

# The Cotton Wrap - The April Edition



## **Welcome to the 8th edition of the Cotton Wrap!!**

### **Dryland/ Irrigated Cotton**

Thanks to Michael Josh a few of us headed out to "Glenroy" west of Bellata to look at some limited water cotton.



*Geoff O'Neill talking limited water with Michael Josh.*

A few tips Michael passed on were-

- First water at around 65 days post sowing.
- Break the next 2 waters on a crop cycle of 180 days which will be around 25 days and 20 days
- The aim is always to capitalise on rainfall.
- Only water if you have flowers.
- Single skip if you have 3 in crop waters, double skip if less than this.
- Top end yield with single skip is 5 bales/ha

These are 'rules of thumb' and will vary year to year. The cotton certainly looked impressive with over 4 bales/ acre certainly a real possibility in a tough year.



*Drew offered many worthy insights.*

### **Verticillium Workshop**

I attended a workshop at ACRI to look at the research which has been done on Verticillium over the last 40 years and what is being done to thwart this nemesis of the cotton industry. I can assure you that plenty of research has gone into this topic and the ways to manage are still the same;

- Manage for earliness
- Avoid late season watering
- Slash and mulch quickly after picking
- Grow high resistant varieties
- Rotate with non host cereals wheat and sorghum
- Control weeds like Bladder Ketmia
- Minimize tail water
- Practice good farm hygiene

There is some evidence to suggest a link between Black Root Rot and Verticillium. The disease survey suggests it is not getting worse in any area except the Namoi and even then it is not consistent. Evidence from the day indicated severe occurrence in the Gwydir and Border Rivers.

Karen Kirkby has taken soil samples and is starting to develop thresholds for inoculum levels. Come Clean go Clean continues to be the best method of control. DPI have sent out sample bags to all growers so take some affected stems and send them in for testing.

### **Points of Interest**

A report published through the Journal ACS Nano has identified researchers in China who have hit upon a chemical compound which binds to cotton and makes it both water resistant and fire retardant. The cotton is still flexible and porous but once exposed to fire it emits a chemical which deprives the fire of oxygen. It withstood burning and abrasion and still remained resistant to water.

Larry Marshall is the new CEO of CSIRO and he comes from a background as a Venture Capitalist from Silicon Valley. He makes some glowing references to the quality and innovation which has emanated from CSIRO but was a little critical about the focus on publications and papers and not on collaboration and importance to industry. If Marshall follows through this will change, as well as making it easier for Venture Capital to flow to CSIRO inventions. Greater

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investment by CSIRO was also flagged for the future development of new products.

The Brazilian Government is investing in infrastructure in Mato Grosso and landowners are seeing a windfall. Property values have increased by 30% in the North of the State which compares to a measly average of 16% Nationally, according to a survey by Informa Economics FNP research, commissioned by local business daily Valor Economico.

The ABS says that there is nearly as much Australian capital in China, \$29.6 billion compared with \$31.9bn of Chinese Capital here.

## Trials

The first Nitrogen trial is off and module weights are in but ginning may be a little way off with a breakdown at the Gin. Early indications are 160 Units N will still grow high yields and the highest rate was not the highest yield. Ginning though will tell the story



*N trial picking at "Riverway"*

Alice Devlin attended a workshop to hear of all the latest projects on N and some early results.

- Dio Antille is this coming season working with Peter Grace to look at ways to increase profitability through improved Nitrogen Use Efficiency (NUE) and reducing loss of N. The goal is to reduce inputs by 25% without impacting productivity.
- Rocky has been looking at timing and placement of N. He's been looking at split applications and found significant decreases in Gross Margin, the later the N is applied in the season. Discussion about putting the whole amount down up front so that it's there

for when the crop needs it...raises the issue of losses though. Best practice may be deep placement pre sowing into cool soil.

- Ben Macdonald presented indirect nitrous emissions in irrigation results (Moree trial) and found no significant differences between 3 rates of emissions. Total loss through irrigation was 44kg N/ha. He compared the results from the Nitrate test strips to the lab results of the same samples and found the strips were pretty accurate. For this trial, strips cost \$63, lab cost \$2500, so a good option for growers wanting to look at their losses. A total of about 10-20% applied was lost in tail water.
- Ben also looked at N residence time in tail water. 1 day after irrigation, 50% of run off N remaining in tail water, 20% by day 3. This work will continue at Moree next season.
- David Rowlings has looked at enhancing efficiency of fertilisers (ie slow release). He found a need to be able to reduce N rate by 20% to make using these products cost effective.
- Mike Bell has (in his words) finally had a response to P in cotton. With deep bands of P, he saw early response up to peak flowering. Response gradually disappears afterwards, with similar results from K studies. Mike wonders if this is function of the cotton root system per se, or the irrigation system on root function in the hill? His current research is looking at whether foliar application can get around inefficient access to soil P & K. Mike made the point that simply applying nutrient does not mean the nutrients reach the zone of depletion, or are taken up by the crop.
- Oliver Knox has been looking at soil constraints to cotton roots and system approaches to change. He discussed the soil constraints in terms of when the roots don't reach 1m, so you'll have less recharge, smaller deficits and more frequent watering – all exacerbating the problem. Barley was suggested as a rotation, not for yield but as a sacrificial crop to repair soil. Oliver also

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discussed gypsum and felt this could displace more Na from surface.

## Around the Traps

Growth Agriculture have a trial looking at differences between Blood and Bone vs conventional fertiliser at "Lammermoor", Merah North with some surprising results. They also mentioned that Sero X has passed regulatory approval for use on cotton.



*Blood and Bone on right vs conventional N on the right.*

Yields all over the areas are still coming in above expectations but persistent rain is making life difficult around Narrabri and Wee Waa. It looks like a dry couple of weeks ahead now. Some handy falls west of Bellata and Mallowa at Easter has a few chancing some winter crop and Faba beans going in as well in the East. Walgett again mostly missed out with the best rain around Narrabri, Bellata and East. The Macquarie also received some handy falls. The last change did not deliver anything near what was predicted in most areas.

## CQ Update

Area wide management group meetings are being brought back. Two meetings are proposed on the 14<sup>th</sup> May. Times and venues to be advised.

## What's On

16<sup>th</sup> June CSD AGM

14<sup>th</sup> May, CQ Area wide management meeting.

## Saying of the Month

"I have not failed. I've just found 10,000 ways that won't work." -Thomas A. Edison

"Insanity is doing the same thing, over and over again, but expecting different results." — Narcotics Anonymous

## Welshy's Weather

When is this El Niño event going to kick in? Media can be misleading. The scientists are telling us a clear signal for a 2015 El Niño event exists, yet we have seen Indian Ocean and Coral Sea moisture deliver some of the most timely (or untimely) rains in these critical months before winter. The El Niño signal is coming from the predicted ocean water temperatures, but for an El Niño to occur this index needs to align with air pressure metrics. The atmosphere and the ocean are like a husband and wife; plans often change when the two cannot agree. At this stage the SOI is still neutral and, like last year will hold the key to the onset of dry winter and spring conditions. Multi-week models suggest a dry May after this east coast low moves away this weekend and then more rain for June.

## Spray Workshop

Bill Gordon will no longer be working in the Cotton and Grains Industries. As of June this year he will be working for the plague locust Commission based in Canberra.

Of note with his final comments were that nozzle manufacturers are all updating their spray quality data as previously it was done with water only. This will change the droplet size in many cases so keep updated as information becomes available. Buffer zones are being reviewed by APVMA and it looks as though many will be increased. If the chemical is off patent manufactures will not do the work to prove differently and so we will have to accept the judge's decision. This will mainly affect Aerial operators first but ground rigs will be next. It will particularly affect Dropp Ultra.

*Until next time*

*Cheers  
Geoff*

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