Welcome to the 15th edition of the Cotton Wrap!!

Dryland/ Irrigated Cotton
The row configuration trial has been thinned down to 1, 2, 4, and 8 plants per metre so we can show differences for solid, single skip, double skip and super single configurations. Michael Brosnan is also assisting along with CSD and Monsanto with a trial at Mungindi comparing row configuration and planting dates against sorghum and cotton with the first planting successful on 6th Sept(Sorghum) and 8th Sept(Cotton) so it should be an interesting comparison.

Row configuration trial at Bruce Kirkby.
A proposal is going to CRDC to extend on the findings from the planter project and the next stage will be to manufacture a planter bar where we can attach up to 6 different planting units side by side in order to test effectiveness and improve planting accuracy in difficult conditions.

Amanda Thomas shared a few comments from 2 growers in the Macquarie Valley who chose to plant into moisture rather than water up in order to save water. Broker McClary planted over 600Ha this year on his farm into good moisture at depth but which was covered with 75mm of dry dirt. The seed was water injected with 400L/Ha at planting with an estimated saving of around 1.2Mega's per Ha from not needing to water up. Some comments were: “it is very important to have dry dirt to insulate moisture, no clods!!!! = early hill preparation, VERY LOW LEVELS OF CROP RESIDUES, PLANTER MUST BE DEAD CENTRE, Planter setup is so crucial, If not willing to address some very basic principles, and setup requirements, DO NOT EVEN WASTE YOUR TIME”.

Jake Hall from Auscott reiterates many of these comments from his experiences where he feels savings of 1.2-1.5 ML/ha were achieved this season. “The uneven surface in the plant line made for quite variable top moisture. We had to cut a fairly serious trench with the trash whippers to get near genuine moisture which creates a rough ride for the planter and less than ideal seed placement with additional bounce. The 1000L/ha water injected rate almost ensures imbibition, but getting the seed into the mayor’s office was difficult to do consistently making for some stressful scratching behind the rigs, with constant adjustments trying to maintain that band of dry soil over the slot to prevent baking and dry back. The more you moisture plant, the better you get to know your planters and your soils (and your varieties!) that’s for sure – but certainly each season and each field have plenty of curve balls for us. The advantages of establishing a stand on moisture are significant, so I’m guessing that at least while water is limited we will get plenty of practice- but hopefully not!

Research
We had a team of Researchers jump on the bus last month for a local tour and meet growers first hand. Thanks to everyone involved because the value for researchers is immense and I am sure growers on the day picked up a few things also.

The team on the researcher farm tour
Geraldine Wunsch is doing a project on the motivational aspects of cotton growers and is looking for a few more responses so if this is something you could contribute to follow the link below.

https://www.surveymonkey.com/r/MotivationalFactorsofCottonGrowersREVISED

For further information contact Geoff Hunter on 0458 142 777
Trials
Bellevue trial is around 15 nodes and N applications at varying rates have gone on. The Pix trial block is starting to hammer and we expect Pix will be applied in the next week or so. The Emerald trial is near cut-out and fruit numbers look good with the year being favourable to date. The AVG and 1 MCP applications are all complete in Emerald so just waiting for yield there and the southern applications are up to date with only a cut-out spray left at Bellevue. Getting quite a few mirids in the light traps and a couple of Heliothis and lots of “Others”.

Around the Traps
Emerald has been dry early this season so far with only a few lucky ones in a strip through Rob Ingram back towards the Northeast getting some useful falls of around 100mm. Most other areas have just received a few 10-15mm falls. A similar story over Xmas and into Jan with falls ranging from 100mm-200mm and some damage. Saying that though the cotton looks great and much of it is cutting out. The early planted trials of Paul Grundy’s are really showing up some differences with the earliest plant going to be picked possibly around late-January. Very little general rain in the Namoi last month, mostly storms with one very isolated fall of 175mm on a farm east of Bellata. More storms into Jan is helping some but still plenty of dry patches around. The cotton had been a bit slow but is powering on now with most crops flowering now. A few insecticides sprays going out for Mirids, Mites and Heliothis and some low retention in some fields was of some concern for a few growers. A lot of herbicide damage
is being reported and some severe symptoms in some cases so if you do have damage report it to Paul Sloman at Cotton Australia.

Some of the 2-4D damage in the Namoi Valley this year.

Hail damage to a crop on the Downs

What’s On
2nd Feb 2016 - NRM and BMP workshop in Emerald, Ph Liz Alexander 0429 471 511.
8th- 12th Feb 2016 - Nitrogen Tour, Emerald, Goondiwindi, Gunnedah and Darlington Point.
1st and 2nd Mar- ABARES Conference in Canberra
14th & 15th Mar- HR workshop with Crown Casino, Contact myself for more info.

Energy Efficiency Workshop
Some interesting technology has emerged for groundwater irrigators from a recent workshop in Narrabri. Renewable technology has reached a price point where, in combination with diesel fired generation can lead to cheaper per Mega Litre cost of extraction. Drive technology combining AC/DC currents for small industrial systems (>45kw and <200kw) is still being trialled and refined by a select number of engineering companies. These systems are moving away from traditional line-shaft pumps towards submersible pumps fitted with lay-flat hose. Lay flat hose has a number of benefits including; reduced friction loss (and therefore Total Dynamic Head) as the hose expands during pumping and, reduced maintenance cost of bore lifting through unique drainage technology avoiding the need for crane hire. In terms of economic feasibility, Janine Powell (NSW DPI) and Jon Welsh (CottonInfo) have undertaken case study analysis of both grid-connected and diesel fired groundwater pumping systems. Those showing the most potential in terms of project returns occur where water storage is available and the pumping window is able to be extended from traditional cotton growing season into finishing of winter crop during spring months. The high variable cost structure associated with diesel fired systems presents greater opportunity for substitution of renewable energy technology when compared to the high fixed cost tariff structure of grid-connected systems. CottonInfo economic case study analysis is currently under peer review. For those that were unable to attend the recent energy workshops, a webinar of case study findings is currently being prepared by CottonInfo for release in early 2016.

Player Profile
Katie Broughton CSIRO, Narrabri.
Young, enthusiastic Katie is one of many of the unsung heroes helping the Cotton Industry adapt and thrive through research.

Tell us your life history so far- Born in Young NSW and attending both Primary and High School there then off to Sydney University to do Ag Science. Currently working for CSIRO on a 3 year project based at ACRI.

Saying of the Month
“Knowledge is knowing that tomatoes are a fruit and experience is knowing they don’t go well in a salad”. Via Hugo Weissen.
What is your Project? - Measuring the effects of higher CO2 and higher temperature in a future climate change scenario? Initially this is with the same management but the future work will look at how we might manage cotton differently with higher CO2 and temp. Does higher CO2 mitigate the effects of higher temperatures?

What do you like about the Cotton Industry? - Interesting and supportive with lots of research going on which is directed by growers and used by them.

Highlights so far? - Installing and commissioning the chambers and the technology to go with it. That along with the remote sensing technology has been a highlight.

How does the Industry keep you in Cotton research? - While there are jobs here in cotton research, I am happy to keep working in the industry. However, in general, longer funding terms would give more security to researchers. I would like the opportunity for more grower engagement, and eventually to see the outcomes of my research adopted on farm and making a difference.

Welshy’s Weather
“Models are aligned for a soft 3-4 week period out to at least mid-February once this current heat wave passes. Water budgets and dry-land crops hopefully won’t come under too much pressure in the foreseeable future. Although the Southern Annular Mode has reduced influence from its peak spring season, it looks to be settled into positive phase pushing moisture into eastern Australia in the coming weeks. The oceans to the north of Australia continue to warm up which is encouraging for moisture drawing south into timely troughs and rain events. As for 2016 year, the latest long-range predictions out of the International research Institute (US) shows a 40% chance of La Niña condition occurring and 50% for neutral conditions. It really depends how quickly this El Niño event decays as to whether the 2016 La Niña comes to fruition. Prospects appear reasonably bright for 2016 winter crop at this early stage.”

Until next time

Cheers

Geoff

Katie outside one of three chambers at ACRI

For further information contact Geoff Hunter on 0458 142 777