

[Subscribe](#)[Share ▼](#)[Past Issues](#)[Translate](#)

CottonInfo: Connecting growers with research

[View this email in your browser](#)



## First irrigation: making every drop count.

### Is your water working hard enough?

Water is always important for cotton, but this year we all know it's going to be even more critical. That's why this fortnight's newsletter from [CottonInfo](#) is all about the **timing of the first irrigation**, helping your crop to reach its full potential.

Irrigation is one management tool that can be used to regulate vegetative and reproductive growth to maximise yields and fibre quality. Timing the first irrigation to ensure adequate moisture is supplied during early vegetative growth is important to ensure that the crop is large enough to support a high fruit load - which will maximise yield and fibre quality potential.

[Subscribe](#)[Share ▼](#)[Past Issues](#)[Translate](#)

## Timing of the first irrigation

The first irrigation plays an important role in setting up plant growth and fruit retention. Its timing is sometimes a difficult scheduling decision as it's a balancing act between not stressing the plant from waterlogging and allowing the plants to explore soil by the developing root system.

Irrigating too late will incur yield penalties due to impact of water stress on plant development. It is difficult to recover the growth needed for supporting fruit growth if water stress has slowed growth. The timing of this first irrigation will vary depending on seasonal conditions and in crop rainfall and would need to be earlier on lighter soils or soils with compaction which inhibits root penetration.

## What do the researchers say?

### Rose Brodrick, CSIRO

*“Research by Steve Yeates has shown that with high fruit retention in Bollgard II crops, the need to be on top of first irrigation is more imperative. Steve was able to show that yield loss was 1.1 percent per day when stressed around squaring in Bollgard crops compared to 0.8 percent in non-Bollgard crops. It is crucial that there is a large healthy canopy available to the crop when fruiting starts to occur to support ongoing fruit growth avoiding early cutout.*



*“A focus of future research will be to determine the best strategies and develop new tools to assist with deciding the optimum timing of the first irrigation.”*

### James Quinn CSD

*“It's critical that you go into the flowering period with an actively growing crop with eight Nodes Above White Flower (NAWF) or above and extending the flowering period as long as possible to maximise yield.”*

[Subscribe](#)[Share ▼](#)[Past Issues](#)[Translate](#)

Hear more from the CSD team [here](#).

## What do the consultants say?

### **Rob Holmes, HMAg, Moree**

*"You have to get the timing of 1st irrigation right – it's critical, it's setting up the crop for the rest of the season, even more so with high retention Bollgard crops. Timing will vary across farms due to different soil types and weather conditions. When I'm scheduling first irrigation I look at the weather, root extraction patterns and the plants for signs of stress. Young plants don't use a lot of water, you want to maximise root exploration. Don't waterlog your plants either, we don't want any moisture stress, it's got to be just right to ensure the crop hits first flower at maximum growth."*



### **Heath McWhirter, Elders, Griffith**

*"Typically in the southern growing areas our first in-crop irrigation will occur about ten days earlier than those in the north due to our lack of summer rain and also due to our soil type variability. If the conditions are mild, stretching this first irrigation can be beneficial by forcing the roots deeper into the profile."*

*"If we are to experience hot temperatures through squaring its critical to have a good profile to take advantage of the extra vegetative production by having the plants actively growing. I often watch internode length, nodes/week and also the size of developing leaves as a gauge of how the crop is responding to soil moisture. It is also essential to have soil moisture monitoring equipment installed before the first in crop irrigation to normalise the data for the remainder of the season."*



[Subscribe](#)[Share ▼](#)[Past Issues](#)[Translate](#)

## So, what can you do on your farm?

- **Monitor** your soil moisture, root extraction patterns, daily water use and general plant vigour.
- As a rule of thumb **irrigate at 50 percent available soil water** within the root zone.
- **Check weather forecasts** as cool or wet weather near the time of first irrigation can be detrimental to crop growth and water use efficiency.
- It is best to **irrigate at a time that coincides with a hot spell**. If forecasts are for cool weather, then it is better to hold off irrigation during this time as water use by the plant will be minimal.

## Where to go for more information?

Talk to your local CottonInfo regional development officer, read chapter 3.2 of [WATERpak](#), or download the [Australian Cotton Production Manual](#).

And grab the latest copy of [CRDC's Spotlight magazine](#) (Spring 2014) for an Irrigation Special looking at the latest world-leading research into scheduling for precision irrigation, and the outcomes of a grower-led, on-farm trial comparing four alternative systems - furrow, overhead, drip and bankless channel irrigation systems.

| Regional Development Officers  |   |   |  |  |   |  |
|--|---|---|--|--|---|--|
| Regional Development Officers provide cotton research outcomes and information directly to growers, agronomists, consultants and agribusinesses in each region. Contact your local Regional Development Officer for the latest research, trials and events in your area. |   |   |  |  |   |  |
| Geoff Hunter   | Amanda Thomas   | Sally Dickinson   | Kieran O'Keeffe  | John Smith   | Sarah Clift   | Alice Devlin   |
| Namoi, Central QLD   | Macquarie/Bourke                                      | Border Rivers, St George, Dirranbandi                   | Southern NSW   | Darling Downs                                      | Upper Namoi   | Gwydir   |
| P: 0458 142 777<br>E: geoff.hunter@cottoninfo.net.au   | P: 0417 226 411<br>E: amanda.thomas@cottoninfo.net.au | P: 0407 992 495<br>E: sally.dickinson@cottoninfo.net.au | P: 0427 207 406<br>E: kieran.okeeffe@cottoninfo.net.au | P: 0408 258 786<br>E: john.smith@cottoninfo.net.au | P: 0439 602 023<br>E: sarah.clift@cottoninfo.net.au | P: 0427 207 167<br>E: alice.devlin@cottoninfo.net.au |



Share



Tweet



Forward

Copyright © 2014 CottonInfo, All rights reserved.

[unsubscribe from this list](#) [update subscription preferences](#)

Brought to you by the cotton industry's joint extension program, CottonInfo.



is a joint initiative of



Australian Government  
Cotton Growers and  
Developers Cooperative



COTTON  
AUSTRALIA

Best Practice



[Subscribe](#)

[Share](#) ▼

[Past Issues](#)

[Translate](#)

