



MCGA Field Day 16th March Narromine

The Macquarie Cotton Growers Association was keen to showcase the farming systems and innovations bought on by differences in situations and organised two field days, one at each end of the valley. On Wednesday 16th Narromine showcased the farms of Scott Vincent "Wirrigai", Alex Ballhausen "Akoonah", Brad Anderson "Ningawalla" and Peter Grech "Nundah".

At "Wirrigai" we looked at cotton under pivots established with a cover crop underneath – Scott Vincent was keen to play around with a few options this year as establishment is one of the biggest challenges they face each year. Scott planted his cotton into a few different situations: Standing wheat stubble, a faba bean crop and a sprayed out mulch crop as well left an area as a control.

Scott said he struggled with some establishment issues mainly due to disease and pest problems (slugs being a big one this season) and this could have been added to by the heavier mulch crop. Scott

said "cover crops are always a bit difficult to determine the right size to spray out" and he felt his was probably a bit bigger than he would have liked. "We did roll the stubble down in the direction that we planted to overcome this problem", we also compared stubble from the previous years large wheat crop (6-7 T/ha) compared to a sprayed-out wheat stubble (mulch crop). The cotton on the previous years wheat stubble looked great early but struggled from mid January onwards when the stubble broke down. The mulch crop (sprayed-out wheat) struggled to get going but excelled in the second half of the season when water infiltration was crucial.

The cotton grown on the Faba Bean mulch crop was also weaker because there was more seedling disease and the mulch crop also broke down quicker.

The benefit of the stubble for his farming situation is the improved water infiltration and less water droplet erosion from the pivot. To this end, he has been playing around with reducing the pivot from 80%

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(12 mm per pass) to 40% (22 mm per pass). There was a visible difference on the day. In the areas with no cover crop, the plants were a lot smaller than the cover crop areas. Scott believes the benefits gained from growing cotton with a cover crop are extensive and each year/season is different with its own set of challenges but is worthwhile persevering.



Pic 1: Marching out to see the cover crop trial.



Pic 2 : Cotton planted into stubble at "Wirrigai".

We moved onto "Acoonah" to look at the effectiveness of a strip tiller under a pivot. With Alex's hard setting soil type, its essential to maintain a cover crop for establishment and water infiltration throughout the season. By using a strip tiller and adding the ability to place his fertiliser with this implement, Alex is able to get the seed bed he needs to establish his crop while maintaining the important stubble. Alex noted that the strip tiller had made planting easier by eradicating the "hairpinning" of stubble that occurred during planting. Alex Ballhausen was also able to keep the ripped zone open by planting straight above it with a strong rooted plant such as cotton. Compared to ripping in fallow on red soil which can then seal over again quickly after heavy rain.

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Pic 3: Norseman Strip tiller owned by Alex Ballhausen.

Across the road we looked at “Ningawalla”. We looked at some results from Brad Anderson’s canopy temperature sensors. In early stages of field use, the results are showing growers how the sensors can monitor the stress of the plant .i.e. heat stress hours they are exposed to – what implications this has for a commercial system i.e. automating – irrigation decisions made around results remain to be seen so it is a watch this space. Ryan Pratten pointed out to growers the benefits that adding a canopy temp measure to monitoring soil water can give growers especially those who can control the amount of water they add to the crop each day. The aim of the game is

to minimise accumulative stress hours and to do this we need to get a better handle on when the stress is occurring.



Pic 4: Canopy temp sensor in action in the field.

Finally the bus pulled up at Peter Grech’s “Nundah” where the focus was on the new installation of drip irrigation. Peter outlined what they had experienced so far and what he identified as some pros and cons of the system. The advantages of this system are that it allows more hectares being irrigated and the ability to water run products through the drip system. Peter has overcome algae in his drip system and also commented that compaction is to be avoided at all costs, avoid a wet picking. Being freshly lasered country, Peter is

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dealing with growing cotton in fresh cut and fill areas, although he is expecting great things from the country after it has settled down.

The day was wrapped up at the Narromine Golf Club where the MCGA put on a BBQ for those that were able to stay around. The MCGA wishes to thank these growers for their cooperation and willingness to have the field day on their farm. The benefits growers can gain from seeing what others are doing is much more likely to translate in practice change than if you just read something or hear about from someone else.

We have a great team of industry support in the Macquarie so let us know if have an idea for a field day or a bus trip and we can look at getting it organised for you.

Thanks for the participation in the field days and workshops we have put on throughout this season.

Just a reminder of the team in the Macquarie

Macquarie Cotton Growers Association -
Ryan Pratten chairman – 0439 894554

Kerry Duncan secretary_ 0427889621

Cotton Australia Regional Manager

Julie Wise – 0447370043

CottonInfo – Regional Development Officer

Amanda Thomas – 0417226411

Cotton Seed Distributors – Extension Officer

Bob Ford – 0428950015



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MCGA Field Day 18th March WARREN

MCGA annual field day was held on Friday the 18th March. The focus was on water use efficiency and how to maximise production in the dry years. The first stop was Auscott, farm manager Sinclair Steele was on hand to walk the growers through different irrigation scenarios. Traditionally water allocation plays the most vital role in deciding how much cotton is planted in the valley, however a few growers are looking at raingrown or semi irrigated cotton as well as moisture availability at planting to enable them to utilise the land that they have available. Auscott is one of the growers who have had success with semi irrigated and rain grown cotton last season and it looks like they will perform well again this year.

Auscott has a strong focus on trying to maximise their bales per megalitre of water (ba/ML) thus aiming to grow more cotton on less water. Their controversial move to the 60 inch or 1.5m spacing supports this effort, and from what we saw on the Field Day they are certainly getting the most out of every drop of water. Auscott have a long history of participating in trials to support their farming systems and practices, and this year is no exception. This season's trial evaluates the water use efficiency of cotton with the following irrigations and planting conditions;

- 60" rows, solid plant, fully irrigated, planted on moisture.
- 60" rows, solid plant, fully irrigated, water up.
- 60", single skip (2 in 1 out), 3 irrigations, planted on moisture.
- 60", single skip (2 in 1 out), 2 irrigations, planted on moisture.
- 60", solid plant, 1 irrigation, planted on moisture.
- 60", solid plant, dryland september plant.
- 60", single skip (2 in 1 out), dryland.

Auscott also trialled a range of pix treatments on some of these plots (the trial data is attached).

In a year when they had some well-timed rain in November and January, and a pretty dry finish to the season (total rainfall of 186 mm) it will be interesting to see the results of each



scenario and which option provided the best yield and most efficient use of the available water. The system they have adapted will ensure that they can be productive and sustainable into the future.



Figure 1: Left; solid 60" with 1 irrigation – planted 30th September 2015, Right; 2 in 1 out on 60" hills with 2 irrigation planted 9th November 2015.

Another point of interest at Auscott was the use of a strip tiller to get the fertiliser down and plant into existing stubble. By making a seed bed that will have stubble cover on eachside the seedling was protected and also improved the infiltration of water. Growers in the Narromine area using overhead irrigation systems see stubble cover as one of the most important factors in crop establishment, without adequate cover some of the red soils and even the river country have infiltration problems throughout the season if they don't get the cover right.



Figure 2: Growers in one of the trial blocks " Moisture plant into standing stubble"



The next stop on the MCGA field day was “Glengarry” and “Flintrock”. As winners of the crop competition last year Alex and Mouse Ramsay were kind enough to let us tour their farm to find out the recipe of growing consistent high yields (some of the highest the valley has ever seen). First stop was to look at “bio film” trial that Alex participated in this year that allows growers to plant the crop then cover it with a biodegradable thin plastic film to draw moisture to the top of the bed and create a warmer seed bed. The trial experienced a few hiccups but in general the theory is sound, although Alex thought the application methods need some work before it could be useful on a large scale. Below is a link from ABC rural who did a story on a similar trial in Emerald.

<http://www.abc.net.au/news/2014-10-13/qch-cotton-trials/5809756#.VvHndWfu2U8.mailto>

Alex’s agronomist Andrew Cooper was on hand to discuss the program which they have been having a great success with, that see them using recycled gyprock on all their country. Andrew Cooper said closing the gap on the Calcium Magnesium Ratio can assist with the uptake and availability of other nutrients, and judging by the crops this appears to be working.

The day proved to be most enjoyable even if the storms disrupted us at Auscott and a scared a few of the fair weather travellers away. Our expert bus driver Phillip Fuller took on the weather and dirt roads to transport us in style.

We would like to thank the MCGA and participating growers for allowing us to visit their farms and providing the drinks and BBQ at the Warren Golf Club after the field day.

We wanted a chance for growers to participate in grower led discussions and chat to each other without having to take in too much information and I hope that’s what was delivered. We would love to hear from growers on things they would like to see happen in the valley and areas of interest, we have a great team between Cotton Australia, CottonInfo, Cotton Seed Distributors and the Macquarie Cotton Growers Association, we can get things happening in pretty short amount of time so if you’re sitting on an idea come forward and we will do our best to make it happen. We also have an important meeting coming up to feed growers priorities into the CRDC expressions of interest so make some time for that one if you can.



Figure 3 :Recycled gyprock used by the Ramsay's .



Figure 4: Our coach captain “ Phill Fuller” getting the low down from Bobby Ford and Andrew Cooper .

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