



the **cotton tale**

19th June 2020

Micronaire

There has been widespread quality problems this season with low micronaire. Not all locations in the south have been affected but it has been a common quality discount.

Micronaire is measured by placing lint in a chamber, compressing it to a set volume and subjecting it to a set pressure. The micronaire result measured in this way is in fact a function of both fibre maturity and fineness (linear density). As the reading is an approximate guide to fibre thickness the trade use the following micronaire ranges to describe samples:

Micronaire	Grade
>5.3	G7
5-5.2	G6
3.5-4.9	G5
3.3-3.4	G4
3.0-3.2	G3
2.7-2.9	G2
2.5-2.6	G1
<2.4	G0

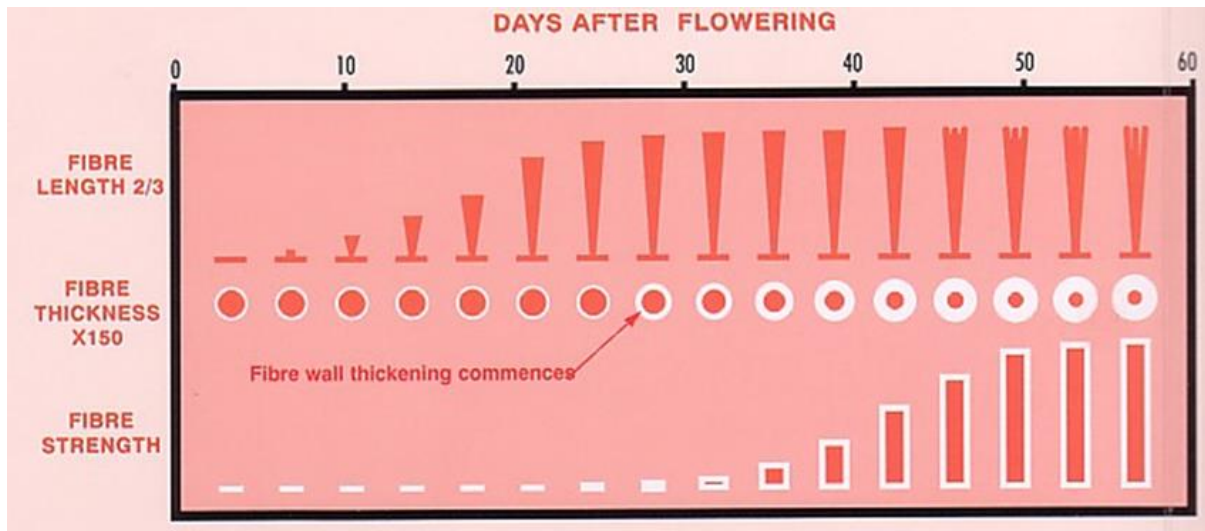
The premium range is 3.8 to 4.5 and the base range is 3.5 to 4.9 (G5) and discounts apply for cotton with a micronaire outside the base range. A lot of the bales this season have been in the G4 or G3 classification.



Spinners do not like low micronaire cotton as it leads to fibre breakage and the formation of neps, which are usually associated with lower yarn strength, loss in production and efficiency and less uniform yarn. The appearance of dyed or printed fabrics are negatively influenced as these neps do not absorb the same amount of dye and appear as white spots on the surface, resulting in downgrading or rejection.

G4 (3.3-3.4) has a discount this season on average of 800 points. To convert points to US cents/pound multiply by 5 (4000 cents). The US \$40 is then divided by the AUD exchange rate (0.70) to give AUD/bale $40 / 0.70 = \text{AU\$ } 57.14/\text{bale}$. G3 is 1232 points or AU \$88/bale. G2 is 1532 points or AU \$109.42/bale. G1 is 2127 points or AU \$151.92/bale. G0 is 2927 points or AU \$209.07/bale. These are average discounts across all merchants.

The micronaire period for developing bolls starts around 20 to 25 days after flowering and the plant continues to add layers of cellulose for the next 35 days for that boll. As a lot of crops started flowering in early January the micronaire period happened in February, March and well into April.

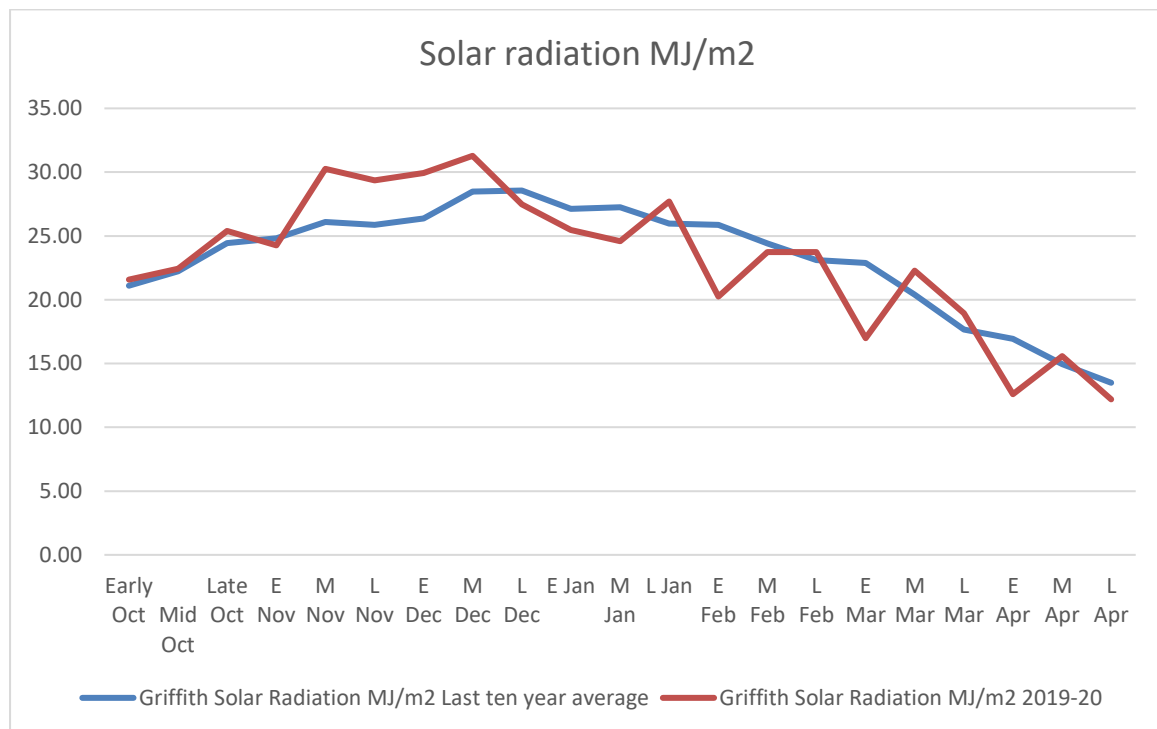


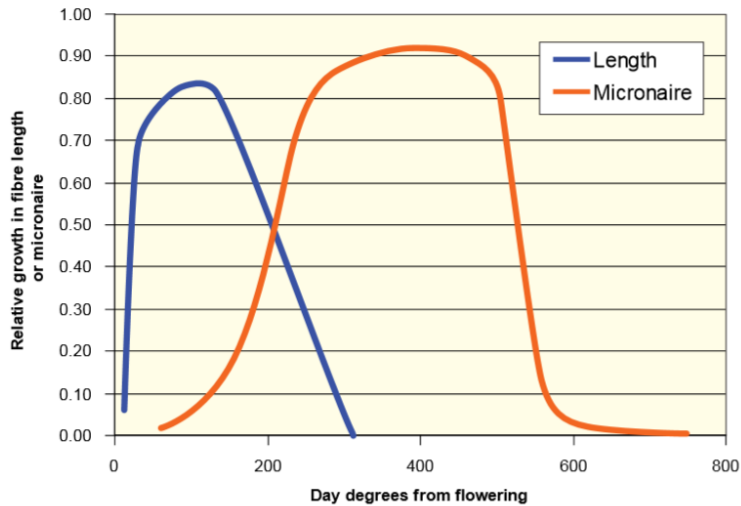
Photosynthesis is the driver of crop development and as the temperatures and solar radiation were well below the 10 year average for this period it led to slow boll maturity.

It is interesting that the seasons January to April average temperatures are above the long term average temperatures dating back to 1962. We have been hotter in the last decade but there will always be climate variability that we have to manage.

Degrees C	10 y ave	2019/20	Griffith data	Lower	LT Ave (1962-2014)	2019-20
E Jan	25.95	26.74		E Jan	23.75	26.74
M Jan	26.05	24.94		M Jan	24.31	24.94
L Jan	26.12	25.62		L Jan	24.52	25.62
E Feb	25.56	24.69		E Feb	24.76	24.69
M Feb	23.81	25.09		M Feb	23.91	25.09
L Feb	24.16	21.41		L Feb	23.04	21.41
E Mar	23	20.93		E Mar	21.94	20.93
M Mar	22.18	20.82		M Mar	21.09	20.82
L Mar	19.43	19.36		L Mar	19.24	19.36
E Apr	18.19	15.73		E Apr	17.58	15.73
M Apr	17.41	15.43		M Apr	16.44	15.43
L Apr	15.56	15.45		L Apr	14.76	15.45
Average	22.29	21.35		Average	21.28	21.35

The last widespread low micronaire year in the south was 2011. The Cottassist website has temperatures for the main boll fill period and micronaires going back to 1958 which shows the run of cold years in the last century.





Day Degrees to mature a boll. Source [Fibrepack](#)

The above graph highlights that it does take 750 day degrees (Base 12) to mature the fibre for micronaire. Colour, length, and strength of fibre this season have actually been good.

Apart from Temperature, variety selection and management play a contributing factor to how micronaire ends up. Sicot 746 B3F and Sicot 748 B3F put their fruit load on later in the season and as a result for the southern crops can put you into the discount range if not managed accordingly. They are varieties that need to hold onto early fruit and need to be cut out on time to allow the fruit to fully develop. A cooler finish could mean for the boll to accumulate 750 DD (base 12) instead of taking 60 days, could stretch out to 90 days. This season the cooler wet weather at the start of March also saw a lot of crops lose photosynthetic power with early senescence and alternaria leaf spot resulting in the full season varieties like Sicot 746 B3F and Sicot 748 B3F struggle to mature up the later fruit – resulting in Low Mic problems, while Sicot 714 B3F and Sicot 707 B3F place its fruit on early and was able to mature up without seeing any issues with micronaire.

Nitrogen use in Cotton

A PowerPoint video here on how we can use N fertiliser more effectively. Click on the link and open Slide show and play from the beginning.

https://crdc-my.sharepoint.com/:p/g/person/kieran_okeeffe_cottoninfo_net_au/Ed9j-gk4ixpFgL8EwmFikqABZgp4Lq09pSWOwuk-FIUXdg?e=lcm4Fw

BOM Outlook

A short video [here](#) suggesting July and August could be wetter than average. Ground preparation for summer crop is now a high priority so planting is on time.

Annual Cotton season survey

The yearly survey of how the season went is about to go out to growers and their advisors. This year I am sending the survey directly to the 2019/20 season growers. It is a much smaller sample so I encourage those that grew cotton last season to contribute to the survey so we end up with a good representation of the season. This will be the seventh year of the survey and it will be available for input through July. Feedback will be in August.



May Answer - Where is Toolbox? Morundah

Regards Kieran

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