

The Macquarie Bale up

Jan 2017

Welshy's weather wrap

A blocking high in the Tasman Sea and a negative Southern Annular Mode persist; keeping the Murray-Darling Basin hot and dry. Historically, these events have broken with a 100-200mm rain event when atmospheric conditions change. A passing weak MJO seems to have created some instability, with models now favouring precipitation and cooler temperatures through the middle of February. A word of caution for 2017 winter crop - the Indian Ocean looks unfavourable for winter rain which has been the breadwinner for the Macquarie over the last few seasons. Keep an eye on the Moisture Manager for updates. If you don't already receive these just head to CottonInfo website and subscribe and they will be in your inbox every second Monday. Or simply click the link below

<http://bit.ly/2kiW5xT>

60 seconds with Bange.....

Geoff Hunter the REO from the Namoi and I have been trying to come up with a few new ways to link researcher and growers. With such a unique growing season this year we thought it's time to touch base with the award winning king of plant physiology Dr Mike Bange.

This man has forgotten more than most of us will ever know about the physiology of cotton crop and how it responds in certain climatic conditions. Geoff and I have fired a few questions at him that we thought were relevant to this seasons crop. So in 60 seconds with Bange we get the low down as to what might be happening out there. Please feel free to email me your own questions and the researcher to you'd like 60 seconds with.



And your time starts now

1. What do you think contributed to plants not fruiting below 12 nodes in some cases ?

If we are talking about no fruiting branches below node 12 this is most likely caused by a delay in floral initiation caused by stress. Very high or very low temperatures delay floral initiation (initiation of the first square) allowing more nodes to develop. This year we certainly had cool/cold conditions during this early period of crop development.

2. What effect is the hot days and warm nights having on the plant?

"Hot days means more water use. We are more likely to see effects of daytime temperature causing heat stress when it is humid. Crops have an incredible ability to remain cool when there is plenty of water and are allowed to transpire freely".

"Warm nights means more respiration (consumption of the carbohydrates that were produced during the day"). With these warm nights coinciding with the increasing fruit loads means that there is more stress



on the plant and makes it more difficult to maintain fruit production. This is also challenged this season with generally lower leaf area development (and probably roots as well) caused by the early cool temperatures. We are seeing NAWF declining rapidly and more difficult to maintain at higher numbers.

Our CTS trial shows how well crops with moisture in the soil can cool themselves in hot dry (not humid) conditions. Please see the link at the end of the newsletter to see for your self

3. Will yield be affected this season?

This will depend on if crops are successfully allowed to compensate and have the length of growing season to allow fruit growth. There is a high chance with delays and the temperature stresses yields may be affected. I hope I am wrong.

4. The crop appears to be putting a lot of fruit on now in a very condensed time, what factors will I need to consider?

Ensuring that irrigation times are optimal. Some additional nutrition (eg broadcasted or water run urea), may help if there is a chance that it may be limiting).

5. I usually apply Pix to my crop at this time of year. Is extra care required because of this extra heat and condensed fruiting pattern?

The same principles apply. But I would also consider that leaf area may be limited. Monitoring is critical (eg VGR)

6. Crops appear to be sending out reproductive stems and then vegetative stems. Is this normal?

This could be a result of stresses affecting the initiation of fruiting branches.

7. What actually causes parrot beaking and how much impact can it have on yield ?

Parrot beaking is a result of high temperature affecting pollen viability and germination. Therefore there are locks of cotton that will not develop seeds and hence lint. Yes it will affect yield, and the degree will depend on the amount.

I have found some related articles that talk about the effects of high temps on cotton plants from the Australian Cotton Grower Magazine as well as Cotton Tales from southern New South Wales in 2008/2009 season.

<http://bit.ly/2kiO0cU>

<http://bit.ly/2kiQ1G0>

Herbicide Resistance Testing

Monsanto is offering a free herbicide resistance testing program this season to all cotton growers that have grown Roundup Ready Flex in any of the previous three seasons. Growers can test five of the major weeds present in cotton systems for resistance to three critical herbicides, Roundup Ready® Herbicide with PLANTSHIELD® by Monsanto, Verdict® and Select®.

The five weeds that can be tested are Annual ryegrass, Barnyard grass, Liverseed grass, Red Pigweed and Milk (sow) thistle.

I have a supply of pre-printed testing envelopes that can be used for weed seed collection.





Alternatively call me and I can come on farm and do the collection for you. If you have any other weeds that you suspect could be resistant, but are not listed above, or you did not grow Roundup Ready Flex in the past three season, I can also arrange for you weeds to be tested under another program for you.

Results will generally take 12 weeks to generate. You will be notified directly by Plant Science Consulting of the results.

What's coming up

Lets take a break and have a bit of fun

Join us for a fun family morning paddling along the Macquarie River on a free kayak trip while learning about your local river and all the creatures that call it home. A free morning tea and BBQ lunch will be provided, followed by an opportunity to see up close some of your local fauna with wildlife expert and ecologist Phil Spark.

There will be will limited spots and we encourage this to be a family fun day for all cotton growers in the valley , more details will come to hand soon



Date: Saturday 4 March 2017.
 Time: 8:30am-2:00pm.
 Location: Warren Weir, further directions provided upon registration.

RSVP: Amanda Thomas,
 CottonInfo, by 24 Feb:
 0417 226 411.

[..\Field days\Macquarie NRM extension v1.pdf](#)

Canopy Temperature Sensor Trial

We are in the third year of exploring the fit of CTS in our cotton systems. If you haven't logged on and had look please do so. As well as the CTS data you can access two weather stations remotely and save the page to your home screen to be able to use the info for spray decisions ect.

- Instructions on how to access the data (same as last year – however note the instructions to hit your REFRESH button as explained below):
 - 1) Go to www.porosity.com.au
 - 2) Under the Porosity/Members login enter the following:
 - Username; mcga
 - Password; ctstrial
 - 3) Once logged in, save the page straight to your home screen by clicking on



 , or the "box with arrow"



 , or to your favourites
 - 4) IF you logged into this website last season, then you will have to hit the REFRESH BUTTON on your web-browser to see the changes from last year.

That's all for this edition of the Macquarie Bale up next month we will have more info on the Valley field days that will be on in March as well as a Spray Irrigation field day.

