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

Gwydir crop check

6th February 2021

Day Degrees

Table 1: **Seasonal Information based on 15th October planting date (Source: Cotton Seed Distributors)**

Summary | Seasonal comparison

	2020	2019	2018	2017	2016	10 year mean
Base 12	1572.8	1782.8 ▲	1752.9 ▲	1592.8 ▲	1706.5 ▲	1624.9 ▲
DD1532*	1018.3	1131.4 ▲	1147.1 ▲	1018.9 ▲	1061.7 ▲	1051.2 ▲
Cold shock days (≤ 11°C)	7	7	3 ▼	5 ▼	16 ▲	6.0 ▼
Days above 36°C	29	59 ▲	46 ▲	38 ▲	48 ▲	34.5 ▲
Nights above 25°C	1	21 ▲	10 ▲	8 ▲	16 ▲	7.2 ▲
Days above 40°C	6	14 ▲	11 ▲	5 ▼	16 ▲	7.5 ▲
Total rainfall (mm)	266.2	156.4 ▼	122.8 ▼	189.0 ▼	127.4 ▼	210.1 ▼
Total radiation (MJ/m^2)	2574.0	2803.5 ▲	2852.0 ▲	2793.1 ▲	2807.5 ▲	2525.9 ▼
Average temperature (°C)	25.6	27.4 ▲	27.2 ▲	25.8 ▲	26.6 ▲	26.0 ▲

* Experimental calculation.

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

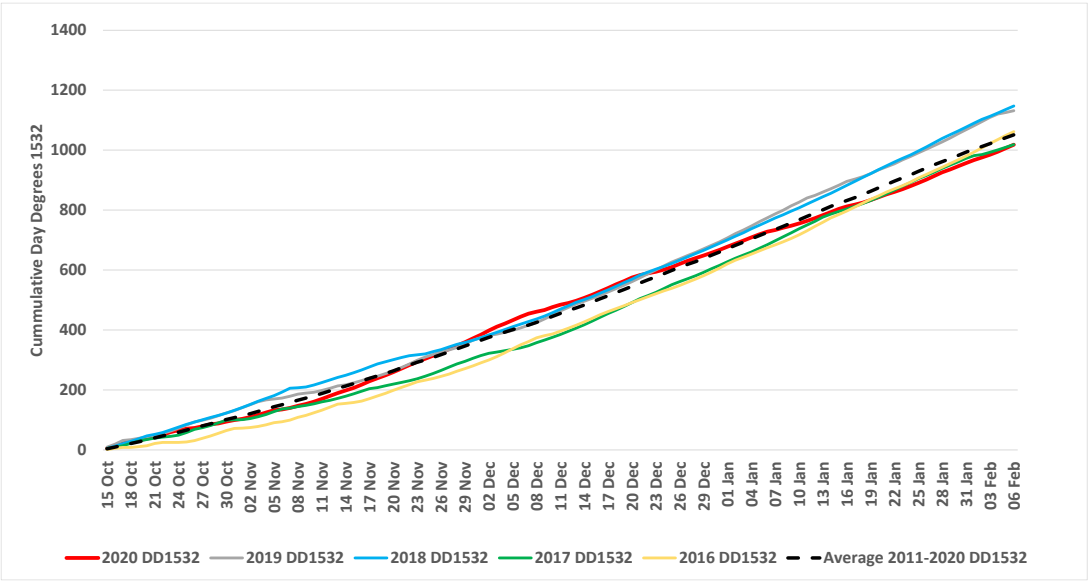
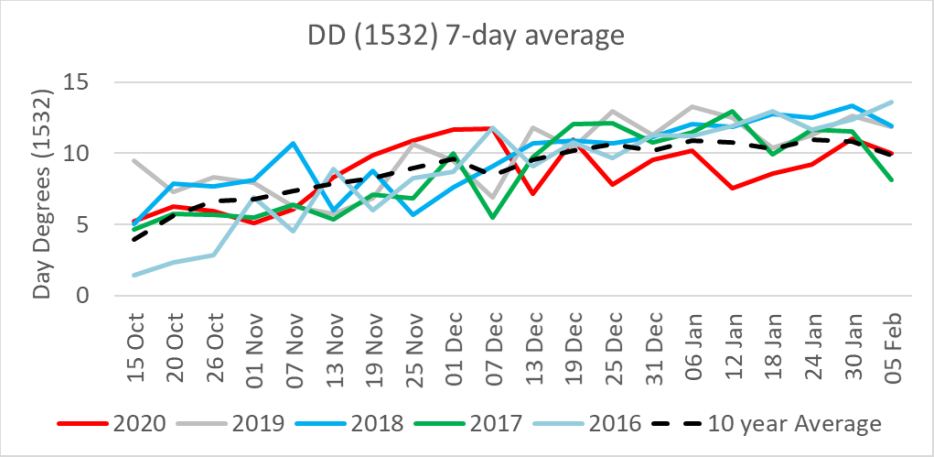
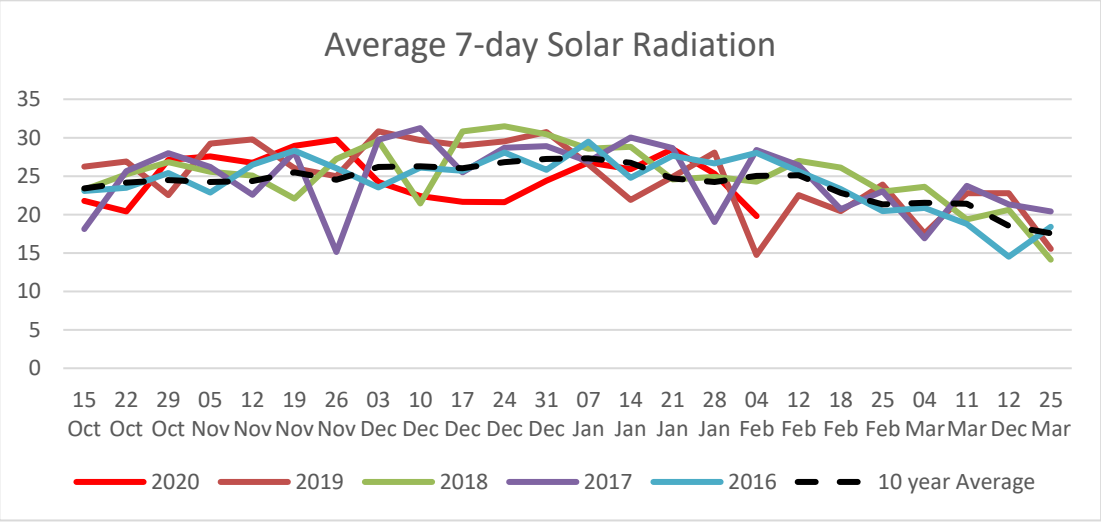


Figure 1: Day Degree comparison using the DD 1532. Source www.csd.net.au/ddc

GWYDIR VALLEY CONSULTANTS SUMMARY

AREA	MOREE
Crop Stage	**Irrigated Cotton:** • 10 – 28 nodes. Earlier plant starting to cut-out 5-7 NAWF, low % of cracked bolls. *"Irrigated cotton up to 28 nodes, very low % of cracked bolls, cutting out at 27 nodes"* *"Irrigated crop is starting to cut out, 5-6 NAWF. This was due to constant rain and not being able to sub well when it was irrigated".* **Dryland:** • 8 – 29 nodes. Early dryland approaching cutout, with some reaching cutout. Very low % cracked bolls. *"Late dryland 10 nodes, squares forming, evidence of minor hormone drift. Mix of 24D and other group I herbicides".* *"Our dryland cotton paddocks range from 24-28 nodes, 2-4 NAWF, loaded up reasonably well with late fruit and are filling 3-12 bolls/plant now but in the process of spitting off nearly anything not a boll"* *"Crop has hit the wall seriously on 1.5m rows but not as hard on 2.4m, as expected"* *"If we don't see cavitation on the young bolls or sunburning on the older ones we should bring home 2-3b/ha at this stage. 30-50mm would secure those yields while 75-100mm would kick them up with lateral branch fruit - happy with either number at this stage!"* *"Crops have had 2 mirid sprays and 2 moderate pix sprays as well as foliar zinc and other traces. 2 RR sprays, 1 with Group A".* *"Tossing up whether to strip or pick the dryland at this stage, fairly bulky plants"*  **Figure 2: 7-day average DD (1532) for the last 5 seasons and compared to the 10 year average.**  **Figure 3: 7-day average daily Solar Radiation (MJ/m²) for the last 5 seasons and compared to the 10 year average.**

Gwydir crop check

Irrigation	• Up to 5 irrigations to date, water situation tight, but some confident they will have enough to finish the crop. *"Up to 5 Irrigations in advanced crops. Water situation ok at the moment, should get home"* *"3 in crop waters, will have enough to finish the crop"* *"3-5 irrigations, should be ok to get through"* *4 – 5 irrigations, some will be short of water*
Insects/Beneficial	• *BSB (Brown stink bug), GVB (green vegetable bug) and Piezodorus present, with sprays occurring.* • *Mirids active, but mostly low numbers* • *SLW generally remaining low, but closely monitoring. A small number of fields have received a pyriproxyfen spray. Parasitism variable.* *"BSB and GVB a problem, difficult to control"* *"Insects fairly quiet, low mirids, remnant flights of heliothis 5-10/m, sporadic brown stink bug and Piezodorus (often found in fields adjacent to riparian areas).* *"Low levels of mirid adults, but emergence of mirid nymphs. 3-4/m. Fipronil and oil went out today".* *"SLW – no sprays. Very high parasitism"* *"Only a few whitefly adults and nymphs, no parasitism"* *"No pyriproxyfen applications yet. One to two sprays for mirids and starting to see GVB numbers increasing so controlling those also".* *"Whitefly have been present for a number of weeks but not in great numbers and only adults. Starting to see numbers increase and the GVB control will probably flair the numbers…"* *"pyriproxyfen started to be applied this week on low but building populations of SLWF. Parasitism evident (just)"* *"Influx of locusts on the wing"* *"Mice moving in eating plant terminals. aerial baiting last week and more next week after rain event passes"* *"Minimal damage from locust in irrigated, little bit in dryland against trees, stubble etc. Also some mice damage bordering winter stubble paddocks, having a chew at the terminal causing it to wilt and die"* *"A few locusts, more mice, just starting to see some damage, starting to bait some fields"* *Some mice in cotton has been noted,* *"Mirid numbers persist at low levels, along with leaf hoppers and very low whitefly (not enough nymphs to sample)".* *"Mice are prevalent everywhere and have been full baiting sorghum and corn and edge baiting cotton so far, prior to open bolls"*

Gwydir crop check

	"Grass hoppers have been sprayed in approx 5000ha of fallows but not specifically in cotton yet"
Weeds	• *Weeds look to be under control*
Disease	• *Fusarium and verticillium prevalent* *"FOV – some fields may have to go out of cotton"* *"Vert showing up after cooler nights in January"*
General Comments	*"Have noticed some hormone spray drift on some dryland cotton this week west of Moree – still unsure where it has come from"* *"Some light 2,4-D drift around Bullarah, severe at Rowena unfortunately"* *"Drift evident east of Newell, Bellata, Gurley districts, low to moderate damage"*

The CottonInfo Crop Check is a summary of cotton crop information gathered from consultants by each CottonInfo Regional Extension Officer (REO) for their valley. This information is collected on a regular basis to share with growers, researchers and other consultants. It should be noted that the information is just a snapshot in time. It does not claim to be a thorough report for each valley, just a summary of comments received.

Gwydir crop check

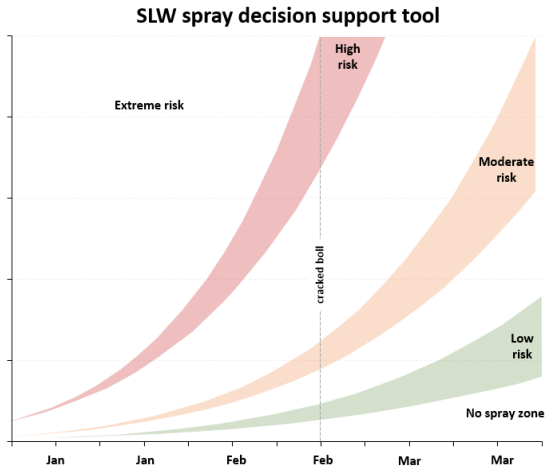
Smartphones joining the hunt for whitefly

The Cotton PestDetect App is a digital tool in development to assist with sampling for silverleaf whitefly nymphs and cotton aphids by providing image-derived insect counts using the phone's camera. The app had an initial test run last year, during which thousands of photos were captured by researchers and agronomists. Over the past 8 months, the project team and the University of Southern Queensland and Queensland Department of Agriculture & Fisheries have been improving the accuracy of the camera app using the thousands of photos taken by researchers and consultants and building in new features.

The biggest of those new features is the automatic plotting of results on the latest decision support tools. The app automatically records the accumulated day degrees for each field based on the provided GPS location, and so you can see the latest results for that field as soon as you are finished taking photos.

A beta version of the App is about to be released for this cotton season, and the development team is inviting all interested growers and consultants to try it out when sampling for whitefly and aphids in the coming weeks.

You can get started by contacting Derek Long from USQ (derek.long@usq.edu.au) who will create an account for you and send a link to the App.



New silverleaf whitefly decision support tool by Dr Richard Sequira (CRDC project DAQ1903).