

# The Gwydir Grower



## Trial Update

Results are in from the **N Trial at Milo**. The following shows the yield for the three treatments:

<b>T1</b> (50 units N upfront, 250 total) = <b>11.68 bales/ha</b>
<b>T2</b> (100 units N upfront, 300 total) = <b>11.65 bales/ha</b>
<b>T3</b> (200 units N upfront, 400 total) = <b>8.86 bales/ha</b>

At first glance these results are pretty surprising. But unfortunately a decent area of the T3 treatment suffered hail damage, affecting the results considerably. The similarity between T1 and T2 was interesting though.

I've also converted the results using the industry-developed Nitrogen Fertiliser Use Efficiency (NFUE) measure. This measure provides an indication of the efficiency of N use in the production of lint by dividing lint yield (kg/ha) by N fertiliser applied (kg/ha).

T1 = 10.6

T2 = 8.82

To put this in context, Ian 'Rocky' Rochester determined the optimum NFUE to be in the range of 13 - 18 kg lint/ha per kg of N applied/ha with numbers below 13 indicating that excess N has been applied. You would've heard Rocky speak about this at the Cotton Conference if you were at the Nutrition session.

The plan for this year's trial is to focus on nitrogen use efficiency, rather than rates specifically. We'll be looking at where in the crop we are having inefficiencies, as well as continuing the Nitrous Oxide emissions trial work. This will be complimented by the other CottonInfo trials in the other valleys.

In other trial news, Mike Stone has taken the lead in developing a trial to look at ways of **remediating some of the compaction** that exists and appears to be worsening across the Valley. Working with Dr Michael Braunack, Lou Gall (GVIA) and myself, Mike has planted 3 biological treatment strips of wheat, safflower and vetch. He's also used a mechanical

method of repairing. The trial's being conducted on a severely compacted field at Redmill and the plan is to monitor the effectiveness of each treatment. And hopefully work out some effective ways of fixing (at least to some extent) the compaction issues that we have.

## In Case You Couldn't Make It...

Throughout July, Cotton Australia, CRDC and Monsanto held **Bollgard III updates** across the industry. The Moree meeting was well attended and the discussion raised some important issues for the industry to consider. Kristen Knight (Monsanto) provided an update that the planting window permit is currently with the APVMA, hopefully to be approved in time for this coming season, to allow planting up to 30th November. Noting that crops planted between 15-30 Nov will require destruction within 30 days at the end of the season. Stay tuned for the outcome of the assessment.

Sally Ceeney (CottonInfo) provided some data that showed refuge crops are still effective, but there are currently no new crop options - pigeon pea is still considered the best. The group discussed the difficulty in managing for a good pigeon pea crop (the agronomics and economics), Sally pointed out that one of the problems is the seed.

As the 'last line of defence', pupae busting is still very effective in destroying both resistant and tolerant pupae. The point was raised about crops cutting out and defoliating early, with *Helicoverpa* not entering diapause. Sally said that it's being considered for BGIII that these crops won't need to be pupae busted.

The other important factor being considered for the BGIII RMP is reducing the refuge area to 5% unsprayed cotton and 2.5% pigeon pea. Monsanto and TIMMS will review the final BGII RMP recommendations and are aiming for August 2014 to

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do this, to then submit the final RMP to the APVMA for approval in July 2015.

The idea was raised about having refuge management training for growers and consultants, possibly each year. If this is something that you think is a good idea let me know and I'll see what I can do to get it happening.

## Agro Update with Stu Doyle

*What is keeping you busy at the moment?*

Today - looking at blueberries in Mundubbera. Otherwise, water planning and assessing soil tests for nutrition programs.

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

Surprisingly high residual N levels. I had a field that yielded over 13 b/ha and there was still a high amount of N left in the soil. The farm had a good irrigation schedule, and in this dry season there was little water logging. So maybe this is the reason? Or the N cycling? I'm going to look at is closer in a trial situation this coming season.

I'm also struggling with how I'm going to manage Verticillium Wilt this season in back to back fields.

*What should growers be thinking about at the moment?*

Ground prep, ground prep, ground prep. Make sure you've done all you can to get it right before planting. Also finalising water and nutrition budgets. And hoping for rain!

Thanks Stu 😊

## Controlling Volunteers - By Geoff Hunter (Namoi)

As many of you would know Australian Cotton Research Institute (ACRI) is our Premier Research facility where a big part of our Cotton Research is carried out. I recently took a trip out there and caught up with Graham Charles to find out the results from his herbicide trial looking at the control of volunteer cotton.

Graham did some trials in 2012/13 on cotton at 8, 16 and 24 nodes using chemicals like Glufosinate-ammonium e.g. Basta, Bromoxynil, Carfentrazone-Ethyl e.g. Hammer, Saflufenacil e.g. Sharpen, Amitrole + Paraquat e.g. Alliance and Paraquat + Diquat e.g. Sprayseed or SS. All sprays were applied during the day and really nothing gave very good control except SS as a double knock.

What a difference a year makes and trials this year (2013/14) sprayed at night have shown some excellent results on cotton up to 24 nodes. Below are some of the better results, other chemicals were used so let me know if you want a more complete list.

Graham commented that hitting the cotton with a strong mix of 2 chemicals upfront is better as there are more leaves to take up the chemical as opposed to the double knock situation where the leaves and plant is already sick. Some chemicals seem to work better with SS. 2,4-D + Picloram or trade name Tordon for instance had a zero kill by itself on 24 node cotton and with SS achieved 99% kill after 50 days. This compares with SS by itself only achieving 63% (not shown in the summary) on the same cotton over the same period. SS is activated by sunlight and so having all night to be taken up by the plant makes all the difference when the sun hits.

A summary of some of Graham Charles results are below.



Photo Courtesy of Graham Charles from NSW DPI. Cotton treated on 18th March with SS + Fluroxypyr at 24 nodes.

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Chemical applied			% of dead plants with application at 12 nodes				% of dead plants with application at 24 nodes	
Chemical active	Eg. Trade name		2-Jan	10-Jan	22-Jan	18-Mar	18-Mar	7-Apr
Paraquat + Diquat	2 X Sprayseed						86	98
Paraquat + Diquat	Sprayseed	SS Day 11	100	100	99	100	76	78
2,4-D	Baton + SS		100	100	98	100	64	80
2,4-D	Baton + SS	SS Day 11					93	100
Bromoxynil	Bromicide + SS		100	100	99	93	53	53
Triclopyr	Garlon + SS		99	100	86	90	88	86
Saflufenacil	Sharpen + SS		100	98	99	100	49	68
Fluroxypyr	Starane + SS		100	100	92	99	94	95
2,4-D + Picloram	Tordon + SS		100	95	87	90	89	99
Flumioxazin	Valor + SS		98	100	96	97	48	77

\*\* These chemicals were used in trials, make sure you always refer and adhere to label directions\*\*

## Gwydir Grower Hall of Fame!

Congratulations to Zara Lowien at being named the Chris Lehman Trust Young Achiever of the Year, Andrew Parkes for his Service to Industry Award and to James Quinn for being a finalist in the CSD Researcher of the Year. All very deserving and we're lucky to have such talent in the Gwydir.

## HRMS

The new **Herbicide Resistance Management Strategy** has been released. This document is to be used as a tool to guide in weed management, with the intention of delaying Glyphosate resistance.

A group of growers recently visited the US to look at the Glyphosate resistance problem over there, and the message was loud and clear, we do not want to get to that point! "The cat's out of the bag and it's not going back in!" Kieran O'Keeffe, CottonInfo, commented on his return.

The HRMS uses the 2 + 2 + 0 formula:

- 2** non-glyphosate tactics targeting both grasses and broadleaf weeds during the cotton crop
- +**
- 2** non-glyphosate tactics in summer fallow targeting both grasses and broadleaf weeds
- +**
- 0** survivors, control survivors of glyphosate applications and do not allow them to set seed.

The HRMS will feature in the new Pest Management Guide and I will send around copies separately soon.

## Dates for the Diary

Dryland Trip - Visiting John Cameron's property at Bongeene, QLD and Jamie Grant's near Dalby on the 3rd & 4th of September via Croppa Creek looking at planting machinery. Let me know ASAP if you're interested in coming along.

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