



the cotton tale

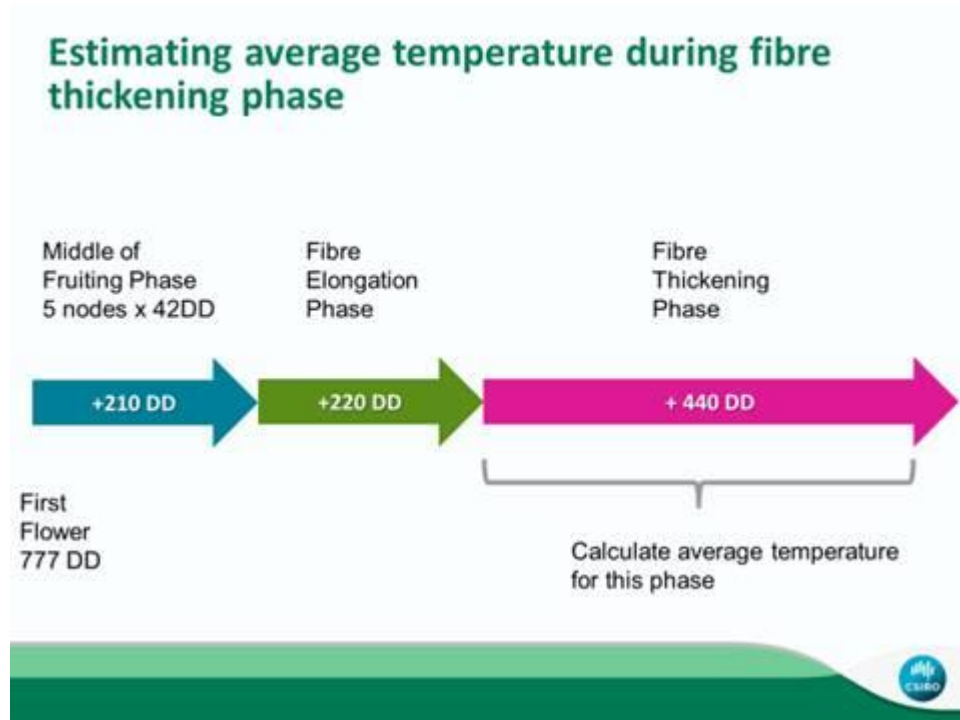
18th January 2021



Photo here of a Sicot 714B3F trial site looking at how early retention affects the final crop result. These plants are undamaged and loading up well with fruit. The trial has treatments where the first five fruiting sites are damaged, first ten sites are damaged and 6 to 10 are damaged. Previous trials across different valleys indicates that the plant is able to compensate for early fruit loss with no delay in maturity or decrease in yield. The trial results will be interesting and very relevant this season with cold shocks and mirid pressure around early squaring leading to early square shedding in many crops.

How will micronaire end up in 2021?

After low micronaire problems last season, the question is what will the boll filling temperatures be this season? The Cottassist tool for micronaire prediction give us an insight of when the critical time for fibre thickening is.

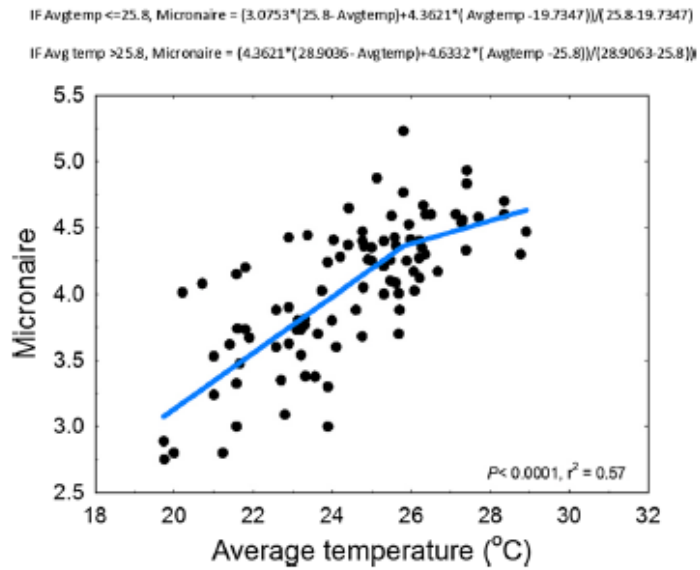


With many crops in the south flowering at the start of the New Year the day degrees accumulated to First flower was around 900 day degrees (Base 12). Looking at Figure 1 the middle of the fruiting phase occurs 210 DD after first flower so for us 1110 DD. Add on another 220 DD for fibre elongation so the critical time starts at 1330 DD and goes for 440 DD. The average daily temperature at this time has a big influence on micronaire. On average this is from the 10th February to the 20th March but can be earlier or later than this with seasonal accumulation.

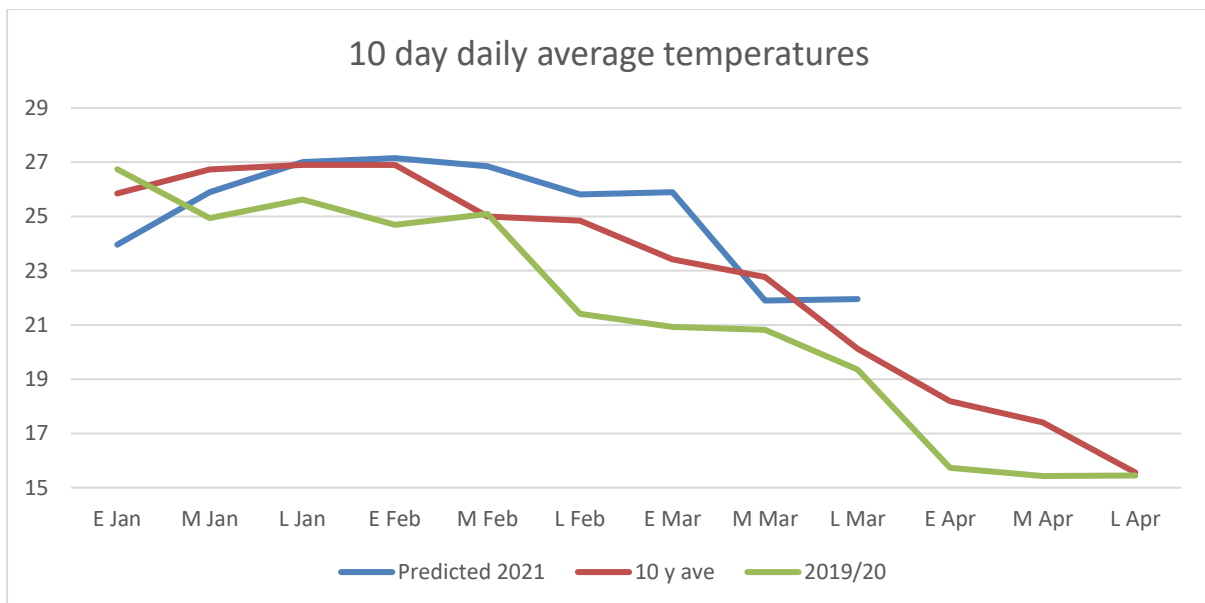
Extending out when crops are given cut out rates of Pix increases the risk that the time to accumulate the day degrees for thickening increases and the probability of low temperatures increases dramatically. Immature bolls at the top of the plant can very quickly bring down the overall micronaire of the crop.

Predicting what temperatures will be in the future can't be taken for an exact science but we can be guided by historical temperatures. If we can average above 22.5 degrees for the thickening period micronaire tends to be above the lower limit of 3.5.

Fig. 3 Micronaire response curve to average daily temperature during boll filling



Last season flowering was delayed into the first week of January and this had a flow on effect with temperatures dropping away in late February and March. Last season daily temperatures averaged 22 degrees from mid-February to mid-March. The 10 year average is 24 degrees. The predicted temperatures are around 25 degrees for the same period this season but it does drop below average in mid-March.



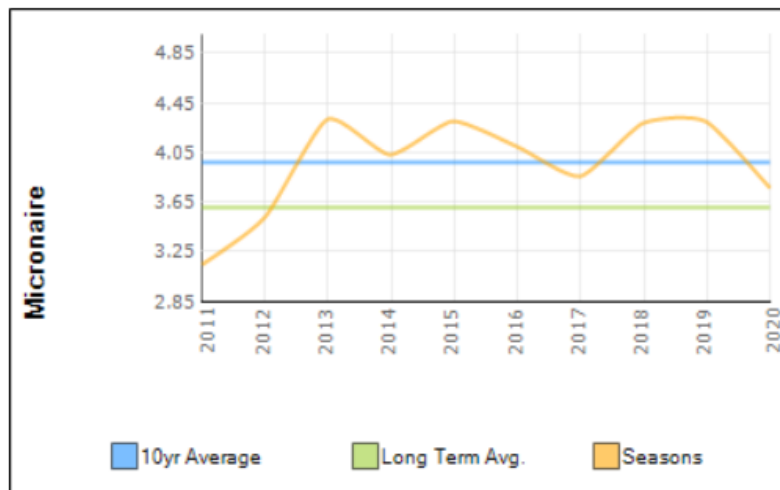
So what management levers are available to reduce the risk of low micronaire?

1. Manage the crop for earliness -Plant as early as possible following the traffic light system, minimise stresses
2. Irrigate so not to stress the crop Variety selection will help so a variety like Sicot 714B3F will set its fruit earlier so has less risk than a later fruiting variety like Sicot 746B3F.
3. Cut the crop out on time (around the 20th – 26th January). The last effective flower that will produce a harvestable boll is on the 10th February. This flower will take 750 day degrees to fully mature. Any delay in cut out will blow out the time to accumulate the day degrees. The Cottassist website has a Last effective flower tool where you can see the effect of any delay in cut out.
Some short videos here that reinforces the importance of sticking to set cut out dates
[Do fruiting sites formed after last effective flower contribute to yield? - YouTube](https://www.youtube.com/watch?v=GOQShEPXILo&list=PLQy8KAPn-Dyou6uDnQi9Ba_7utu2ieo47&index=4)
https://www.youtube.com/watch?v=GOQShEPXILo&list=PLQy8KAPn-Dyou6uDnQi9Ba_7utu2ieo47&index=4
4. Know the N status of individual fields before planting and through the crop cycle. Excess applied Nitrogen will delay crop maturity and make defoliation more difficult

The graph below from the Cottassist micronaire predictor shows that in some seasons temperatures during boll fill will vary the micronaire result. It does show that we are getting warmer over the last 10 years and the risk has reduced.

I encourage everyone to have a look at the micronaire predictor and Last effective flower tool on the Cottassist website <https://www.cottassist.com.au>

Seasonal Predictions



Events coming up (details in attachments)

- **Thursday 21st January** IREC Field day 7.30 am -12 noon. RSVP essential by Monday 18 January IREC: 02 6963 0936 Iva: 0402 069 643 e. irec@irec.org.au
- **Thursday 4th February** NSW DPI Summer crop field day 8 am -12 noon. RSVP's essential to <https://www.trybooking.com/BNWYB> or to Hayden Petty on 0447825052
- IREC and Southern NSW Irrigator tour to the Gwydir **9th -11th February**. See flyer for booking and tour details
- Digital ready Grassroots grant. See flyer for details and registration



December quiz answer

Where are these silos and why are they so famous?

Mirrol Silo kick

<https://www.youtube.com/watch?v=9XDr96wsaZM>



January Quiz

Name this sculpture and its location

Regards Kieran

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