

The Gwydir Grower



Trial Update

The N trial at Milo has recently been picked. While we wait for ginning results, the view from the picker didn't show any obvious differences in yield between the half, regular and double rate treatments. The field had 3 passes of defoliation and while it was suspected that the double N rates may have been a little harder to defoliate, this wasn't found to be the case. So it'll be very interesting to see what results we have after ginning. In the meantime, some seed N testing will be done, so stay tuned for these results.

Words of Wisdom

For the next and subsequent editions, I'm looking for Words of Wisdom from growers - from your experience, the key elements to being a successful cotton grower. You have been warned!



In Case You Couldn't Make It...

As the March rainfall put a halt on picking for a few weeks, we took the opportunity to hold an impromptu field day at Boolooroo in April. Dr Rose Brodrick spoke about hers and Dr Onoriode Coast's **irrigation scheduling trial**. The premise of this research is to develop irrigation strategies that take into account the actual or future level of plant stress, rather than basing decisions on just climatic and soil moisture conditions. To do this Rose has had Canopy Temperature Sensors in the field at Boolooroo.



Discussing irrigation scheduling using Canopy Temperature Sensors

There are two main strategies being developed:

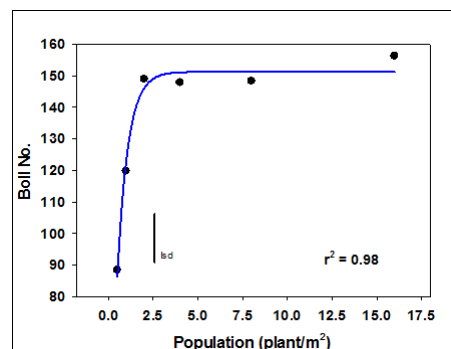
1. Dynamic deficits – changing the deficit at which we irrigate depending on the forecasted evaporative demand
2. Stress Time Thresholds (STT) - the period for which a well watered crop can function at temperatures above its biological temperature limit

Rose commented in regards to the dynamic deficits work,

"The treatment where irrigation was delayed by six days at cut-out received one less irrigation over the season. It highlights to us the future opportunities for water savings by being able to take advantage of periods when crops are experiencing low levels of stress."

In the same field James Quin (CSD) has had a **crop uniformity trial**, looking at what the cut-off is for plant stand not having an effect on yield. With uniformity understood as being critical, Quinny wanted to establish the effect of uniformity in new varieties.

At the field day, the difference in size of the plants and how they grow was very obvious. So it was surprising that once the plot was harvested, it was found that boll numbers were not significant from 2 plants/m to 16 plants/m (graph below).



The final yield results for this trial will come after ginning, so stay tuned.

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Agro Update with Rob Holmes

What is keeping you busy at the moment?

Checking soil moisture - of which there isn't much!

Tell me something that has had you puzzled or challenged recently.

Silver Leaf Whitefly and the interactions of honeydew in problem grade cotton. Is it economic to manage whitefly? Rain washes off honeydew, but then there are colour problems with rain - good thing about rain is it's out of our control, the whitefly aren't.

What should growers be thinking about at the moment?

Making sure they pupae bust correctly and chasing up any weeds in channels. And getting prepared early for next season.

Thanks Rob 😊

Time of Planting - Some Interesting Results

There has been much discussion as the **later planted cotton** has been picked across the Valley, that this cotton has **yielded markedly better** than the earlier planted crop. Mike Bange (CSIRO) has been conducting time of planting experiments each season to generate differences in growth and development associated with temperature. I visited Mike's field at Myall Vale recently and the visual difference between the two treatments, planted about 3 weeks apart, was remarkable.

The first planting was mid October and the later one was in early November. The top 4 or 5 five nodes of the October crop had no bolls on them, whilst the crop planted in November had a full boll load to the top. Mike puts it down to the fact that the fruit retention on the cotton planted in November was much higher than that planted in October. The October planting had a fruit load when the highest temperatures hit in early January, causing the stressed plant to shed this fruit and therefore was compensating later with new growth. However the November crop didn't have the same load and

therefore could hold on to its fruit. Mike noted that in most of the seasons where he had planted this late the maturity of the earlier sowings was always earlier.

In regards to the risks associated with planting later, Mike pointed out that Bollgard II varieties will generally hold on to their fruit better than non-Bollgard, so you can afford to plant a little later as the early crop growth develops rapidly in warmer conditions and there is no loss of the length of the flowering period.

"We have also seen that these moderately later plantings have lower micronaire and longer fibre as the bolls are developing in cooler conditions." In particular, Mike pointed out that this isn't the kind of theory that can be held across cooler cotton growing areas. It is food for thought for the Gwydir though, with average temperatures predicted to rise in the coming seasons.



Jane Caton (Agronomy Technical Officer CSIRO) stands between two different plantings the cotton on her left was sown three weeks later in early November.

Dates for the Diary

End of Season Wrap Ups - To be held in Area Wide Management Groups in June and July

CSD Crop Tour - Mungindi Two Mile Hotel, Friday June 20th 10am

Moree Services Club, Monday June 23rd 5pm

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