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# 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).

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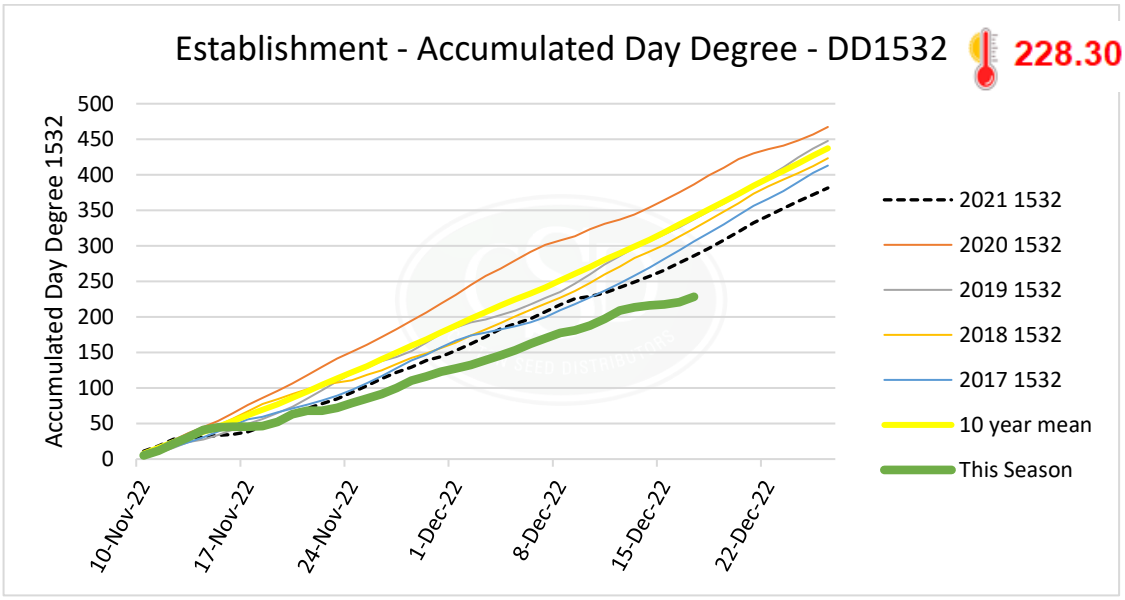


**Figure 1: Day Degree comparison using the DD 1532, planting date 10/11/22 Source [www.csd.net.au/ddc](http://www.csd.net.au/ddc)**

| AREA | Gwydir Valley |
|---|---|
| **Crop Stage** | **Irrigated Cotton:**<br>• 3 leaf to 12 nodes<br>• Crops sown before the flood are starting to take off and fruiting at 5th – 6th node.<br>• Retentions 85%+<br>• 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<br>• Mirids building slowly.<br>• Apple dimpling bugs about<br>• Green vege bugs<br>• Low level of beneficial insects – lady beetles, spiders, lacewings |
| **Weeds** | • Fleabane, Barn Yard Grass, Feather Top Rhodes Grass, Peachvine and Sow Thistle |

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