



Darling Downs

January 2018

Welcome to a New Year. For the past two years it seems I am always saying that I hope this year is a wet one, and needless to say I again will start the newsletter off with that statement. Our hopes for a reprieve of the hot and dry conditions over Christmas and into January have not been met.

Jon Welsh (CottonInfo) held a webinar a couple of weeks ago about a mid-season update for the next couple of months. Some positivity came out of it with the MJO entering our region around 20th Jan and analysis shows that at this time of year rainfall often follows the event by 7-10 days. Let's hope they are right. For a full recording of this webinar, please refer below for the link. There is a lot of information in this newsletter which I hope you find informative and interesting. Enjoy!

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>.

Farmcleanse

For those of you that are unaware, **Farmcleanse** has been withdrawn from Castrol's range. An alternative is available called Bio-Cleanse.

Please find a blog post on the CottonInfo website:

<http://www.cottoninfo.com.au/blog/come-clean-go-clean-bio-cleanse> which provides information on the alternative product.

Contact your usual supplier as they may still have Farmcleanse in stock, or they may need to get stock of this alternative.

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*)

	Bollgard ^a
Squaring	1.1
Peak flowering	1.7
Late flowering	2.7
Boll maturation	0.69 ^a

^a 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.

Further Information:

- CottonInfo Blog: <http://www.cottoninfo.com.au/blog/water-running-short-how-do-we-manage-our-irrigations>
- CottonInfo video: [Strategies to manage limited water](#)
- [WATERpak](#) (see section 3.1, 3.2 and 3.3)

CottonInfo Trial Update



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? Is this impacted with an increase in flow rate? (single vs double siphons)

Location: 'Melrose' Brookstead.

Want to know the outcome of this irrigation trial? Then attend the 2018 CottonInfo Research Tour (details below)



Trial 2: 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: Stuart & Maxine Armitage, 'Wamara' Cecil Plains

Mid-season climate Webinar – Jon Welsh

CottonInfo's Technical Lead for Energy and Climate, Jon Welsh, provided a mid-season webinar update for the 2017-18 cotton season. The MJO had entered our region so hope of a rainfall event in the next few weeks is positive.

Key points:

- The Madden Jullian Oscillation (MJO) will enter our region around 20th Jan and analysis shows that at this time of year rainfall often follows the event by 7-10 days.
- The [MJO](#) is a tropical disturbance and low air pressure which is moving around the equator and it has the ability to disrupt and change convection patterns. Analysis also shows that an active MJO season correlates to better rainfall and it has been distinctly lacking over the last 3 summers.
- Multi week models struggle for accuracy at this time of year and what we need is a build-up of moisture in the tropics, especially the Coral Sea to increase our chances and things can move quickly.
- This time of year we track the passing of the MJO over eastern Australia in the hope that the stubborn high pressure patterns in the Tasman Sea that keep us dry can be unsettled and bring some much needed rainfall.
 - At this time of year, its best to concentrate less on season and

multi-week models and monitor a select few weather models such as these ones below.

- [NCEP](#) 16 day
- [WATL](#) 8 day
- [GEM](#) 6 day

Here is the link to the full recording of the climate webinar

<https://www.youtube.com/watch?v=GpAdbHnBDtM&feature=youtu.be>

War on Weeds

The increasing incidence of weeds that cannot be controlled with glyphosate is forcing a rethink on the range and diversity of weed management tactics used in cotton - with growers having to integrate a wider range of management tools.

Growers **Ross, Ingrid, David and Margot Uebergang of Uebergang Agriculture, Miles, together with their consultant, Tim Richards** of MCA Goondiwindi, have implemented a whole-of-farm approach to integrated weed management, involving multiple weed-control tactics.

Weedsmart have published their story :

<https://weedsmart.org.au/planned-approach-to-rotations-helps-manage-weeds/>.

Early season disease survey - Preliminary results

The Qld DPI Pathology team of Linda Smith and Linda Scheikowski along with myself, conducted disease surveys on the Downs in November. Below is a summary of the survey results to date.

- 11 fields, 10 farms across the Darling Downs were surveyed in the 17/18 early season.
- BRR was detected on 10 out of 11 fields surveyed (**91%**). BRR was confirmed by examining roots under magnification

back in the lab. Incidence av. **33%** (range: trace-40%).

- Rhizoctonia was observed at a low level, with an incidence av. **2.8%** (range 0-13%)
- Pythium was rarely observed, with an average incidence of **0.4%** (range 0 - 2%).
- No Alternaria was observed.
- Fusarium wilt was detected in 2 out of 11 fields surveyed with an av. **0.6%** of plants infected (range 0 – 5.5%).
- No Verticillium wilt was detected.
- The average stand count sits at **12** (range 8.2-16 plants/m).

CGA Windows for Silverleaf Whitefly

Industry data from Silverleaf Whitefly (SLW) resistance monitoring showed an increase in pyriproxyfen (e.g. Admiral) resistance for the 2016-17 cotton season.

To reduce the risk of SLW developing widespread pyriproxyfen resistance and potential product failure, Cotton Growers' Associations (excluding Central Queensland) have nominated a voluntary 30-day window for each region in which pyriproxyfen can be applied. There are 30 days window for the Downs is as follows:

	Start	Finish
Central Downs	28 January	28 February
Chinchilla - Brigalow - Tara	20 January	20 February
Murgon-Byee	10 February	10 March

The aim of narrowing the pyriproxyfen window is to minimise consecutive generations of SLW being exposed to resistance selection, and ensure the product is being applied once per season when most effective.

Reminder - when controlling SLW populations:

All spray decisions should be made based on the SLW matrix in the Cotton Pest Management

Guide: <https://www.cottoninfo.com.au/publications/cotton-pest-management-guide>

- Growers and consultants should check their regional window before applying pyriproxyfen
- Growers or consultants with concerns regarding their ability to manage SLW within their regional window should contact Sally Ceeney, Bt Cotton and Insecticide Stewardship Technical Lead by calling 0459 189 771 or **emailing Sally Ceeney**

Herbicide Resistance Testing – 2017 results

Eric Koetz NSW DPI, CottonInfo Technical lead, Weeds, has provided a summary of weeds tested for resistance status in the 2017 season. These samples came from all cotton regions.

- **42 weed samples tested**
- Fleabane samples from 2017 season came back as 75% resistant to glyphosate
- 2 Fleabane populations were resistant to paraquat at 2L/ha
- Only 6 populations of sowthistle were collected and all were susceptible
- 11 populations of windmill grass collected, 5 resistant to glyphosate
- ABYG and FTRG being assessed at the moment

Region	Fields sampled	Rank 1	Rank 2	Rank 3	Other
Darling Downs	12	FTRG	FLB	BYG	Amaranths
Border Rivers	5	FLB	FTRG	BYG	
Gwydir	6	BYG	FTRG	FLB	
Namoi	7	WMG	FLB	BYG & AR	
Macquarie	6	WMG	BYG	FLB	
Southern	7	BYG	AR	FLB	

Table: Most common weeds collected and identified in each cotton valley in 2017.
 (AR - annual ryegrass, BYG - barnyard grass, FLB - fleabane, FTRG - feathertop rhodes grass, WMG - windmill grass)

Date Claimers:

2018 optimising irrigation & nitrogen research tour

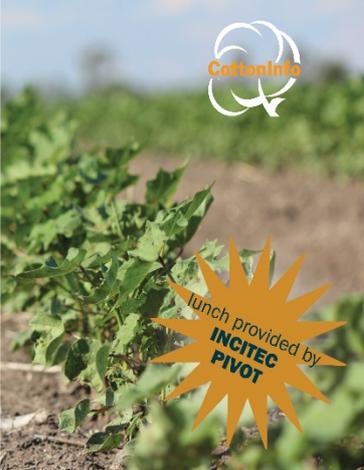
Getting your irrigation and nitrogen spot on is essential for maximising yield - and profit.

That's why CottonInfo is bringing a team of leading researchers to a cotton farm at Brookstead to talk about optimising irrigation and nitrogen.

BROOKSTEAD - WEDNESDAY 14 FEB
'Melrose' Brookstead
8am-11:30am
Contact: Annabel Twine, CottonInfo
0447 176 007

Learn about:

- using benchmarking to quantify irrigation losses on-farm
- understanding where nitrogen losses occur and what can be done
- determining how irrigation management influences losses in crop nitrogen uptake, and
- maximising irrigation system performance.

Lunch provided by
**INCITEC
 PIVOT**

'Melrose' · Brookstead · Wed 14 Feb · 8am-11:30am

Darling Downs Cotton Grower of the Year Field Day – 'Delivering on Performance'

Wednesday 28th February, 'Burradoo Plains' Chinchilla, 8am-12.30pm

Until Next time

Annabel Twine

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