



6th January 2018

Bug Check

Gwydir

- Insect pressures remain low across the valley. In fact some consultants have reported no insect sprays to date.
- Mirids are present, but generally below threshold.
- Those with more active Mirids and seeing some damage, particularly on younger cotton have sprayed. Products used include Transform (Sulfoxflor) and Mainman (Flonicamid). There has been some Shield (Clothianidin) and Dimethoate applied on some farms.
- Very low numbers of Silverleaf Whitefly (SLW), if any present at the moment. This season very different from last (plenty of beneficials, very low insect pressure). First SLW nymph found.

Mungindi

- First Mirid sprays going on in Mungindi crops as crops begin to close over. Using transform and salt.
- Using very little pix as crops compact and have struggles to keep plants at 8 & 9 NAWF due to high fruit load and cool Nov/Dec.
- Low numbers of SLW in older crops, 20-23 nodes. Most farms in Mungindi district have had 2 hits with 2,4-D with two of these farms just getting their 3rd hit.

Keep the spray on the weeds

We continue to hear reports of damage from spray drift. Everyone is reminded of best management spray practice so not to impact on sensitive crops. This applies equally to cotton growers and we need to be careful and lead by example.

A new resource is attached (put together by Amanda Thomas, CottonInfo REO for the Macquarie) that brings together a lot of the excellent resources available on spraying to minimise non-target impacts.

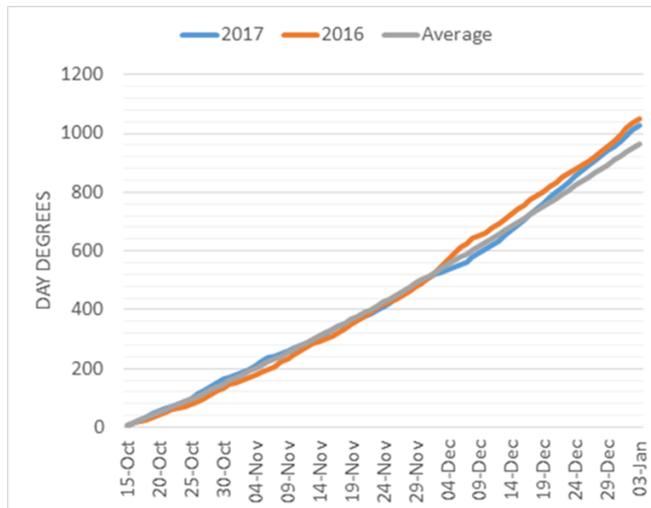
For further information on managing spray drift see CottonInfo website:

<https://www.cottoninfo.com.au/pesticide-input-efficiency>

Day Degrees - Moree

Accumulated day degrees from planting date of 15 October until 6 Jan - Moree

- From 15th Oct – 1079
- 2016 – 1099
- Long Term Average – 1005

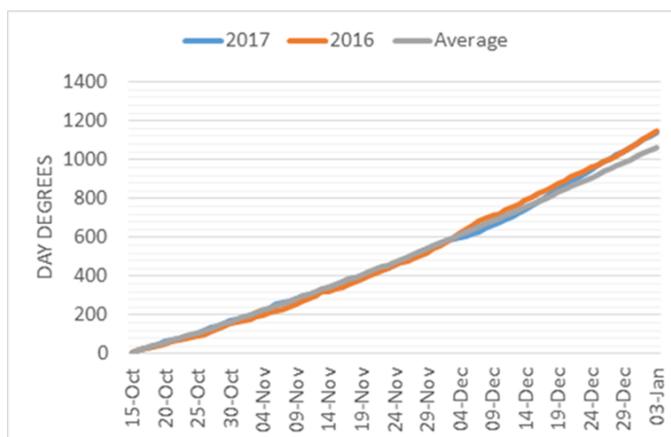


Date	2017	2016	Average
Hot Days	20	22	11
Cold Shock	5	16	9.5

Day Degrees - Mungindi

Accumulated day degrees from planting date of 15 October until 6 Jan - Mungindi

- From 15th Oct – 1197
- 2016 – 1199
- Long Term Average – 1111



Date	2017	2016	Average
Hot Days	29	33	22.5
Cold Shock	3	13	7.2

Fruit Loss in Dryland Crops

There is extreme fruit loss in many dryland crops both east and west of the Newell in the Gwydir. No apparent reason for this loss, down to 50% retention, blackened leaves. Pest pressures are very low eg Mirids 0.1 -0.2 mirids/m. The odd adult mirid, heliothis were present earlier on, but they have quietened down now too. Worse in later planted cotton compared to earlier planted cotton. **What's going on?**

We asked Dr Mike Bange, Senior Principal Research Scientist (Plant Physiologist), CSIRO

I have witnessed a small well irrigated crop suffering from wilting with the hot conditions (temp and wind). I would have no doubts that these conditions were affecting the plants. Also given that there were no canopies there is little insulation from the heat, so they are really exposed.

Photosynthesis would most likely be affected in a negative way and this could lead to shedding.

Water running short? How do we manage our irrigation?

When irrigation water is limited, stress has less of an impact if it occurs early or late in the season, compared to stress during the flowering period which can lead to significant yield loss. The crop is most susceptible to stress during flowering (see Table 1 - extracted from [WATERpak](#) chapter 3.1). In fact, stress during peak flowering is likely to result in double the yield loss compared to stress during squaring and late boll maturation (as shown in Table 1).

Table 1. Yield loss (%) per day of water stress (extraction of > 60% plant available water) (Source Yeates et al. 2010#; Hearn and Constable 1984*)

	Bollgard⁴
Squaring	1.1
Peak flowering	1.7
Late flowering	2.7
Boll maturation	0.69 [^]

[^] 14 d post cut out

So, what can you do on your farm?

- Current recommendations for limited water situations are to aim to concentrate water applications during flowering (first flower to cutout) and minimise stress during this period. This is the period that cotton is most sensitive to water stress and

loss of early fruit will require further growth and water to support growth later in the season.

- Monitoring of crop development and using [CottASSIST's](#) crop development tool to determine how a crop is performing in comparison to the expected growth of a well watered crop.
- Continue to use a variety of tools to schedule irrigations including soil moisture and weather forecasts.
- Join Jon Welsh (CottonInfo's Climate Risk Technical Lead) on Jan 12 to review current climate information. To register click here <http://bit.ly/2kxmTfD>

Further Information:

- CottonInfo Blog: <http://www.cottoninfo.com.au/blog/water-running-short-how-do-we-manage-our-irrigations>
- CSD Facts on Friday: [January a critical time for crop development](#)
- CottonInfo video: [Strategies to manage limited water](#)
- [WATERpak](#) (see section 3.1, 3.2 and 3.3)

In case you missed it.....

Gwydir December AWM Meetings, 6 & 7 December 2017

David Parlato, CQ Consultant, Brad Anderson, CQ Grower, Iain Macpherson, Consultant & Arthur Spellson, ACSA came along to our December AWM to share their experiences in managing Silver Leaf Whitefly and Mealybug.

Key Messages:

- The Australian Cotton Industry cannot get a reputation for sticky cotton
- Only have to get sticky cotton from one area and whole of industry affected.
- In Arizona, the problem was so bad it impacted the whole region and cotton from Arizona instantly dropped in value by \$25 – \$50 per bale, regardless of whether it was sticky or not.
- Broadly speaking we are only 1 “bad season” away from this happening.
- Emerald Experience
 - 2001 Low numbers build up exponentially in a perfect storm for favourable SLW conditions and they exploded.
 - Entire region covered in honey dew – clouds of SLW in town (“people were wearing surgical masks , aircraft had visibility issues , that’s how thick they were”)
 - Luckily they dodged a bullet – rain at the end of the season washed off the stickiness
 - Toured Arizona and came home prepared to make change, no choice if they wanted to grow cotton.
 - Started AWM groups, communication the key.
 - New approach: Soft chemistry , monitor retention, preserve beneficials
- Manage the population all season, stay soft as long as possible. No longer use SP's or OP's. Anything hard had to be late in the season if at all.
- All the beneficials, parasitoid wasps and soft options help but they can't work alone , they need to be working together to control the population, if you disrupt 1 of these things it can be the leg up the SLW or mealybug need to get a hold.
- “Whatever you do, you are creating your own problem. Every time you put an insecticide on the crop you are affecting something else”. Very relevant to Mealybugs too which are heading your way.

- Always have SLW and Mealybug in mind every spray decision (esp. early season)
- Prophylactic sprays are problem in the industry many sprays go in with the round up even if numbers are not at threshold.
- Question: “how about low rate of broad spectrums thrown in with the round up – “don’t even go there – if you do this your setting yourself up to spray your way out of it “It might be cheap early but expensive in the long run “
- If anything drives you to IPM, its Mealybugs.

The full document of key messages is attached.

Dryland Cotton Research Association Field Day “Belvedere”, Moree

The DCRA held their annual field day on 12 Dec with a great turnout.

Key messages were:

- Ground cover is king
- Taking crops to yield produced a better GM than brown manuring in this season.
- Pulse crops provide the best benefits when moisture, nutrients and disease control are included.
- Summer cover crops are difficult to establish and even poor stands contributed positively to moisture retention for this trial.

Also unveiled at the field day was the much hyped planter bar and it did provide plenty of interest. The bar has been really well supported by Boss Agriculture, NDF, Excel, Norseman and Precision Seeding Solutions who all provided units. Air and hydraulic components were installed by Precision Seeding Solutions to give units acces to all of their capabilities.



The DCRA planter bar

[CottonInfo Trial Update](#)



Trial 1: Impact of insect pressure on early season retention

Aim: To find out if high Mirid pressure during early squaring really makes a difference to final fruit retention and yield

Location: Wyadrigah, Mungindi



Trial 2: Measuring nitrogen loss during early season irrigation

Aim:

To investigate what quantity of dissolved nitrogen moves out of the field with irrigation tail water under normal irrigation practice?

To see what is the impact on nitrogen loss in irrigation tail water with an increased flow rate.

Evaluate irrigation performance (single vs double siphons)

Location: "Norwood" Moree and "Terriadi", Weemelah



Trial 3: Verticillium Solarisation Trial, QDAF & CottonInfo

Aim: To investigate if soil solarisation for 6 to 10 weeks will reduced the population of V. dahliae in the 0- to 40-cm soil layer.

Location:" Strathguyle", Garah

Photo: Andrew O'Connor, Strathguyle with Dr Linda Smith, Pathologist, QDAF.

Dates for Diary

- **Gwydir Area Wide Management Meetings**
 - **Gwydir West AWM**
 - Date: Wednesday 10th January 2018
 - Time: 4:00pm
 - Location: Telleraga Woolshed

 - **Gwydir North East AWM**
 - Date: Thursday 11th January 2018
 - Time: 7:30am
 - Location: Auscott, Midkin, Office.

- **Mid-season climate outlook - Webinar**
 - **Gwydir West AWM**
 - Date: Wednesday 10th January 2018
 - Time: 12:30 – 2:00pm
 - To register, visit: <http://bit.ly/2kxmTfD>

- **CottonInfo Cotton Research Tour - Optimising irrigation and nitrogen**
 - Dates & locations:
 - 2018: Murrumbidgee - 6 Feb; Macquarie - 7 Feb; **Gwydir - 8 Feb**; Namoi - 9 Feb; Goondiwindi - 13 Feb; Darling Downs - 14 Feb.
 - Gwydir day run in conjunction with GVIA Field Day at Keytah.

To see what other events are occurring in the cotton industry check out

<http://www.cottoninfo.com.au/calendar/month>

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