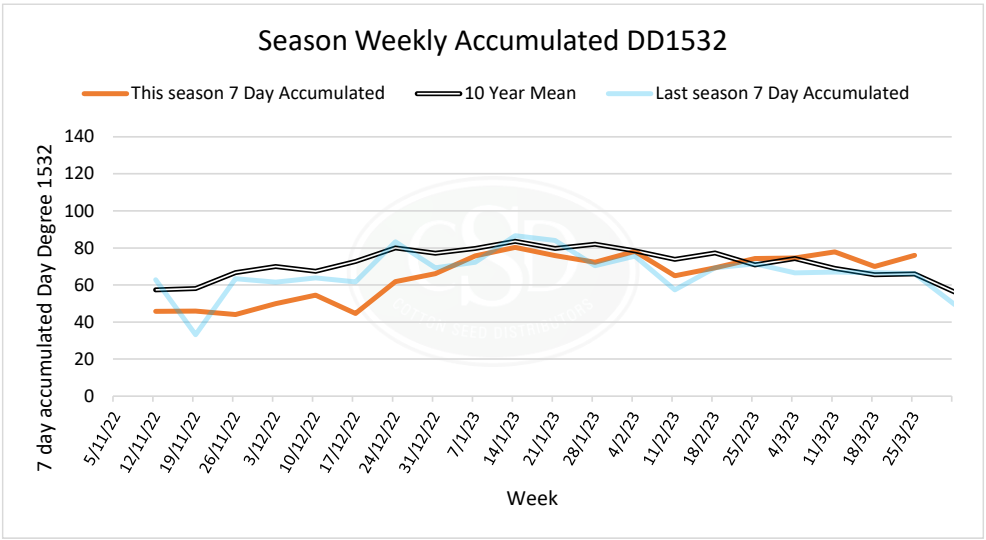


Figure 2: 7-day average Day Degree comparison using the DD 1532, planting date 5/11/22 Source www.csd.net.au/ddc

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

Mungindi crop check

Day Degree

able 1: **Seasonal Information based on 5th November planting date (Source: Cotton Seed Distributors)**

	2022	2021	2020	2019	2018	10 year mean
Base 12	2146.5	2109.4 ▼	2193.2 ▲	2328.4 ▲	2475.2 ▲	2319.3 ▲
DD1532*	1365.3	1401.7 ▲	1443.6 ▲	1487.9 ▲	1579.2 ▲	1492.8 ▲
Cold shock days (≤ 11°C)	7	4 ▼	2 ▼	5 ▼	2 ▼	2.7 ▼
Days above 36°C	60	35 ▼	43 ▼	75 ▲	84 ▲	67.1 ▲
Nights above 25°C	4	2 ▼	7 ▲	30 ▲	27 ▲	13.6 ▲
Days above 40°C	14	8 ▼	13 ▼	30 ▲	29 ▲	21.9 ▲
Total rainfall (mm)	113.4	363.3 ▲	491.1 ▲	349.0 ▲	128.2 ▲	233.7 ▲
Total radiation (MJ/m^2)	3260.3	3063.6 ▼	3188.0 ▼	3313.5 ▲	3472.6 ▲	3031.2 ▼
Average temperature (°C)	26.5	26.3 ▼	26.9 ▲	27.8 ▲	28.8 ▲	27.7 ▲

* Experimental calculation.

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

AREA	Gwydir Valley
Crop Stage	**Irrigated Cotton:** • Defoliation commencing this week on early crops **Dryland:** • Needing rain badly • Defoliation starting "Defoliated some irrigation fields earlier this week and leaf coming off beautifully due to the heat" Dryland: "Late boll fill, odd paddock just cutout" "Dryland up to 26 nodes, all cutout"

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

Mungindi crop check

Irrigation	1-2 irrigations to go "*Majority of irrigation had its last water. Some had their last a fortnight ago"* *"Applying the last irrigation on November planted cotton and still one irrigation to go in 7 days time on the very last planted fields"*
Insects/Beneficial	• Mites persisting • Aphids moderate to high, requiring sprays. • CBT Common on Aphid fields • SLW have increased significantly, but already row closure so looking at other product choices. Mites have persisted all season. The end of the season has become expensive with mites, aphids and SLW. SLW number have been greatest in western districts – warmer. *"patches of aphids, but good presence of lady beetles, red blue spiders"* *"thrips have arrived"* *"SLW remaining low"* *"Aphids turning up and flaring in some paddocks. Earlier Intruder was successful, recently used Primicard which was successful and has preserved a good number of parasitic wasps, hoverfly and lady beetle nymphs".*
Weeds	• Fleabane, Barn Yard Grass, Feather Top Rhodes Grass, Peachvine and Sow Thistle • " *yellow vine, peach vine, red pigweed and grasses where Terbyne and Dual Gold have worn off*"
Spray Drift	• Late hit of 2,4-D a fortnight ago visible on some late crops.
Disease	• Vert starting to wreak havoc and some final waters pulled up for that reason. • Small amount of Alternaria showing up in some fields.
Comments	

Mungindi crop check

Key CottonInfo Publications:

Cotton Bunchy Top: https://www.cottoninfo.com.au/publications/disease-idm-cotton-bunchy-top also CottonInfo E-News 13/03/23

Managing whitefly https://www.cottoninfo.com.au/sites/default/files/documents/SLW%20booklet%20-%20May%202018.pdf

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- The impact of environment and crop factors on harvest aid performance.
- The mode of action for defoliants, boll openers and desiccants.
- Crop maturity for timely harvest aid application.
- How to improve defoliant application efficacy.

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Emgerged case of Silverleaf whitefly *Bemisia tabaci*

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

Mungindi crop check

Emerged and Nymp stage of Greenhouse whitefly *Trialeurodes vaporariorum.*

Two Spotted Spider mites were the most common mite I have spotted this season during the resistance monitoring. I have also found quite a few aphid populations. It has been good to use a hand held microscope in the paddock (or front seat of the Ute) to work out exactly what species you have present. If anyone would like to borrow or try the lens just give me a call or collect some leaves and drop them in and I'll send you some pics. I also have a Microscope available if anyone needs it.