

## Central Queensland

Very hot and dry conditions experienced throughout the Central Highlands and Dawson regions in December and January have resulted in the August planted cotton finishing up relatively quickly. The hot and dry weather conditions also favored an outbreak of silverleaf whitefly which required an insecticide during the latter part of the growing season. Irrigation schedules required very short intervals during the heat to minimise stress on the plant, aiming to fill the last of the maturing bolls.

Defoliation applied in mid-January delivered a quick and effective leaf drop under the hot and dry conditions and picking started the week before Australia Day. Although too early for yield results, the early indications around the district look positive for the cotton that may have been short an irrigation. Early picking efforts have been limited by the welcome rain with over 100 mm falling throughout the catchment.

The rain fall over the past week has delivered a welcome change to most areas of the Central Highlands creating an opportunity to build a profile of soil moisture and provide an opportunity for a late summer crop or early winter plant. The rain fall over the catchments has been enough to generate some much-needed runoff water into the storages. Fairbairn dam has started to see some inflow. The Dawson Valley weir system is receiving good inflows at present and growers are anticipating an allocation off the back of the January rain.

October planted cotton, which has been sitting in limbo so far, will respond to the more favorable conditions and benefit the yield potential by adding lateral and terminal growth to the plant. Some growers will top up nutrition to the later cotton fields, to capitalise on the large portion of the growing season remaining and the fields will be grown on to take full advantage of the moisture and potential allocated irrigation water in the Dawson system to increase overall potential yield.

**Stewart Brotherton**  
January 28, 2020

## St George and Dirranbandi

Well it would appear that there is no situation that bad that it cannot get worse. With 2019 being our driest year on record at 102 mm most growers realised this was probably as tough as it was going to get.

Thus began the season with cotton acres being pared back by

the day at planting with initial thoughts suggesting there could be as little as 1000 hectares planted. This was then reduced to 800 hectares which was then further reduced to only 600 hectares being planted.

With October, November and December only seeing falls totalling 24 mm and a number of heat waves coming through the water budgets for this 600 hectares began to look a little shaky. With no storms or inflows over Christmas or the New Year growers made the tough decision to begin dropping out fields or sections of fields.

This led to the majority of growers generally dropping out half the area they did plant. So the St George area now has a total of approximately 300 hectares remaining and even some of this will be one or two irrigations short.

A memorable year, unfortunately for all of the wrong reasons! As I write this there has been some reasonable falls in the catchment area around Mitchell, Roma and the Darling Downs with a small flow expected into Beardmore though possibly not enough to help considering the amount of water that would be needed to charge the irrigation channels so as to deliver water to growers.

But the Moonie now has a decent flow going through and will see the two irrigators near Thallon able to pump some water, though how long this flow lasts is uncertain.

To finish on a positive note it is great to see some decent rainfall totals in the NT and the northern areas of Queensland. Hopefully this generates more moisture and rainfall for the Murray Darling Basin and signals the beginning of the end of this relentless drought and the devastation it has caused to our rural communities.

**Dallas King**  
January 29, 2020

## Darling Downs

We are finally receiving some decent rainfall and the outlook is improving, significantly for the Darling Downs.

2019 will go down in the books as one of the lowest rainfall



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years on record. Although 2020 began in a similar fashion, storms have provided much needed relief and have begun to put at least some moisture back into profiles. The saving grace for the small areas of irrigated cotton which have been planted on the Downs is that the weather, while being warm and relatively dry, has not been extreme in temperature.

The mid January storms provided some much needed moisture, for those areas which received reasonable totals. Typical of storm rainfall, falls were patchy and totals recorded ranged from as low as 20 mm, up to almost 200 mm over parts of the Downs.

The falls were quite timely for a number of growers, many of whom were preparing to put on their second in-crop irrigation, which for some was also going to be their last. For those who have already run out of water, the rainfall may help to see the crop through to a reasonable potential yield. But certainly for some crops the rain still came too late for them to be saved.

The final area for the region will likely be around 5000 hectares of cotton in total, a far cry from the typical areas of planting in previous years. The majority of this area is irrigated and the dryland crop is all but non-existent, which will come as no surprise given the amount of moisture in fallow.

The majority of crops are well into flowering. Plant height and nodes vary quite a bit due to the slow start of many crops, but things seem to be progressing well since first irrigation.

Pest numbers have been low throughout the season, with very few spray applications required and good numbers of beneficials being seen in many crops. The weed situation has been largely under control this season, due to the dry conditions. We will likely see a fresh flush of weeds coming through in crop and fallow following the recent rain, but most growers will welcome this, as it means there is at least some moisture entering the profile.

The Darling Downs Grower of the Year Field Day will be held on Wednesday February 26 at 'Cullingral', home of current Grower of the Year, Ashley Geldard. Also featured on the day will be 2019 High Achiever, David Balmain. Agronomists of both award winners will be a part of the day, along with a number of guest speakers. The day is set to be another great event, as hosted by the Darling Downs Cotton Growers Inc.

The January storm rainfall was certainly very welcome and the milder temperatures brought with it are providing some respite for crops. Far from drought breaking, we require further rainfall and bigger totals to boost moisture profiles and to run rivers. Hopefully this comes sometime during the next few months, in the form of general rainfall, rather than patchy storms. (NOTE: the February rainfall has fulfilled some of these hopes.)

**Sam Lee**  
January 22, 2020

## Border Rivers

Finally, some rain to talk about and maybe a change in the weather pattern with some activity kicking off for 2020. Sporadic storms fired up over several days during the third week of

January. Typical of storms, the rainfall totals were very hit and miss. Falls from around 15 to 60 mm have been observed with some prospect at the time of writing of potentially more activity over the next few days.

As previously reported the cotton area is well back throughout the Border Rivers. This reduced area is only possible due to either groundwater entitlement or on farm storage from a significant storm event over Boggabilla in March.

In general terms the majority of crop at this point in time is progressing ok with growth and development on track, but with water budgets becoming tighter some tough decisions may lie ahead particularly in the absence of significant falls of rain.

Fields planted in early to mid-October are cutting out, later planted fields are flowering. Crops have generally had good growth and development leading into flowering with adequate NAWF and good retention observed. December and January has seen a run of hot and dry weather which would have placed additional pressure on early crops fruiting through this period, further exacerbated in a year where irrigations are already tight.

Later planted crops are flowering now with a slight reprieve in temperatures, but humidity is higher. Table 1 highlights how hot a start we have seen this season for Boggabilla when compared to last season and a 10-year average, of note are the number of days greater than 36°C and 40°C for the period October 15 to January 22 (100 days).

**TABLE 1:**

Location Boggabilla Post Office	Date range October 15–January 22		
	2019	2018	10 year mean
Base 12	1526	1453	1370
Cold shock days	8	3	5
Days above 36°C	53	36	28
Nights above 25°C	7	1	3
Days above 40°C	15	7	6
Average temperatures (°C)	27.1	26.5	25.6

Source: CSD Day Degree Calculator [www.csd.net.au/ddc](http://www.csd.net.au/ddc)

Insect activity has been low with sporadic mirid activity observed with some fields being sprayed. Low level silverleaf whitefly activity has been observed which is typical in January, but to date the numbers observed are lower than previous years.

Incidence of disease has been low as conditions just haven't been conducive. That said, the change in weather did see a dip in temperatures over several days where the average temperature fell below 24°C. Dips in average temperature, particularly down around 20–22°C, can open the door to Verticillium wilt. But cooler days and more rainfall would benefit all crops and for some it will be tight to get finished in the absence of some good falls of rain.

The storm activity has offered little in terms of running water into either of the two storages of Pindari and Glenlyon Dams, which currently stand at 4.1 and 2.7 per cent respectively, a combined 3.5 per cent of capacity.

The MacIntyre Valley Cotton Field Day Committee are busy working with Tom and Charm Arnott, 'Fairfield' for this year's Bayer Cotton Grower of the Year field day to be held on Wednesday March 25 2020. Pencil this date in your diary now.

**Chris Teague**  
January 23, 2020

## Gwydir Valley

Storm season has finally hit in the Gwydir and it's been a long time since we've seen it! Two 50 mm events in one week have provided a break in the relentless dry, but the intense isolated nature of these has unfortunately not provided much relief in terms of soil moisture. Cotton crops will of course welcome the extra moisture, but further soaking rain is needed to take pressure off some very pressured water budgets.

First irrigation was applied earlier than normal across the valley, as moisture dried back rapidly under hot, windy conditions, out of reach of roots of cotton plants at less than 12 nodes. The flow on from this and the prevailing conditions meant that in some cases growers had applied three in crop irrigations by Christmas time.

First flower occurred around New Year for most crops and architecturally the cotton was looking good. Insect pressure was very low and retentions were high, over 90 per cent in a lot of cases. Nodes above white flower (NAWF) at first flower were commonly around nine or 10. Nodes to first fruiting branch have generally been a little higher than ideal, in some cases up to 11 nodes. For those that started fruiting around seven or eight, it hasn't been uncommon to see one or two vegetative branches thrown above this.

Mirid numbers have remained low, but the first signs of silverleaf whitefly have begun to emerge in isolated pockets. Progressing through flowering, crops have held at respectable NAWFs with Pix being applied to slow some quite vigorous fields. Irrigation scheduling is now a delicate balance with some growers looking to be one or two waters short come February.

**Alice Curkpatrick**  
January 24, 2020

## Namoi Valley

In the Namoi the crop is progressing well leading into cut-out. There has been very little insect pressure so retentions have been good although there has been some shedding from recent cloudy weather, but everyone would like more of this with 20–50 mm of rain falling throughout the Namoi in the first half of January.

Water use has been high so far with some growers having to cut the crop out earlier than normal. While there is enough bore water allocation, being able to get it out of the ground and into the crop in a timely matter has been very frustrating for some growers this season, but the recent rain has helped.

All varieties seem to be growing strongly at present, with Sicot 748B3F having the best fruit numbers at present across the CSD variety trials.

On another note the annual CSD/LNCGA field day will be held on February 20 at CSD farms. This field day over the past couple of years has grown in size and we are expecting over 150 attendees this year. There will be talks from CSIRO scientists Warwick Stiller and Warren Conaty on plant breeding and plant stress, plus a range of topics around nutrition and water. As well, work that is being done on Verticillium wilt and also the summary of the CSD Ambassador program over the past five years focusing in on crop management. It is well worth attending.

**Bob Ford**  
January 23, 2020

## Macquarie Valley

The 2019–20 cotton season has been a tough season on so many levels. Nearly all cotton grown in the valley is using ground water. Cotton is being grown in Dunedoo, Geurie, Dubbo and Narromine areas. The Macquarie River has ceased to run below the bottom weir at Warren, although tributary flows from the Bell and Talbragar have now reached Warren and are due to put some water back in the holes and get the river flowing again.

Burrendong Dam currently is sitting at 1.6 per cent with a bulk transfer of water from Windermere set to occur in late January to provide critical town water supply. The expected area will be reduced as growers are having to opt out of some fields due to lack of in-crop rainfall and high evaporation rates.

Agronomically this season has had more cold shock days (30 – mostly at the start) than the previous season (21). We have also had similar (30 v 31) hot days (above 36°C days) to last season. The nights above 25°C are lower than in the past two seasons (3 v 7), which is good news during the micronaire period. As of January 20, crops are sitting around 20–26 Nodes, 7–9 NAWF.

Insect pressure has been very low with very few pests about in most places and top five retention is sitting very high. The hot season may impact on yields in a number of ways. Firstly water use has been high and water budgets that were sufficient in the past are pulling up to one water short, leaving growers with tough choices to make. Some growers will struggle to finish off the crop if we don't get some much needed rainfall in February.

The Macquarie Cotton Growers Association will be hosting another smart farm field day this season and will showcase some pump monitoring telemetry on farm.

**Amanda Thomas**  
January 22, 2020

## Southern NSW

The 2019–20 season for Southern NSW started off with some cool weather which then turned cold. Some crops received 41 cold shock days during the establishment and early squaring phase. Planting wasn't stretched across a wide window this year as the area planted was way down due to high water prices and low water allocation.

The area planted in Southern NSW this season saw the Lachlan Valley plant around 3000 hectares and the Murray/Murrumbidgee plant about 12,000 hectares. Even up to the flowering phase, some areas may still come back as water prices remain high and there are concerns with how much water the crop may use between first flower and cut-out.

There were some disease issues in back to back ground this year, with Alternaria also showing up in a number of crops. Thrip pressure was low, but with the slow growth from the cold weather, this damage was compounded, resulting in a few crops being sprayed for thrips.

Early crop growth has been slow and we have seen first flower appear on most crops after Christmas and into the early New Year. Crop retentions have been good, but we have seen

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numerous crops throw back vegetative branches due to the cool weather. Some crops have lost early fruit and thus don't have flowers as yet (mid January).

Not only has the crop had to deal with the cool weather, the opposite has also happened. Extreme temperatures were seen

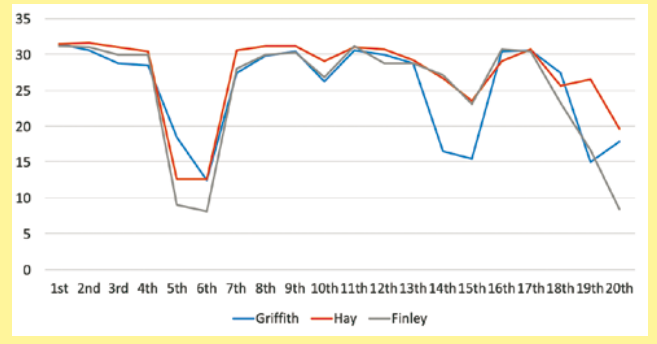


Early cotton effected from residual herbicide applied in the winter with not enough rainfall to break it down.

## ANSWER TO IAN'S MYSTERY TRACTOR QUIZ

The MysteryTractor is a 1918 Ruggles and Parsons 12/20, built by The Republic Motor Truck Co of Alma, Michigan. Photographed in New Zealand, owned at the time by B D Batchelor.

**FIGURE 1: Effects of smoke on solar radiation in Southern NSW (MJ/m<sup>2</sup>)**



the early flowering phase, but not a lot of cavitation was seen in the crop. There were situations where we had temperatures around 48°C followed by a cold shock.

Smoke has also been a concern in the south. There have been a few days where the visibility has been restricted resulting in the solar radiation taking a dive (see Figure 1).

There was some herbicide damage seen in the district yet again. This year's damage was not as severe as previous seasons, but there was some damage resulting from herbicides not being broken down due to lack of rainfall. Irrigation has helped to overcome this stress and the crops have now recovered.

As we approach the middle of January crops are around 22 nodes, with retention sitting about 85 per cent and about 9 NAWF. Some crops will receive a cut-out rate of Pix to start to bring them in, while others will be drawn out to make up for some of the time lost at the start of the season.

**Jorian Millyard**  
January 14, 2020

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