



Information when you need it

the **cq cotton call**

January 2023

Welcome to the January Edition

What's been happening?

Well, this year has well and truly kicked in as we head into February already.

CQ's cotton planting season for 2023-24 has wrapped up, with a total of 28,248 hectares of cotton planted in the region, including 1,393 hectares of dryland cotton. The Dawson and Callide Valleys had 7,394 hectares of irrigated cotton and 240 hectares of dryland cotton. These numbers are lower than the previous 22-23 season, as the dryland fields did not get enough rain in winter and spring to restore the soil moisture. This also impacted the water supply for the irrigated cotton, which had no allocation at the beginning of the season. However, this situation changed dramatically at the end of December, when heavy rains in the Dawson River basin boosted the allocation to 48-68% for the rest of the season. This was very helpful, as many cotton fields had run out of irrigation from the farm water sources, so the timing was perfect.

In the Emerald region, the irrigated cotton area reached 17,963 hectares by the end of the planting period, and the dryland cotton area was 936 hectares. The Belyando region ended up with 1,715 hectares of dryland and irrigated cotton. These numbers are also below the last season, as the lack of rain in spring and early summer reduced the opportunity for more dryland cotton before the planting deadline. The irrigated farmers in the region had water allocation from the beginning of the season, which gave them confidence and a positive outlook for the season. Fairbairn Dam is currently at 35 per cent capacity, giving the irrigators a good outlook for the end of this season and coming into next season.

The growing season started with good boll retention, which led to high fruit numbers on the first, second and third positions.



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Best Practice

However, the conditions became hotter and more humid than the previous season, with cloudy and stormy weather over the Christmas and New Year period, which resulted in some boll shedding in the crops. The earlier planted crops maintained their set bolls but lost most of their top four nodes to shedding. The later planted crops faced the same conditions, but shed more, as they were at their peak flowering stage and lost some early bolls, while keeping most of the top ones with the dry and hot conditions that followed. In areas with less water, the crops flowered and cut out earlier than usual, as they were stressed and matured faster under those conditions.

In January, the growing conditions have been very hot, humid, and unfavourable, with the night temperatures not falling below 22 degrees and as high as 27, which does not give the crops a break. It has been challenging for the consultants and cotton growers to decide on the irrigation timing, due to the wet conditions and the sporadic afternoon storms. The early planted cotton crops have all reached cut out, with a reasonably good boll load but retention sitting at 60% for the past couple of weeks. This raises a management question to the growers and consultants, whether to prolong the crop growth to try and increase the potential yield, or to have a conventional crop and pick in February/March. So far, we may see approx. 80% of the cotton crops in Central Queensland prolong their growth, as a management decision, water availability, or due to the losses caused by the weather conditions. As we head into February here's to hoping for more sunny days!!



NICK STEWART
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Great News for CQ!

Cotton Seed Distributors have recently appointed Nick Stewart as the new Extension and Development Agronomist for Central Queensland. Nick will join us based out of Emerald and will help cover CSD and CottonInfo

tasks across the regions. Nick will be starting in March and will be attending the upcoming XTENDFLEX® field walks so be sure to keep an eye out for him.

Upcoming Events: (Keep a lookout in your emails for confirmed dates)

- Central Highlands Teach the Teacher Tour – Friday 16th February.
- End of February keep a look out for CSD XTENDFLEX® Field Walks across Central Queensland. 2 fields in the Dawson and 2 in the Highlands.
- Early March, Acres of Opportunity field walks
- [CCA REGIONAL TECHNICAL WORKSHOP – EMERALD](#) – 20th March @ 12:00 pm-7:30 pm, The Maraboon Tavern Cnr Hospital Road and Esmond Street, Emerald, Queensland
- April/May, XTENDFLEX® dryland field walks and Richard Williams Long Season Cotton Project field walks.

You're invited to
Irricom 2024

Getting the best from siphon-less irrigation



Date: Tuesday 27th of February 2024

Time: 9am – 3pm

Location: Crossing Theatre in Narrabri

On the 27th of February 2024 CottonInfo will be holding its third irrigation forum – Irricom.

The day will include panel sessions and presentations from growers, researchers, CottonInfo Regional Extension Officers, as well as design and decision-making sessions to best plan for the future.

Since our previous Irricom meets in 2014 and 2021, we have seen improvements in our Irrigation Water Use Efficiency, but there is still more that we can do.

The Benchmarking water productivity of Australian irrigated cotton – 2021 results confirm the water productivity of Australian cotton increased from 0.60 bales/ML in 1997 to 1.22 bales/ML in 2021.

The water used to produce one bale of cotton in 2021 was less than half the water used in 1997. The long-term average water consumption in Australia for 2001 to 2021 period was 0.93 ML/bale, which is less than half the global average of 2.07 ML/bale equivalents reported in 2011.

During the time the industry has been benchmarking performance, growers have been consistently adjusting their irrigation designs. Many of the designs receiving attention have removed siphons from fields, opting for siphon-less or bankless designs. There are many different designs, the most successful of which are designed to meet the needs of the individual farms.

REGISTRATION 2024 CottonInfo
Irricom



As an industry we need to continue to strive to understand the Water Use Efficiency of these designs and to ensure we are selecting the right designs for the farm and the organisation.

Hope to see you there! Link to register for Irricom

<https://forms.office.com/r/knszjTBQC4>



Information and Topics of Interest

Revised SLW management guidelines for 2024

Following user feedback, the management guidelines for silverleaf whitefly (SLW) have been updated with a new sampling strategy and visual format that will be easier and faster for decision makers to use.

What are the key changes?

Sampling remains focused on the presence of nymphs on mainstem leaves taken from the mid canopy (nodes 11-14 down from the terminal) but a time saving presence/absence assessment method can now be used with a revised decision matrix that has been updated to the 15_32 system of day degrees.

If you missed the CottonInfo newsletter it can be found [HERE](#)

The revised sampling and decision-making matrix can be found on the CottonInfo website. CLICK HERE to access.



Researcher Profile – Jamie Hopkinson



Meet your cotton researcher – Dr Jamie Hopkinson, Research Scientist (Entomology), QDAF

2023 CSD Researcher of the Year

“Jamie Hopkinson has been making a significant contribution to the Australian cotton industry through his research into entomological issues for around 20 years. Jamie has shown extraordinary commitment to his research which has taken him to every region where cotton is grown and entailed working weekends, public holidays, navigating long trips to circumvent flooded roads to get his work done!!” [Cotton Australia](#)

What’s your background?

I grew up on the Darling Downs on grain growing property (wheat/sorghum/sunflowers) and a few cattle. I studied Biology at USQ and followed that later with post graduate entomology studies at UQ. I worked in the entomology group on various projects, on pests including heliothis, aphids and whitefly in grain and cotton industry’s.

How did you end up in Cotton Research: In the early years I worked in and out of the cotton industry in response to pest issues, I was fortunate to receive a CRDC scholarship for my PhD which looked at biological control and cotton aphids. Later an opportunity came up to work on silverleaf whitefly and that has been my focus in recent years as it has emerged as a pest problem for cotton.

What excites you about working in the Cotton Industry? It's a great, supportive industry of research, the issue of whitefly and resistance is a high priority, so it's rewarding to provide outcomes that will help growers produce cotton into the future.

What is your current research project? Sustainable SLW management through improved insect resistance monitoring, funded by CRDC. Since 2009 I have been the principal researcher of a CRDC funded projects monitoring Silverleaf Whitefly insecticide resistance. I currently lead a dedicated team to determine the insecticide resistance status of SLW populations collected from the major cotton growing regions across eastern Australia.

How will it benefit the grower? Silverleaf Whitefly (SLW) is a major pest of cotton. It has the ability to contaminate cotton lint with honey dew, has a large host range, can rapidly reproduce and can develop resistance to many insecticides. In addition, the honey dew caused by SLW can cause significant problems in the spinning process causing stickiness in the machinery necessitating shutdown for cleaning. Consequently, cotton producing countries that develop a reputation for supplying honey dew contaminated cotton risk significant discounts. Pyriproxyfen is a cornerstone product that growers are reliant on for SLW control. Monitoring resistance levels and encouraging best practice of insecticide application will ensure the longevity of this product and the continued production of high-quality cotton.

How will it benefit the industry?

- Monitoring SLW resistance across the industry to pyriproxyfen.
- Increased human capacity and knowledge and adoption of integrated pest management practices.
- Adoption and increased awareness of insecticide resistance, and the importance of beneficial insects in SLW control.
- A culture change of the cotton industry in the use of Pyriproxyfen with an understanding of the significance of SLW resistance to this cornerstone product

What are your key findings? Take home messages 2022/23 season – SLW Insecticide Resistance

- *Low resistance to Pyriproxyfen – Border rivers & Northern NSW*
- *High resistance to Spirotetramat detected in Lockyer valley, elsewhere resistance remains low*
- *Low Acetamiprid resistance in populations from St George Gwydir and Lower Namoi*
- *Bifenthrin resistance is widespread but generally low*

What do you like to do when you aren't researching?

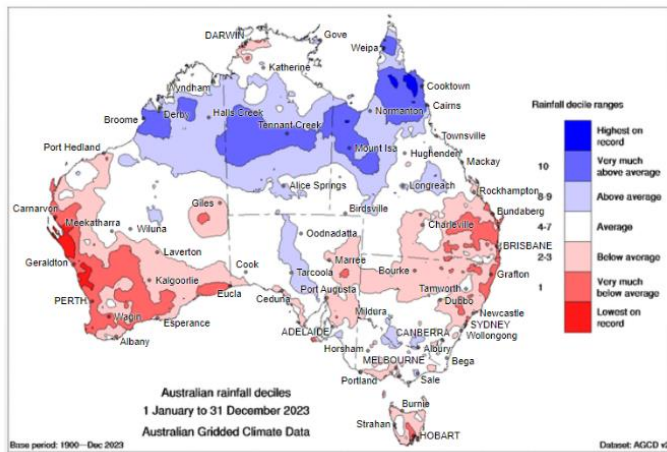
Recently I've been looking into the whole ancestry thing, including getting my DNA tested to see who I'm related to, so in a way I'm still researching!

Thanks Jamie. For more information Jamie Hopkinson E. Jamie.Hopkinson@daf.qld.gov.au M. 0475 825 340

15/01/2024- CottonInfo Moisture Manager [CottonInfo Moisture Manager - monsoon finds a new gear as northern areas brace for a wet fortnight \(mailchi.mp\)](#)

2023 Calendar year rain deciles

2023 was a tough calendar year for many cotton areas and farmers in central-eastern regions will be keen to see the back of.



Seasonal Model Survey (Feb-Mar-Apr)

Seasonal models very much sitting on the fence for the next three-month precipitation period. Interestingly, one-month temperature predictions across the board show a cool February and a warming trend following.



Source	Temp Forecast	Precipitation outlook				
		Emerald	Sth Q'ld	N-NSW	C-NSW	S-NSW
ACCESS-S	Hot	Neutral	Neutral	Neutral	Neutral	Neutral
UK Met	Warmer	Neutral	Neutral	Neutral	Neutral	Neutral
IRI NMME	Warmer	Neutral	Neutral	Neutral	Neutral	Neutral
ECMWF	Warmer	Neutral	Neutral	Neutral	Neutral	Neutral
CMCC	Warmer	Neutral	Neutral	Neutral	Neutral	Neutral
JMA	Warmer	Neutral	Neutral	Neutral	Neutral	Neutral



CQ crop check

AREA	Central Queensland
Crop Stage	<ul style="list-style-type: none"> Late Plant 12 to 14 nodes, early 24 to 26 nodes. Early crop has cut out but has now started to regrow. Cut Out rate of PGR applied to some crops. Generally, boll numbers are down, with large losses occurring 4 to 8 nodes from top of plant. Most areas have cut out at 26-28 nodes and starting to put on and hold new top growth for the grown on portion. Top is holding good retentions and flowering.
Irrigation	<ul style="list-style-type: none"> Growers that were not limited on water availability – 4 waters. Limited Water – 2. Mixed irrigations with mixed rainfall events – Some have irrigated recently with unknown weather predictions. Others have held off irrigating in case we get a large rainfall event.



Insects/Beneficial	<ul style="list-style-type: none"> • Moderate mirids numbers, slow increase in GVB and BSB and now approaching threshold levels. Hot spots of aphids, with isolated spots of mealybugs. • Low to Moderate levels of whitefly in hotspots – haven't treated these specifically yet, but taken into consideration when applying insecticides and have aimed to use more selective products to protect beneficials. • Moderate to High levels of Mites around – Some treatments have been applied. • Moderate levels of Mirids - Mostly small influxes and have been cleaned up in other sprays. Low levels of GVB around – Some hotspots in stressed areas of the cotton and some fields have been sprayed but otherwise not a massive issue now. • Low pressure mealy bug – Have also been using selective insecticides to allow beneficial population to increase and control hotspots of the pest. • Plenty of beneficials around with high levels of lady bug larvae and spiders. • Higher numbers of lacewings now in comparison to the beginning of the season.
Weeds	<ul style="list-style-type: none"> • Moderate level - Mostly sesbania, Pigweed and peach vine in crop. Most controlled with glyphosate applications at the beginning of the season and now with a thick row closure these don't seem to be an issue. • Fleabane • Feather top Rhodes grass becoming harder to control
Disease	<ul style="list-style-type: none"> • Early Plant – Moderate levels of Alternaria Leaf Spot, Isolated Cotton Bunchy Top, Low levels of Boll Rot. • Some Alternaria in crops – mostly in tail drains where waterlogging has occurred.
Environment	<ul style="list-style-type: none"> • Have had high temps over the past month ranging from 38 – 42 degrees with high overnight temps of 22- 27 degrees • Desperately need a dry fortnight, to help with late square / boll retention. • Very humid and hot conditions in the past few weeks with storms around and unpredictable weather events. Cloudy weather has triggered cotton to shed some small bolls at the top and 3rd/4th positions on lower fruiting branches but plants seem to be holding new 'grown on' top growth well at the moment with hopefully some more sunny days helping us along.

Kind Regards
Kim Stevens

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