



Information when you need it



the gwydir grower

31 January 2020

Crop Check - Moree

CROP STAGE -

- 23 to 26 Nodes
- 9 NAWF to Cutout
- Good retention, although some shedding 2nd and 3rd position fruit with recent rain and cloudy weather
- Pix applications common

INSECTS/BENEFICIALS -

- Low numbers Mirids, Thrips. Some Mirid sprays, mostly Fipronil, but some fields no sprays.
- SLW increasing. Pyriproxyfen applied to some fields and waiting to see results. Nymphs present and some parasitism evident,
- Beneficial numbers good, mostly Red and Blue Beetles and Spiders.
- Gwydir Pyriproxyfen window 20th Jan – 20th Feb.

WEEDS -

- Nothing reported irrigated field, canopy closure. Yellow vine common since rain.

DISEASE -

- Some Verticillium and Fusarium in known areas.

GENERAL COMMENTS -

- All Moree irrigated cotton crops got under recent rain 40-100mm.

What the consultants are saying:

"Advanced crops 25 – 26 nodes, 6NAWF, late crops 20 -22 nodes, 9NAWF, all pests very quiet, beneficials 7-8/m"

"Significant fruit shed requiring multiple Pix applications. Total Pix up from normal. Fruit load should have checked growth but fruit shed taking the brakes off crop"

"SLW slowly rising, 5% parasitism in one field, predators common"

"25 nodes, odd mirid, retentions still high so no sprays yet. Some shedding with rain and overcast conditions last week. Seeing more vegetative branches than usual"

"Disease pressure very low at this stage. Will monitor alternaria to see if it develops with showery weather and cooler days next week, given early incidence in the valley"

"Some vert/fusarium in known areas. Maybe not as bad as past seasons in those area"

“26 nodes, very low mirid pressure, admiral early last week, solid rates of pix to keep cotton in check since rain”

“Cutout (early Oct plant), high retention, admiral applied 10 days ago, SLW low but adults and nymphs present, seeing some parasitism”

Day Degrees 1st Nov 2019 – 30th Jan 2020

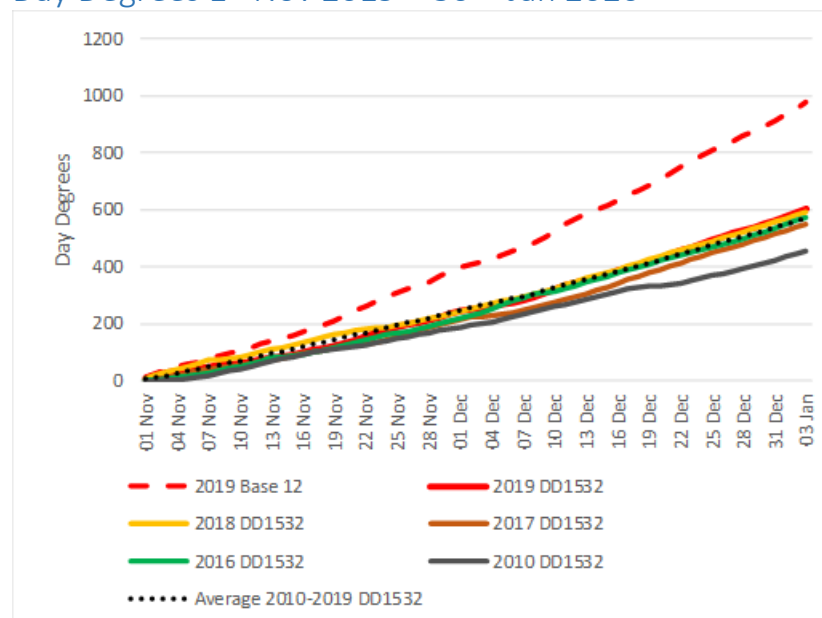


Figure 1: Accumulated Day Degrees 2019 DD 1532, 2018, 2017, 2016, 2010 & 10-year average (2010-2019) DD 1532 compared to 2019 Base12

Source: <https://www.csd.net.au/ddc>

Table 1: Day Degrees seasonal comparison 1/11/19 – 30/01/20

	2019	2018	2017	2016	2010	10 year mean 2010-2019
Base 12	1457.2	1429.8	1334.8	1411.2	1122.2	1323.2
DD1532	923.4	931.9	860.6	896	736	863.6
Cold shock days	5	2	3	8	6	2.9
Days above 36°C	51	41	36	41	9	29.6
Nights above 25°C	17	8	8	11	1	6.1
Days above 40°C	14	11	5	13	3	6.7
Average temperature (°C)	27.9	27.7	26.6	27.4	24.2	26.5

Source: <https://www.csd.net.au/ddc>

Meet your cotton researcher – Dr Alison McCarthy, Mechatronic Engineer, Centre for Agricultural Engineering, USQ, Toowoomba

How did you end up in Cotton Research: I became involved in cotton research during my PhD on optimising irrigation using real-time adaptive control funded by the Australian Research Council and CRDC. Following this CRDC funded my postdoctoral scholarship and research projects in irrigation automation and sensing tools for insect management

What excites you about working in the Cotton Industry? The Australian cotton industry is innovative in their uptake and research support of cutting edge technologies that optimise efficiency and management practices.

What are your current research projects?

1. Development and evaluation of methods for monitoring and control of irrigation for optimum productivity (Alison McCarthy (USQ), Joseph Foley (USQ) and Malcolm Gillies (USQ))
2. Machine vision App for automated cotton insect counting (Alison McCarthy (USQ), Derek Long (USQ), Paul Grundy (QDAF))

How will they benefit the grower?

1. Provide sensors and software tools that improve precision of irrigation application to meet water requirements, reach yield potential over whole field and improve water productivity.
2. Improved time efficiency in sampling for insects, standardise pest counting between different observers, improve chemical control decisions, and provide a convenient method for logging and viewing data for each field

How will it benefit the industry?

1. Optimisation of water use will aid industry to hit WUE targets, demonstrate improved water management benefiting industry social licence when being scrutinised for water use.
2. Automation of pest counting process for improved pest control decisions and potentially Area Wide Management.

What are your key findings to date?

1. Using in-season crop sensing for irrigation decisions in cotton has led to 6% extra yield and 14% more efficient water use than existing soil sensing approaches. In-season yield prediction that can help plan irrigation management has been demonstrated with errors of 10.2%-18.8%, 4.9%-8.7%, 2.5%-9.5% and 0.5%-10.1% at four, three, two and one month before harvest.
2. Initial image analysis techniques for SLW nymphs have shown 79% accuracy. This will be refined and techniques expanded to other pests (aphids and mites) with App developed for preliminary field testing by agronomists in the 2019/20 season.

Thanks Alison. For more information Alison McCarthy E. alison.mcarthy@usq.edu.au P. 07 4631 2189



Dates for the diary

- Friday 14th February - GVIA Field Day
- Thursday 20th February – CSD & Lower Namoi CGA Field Day



COTTON SEED DISTRIBUTORS AND LOWER NAMOI CGA FIELD DAY

FEBRUARY

20

Thursday, 20 February 2020

2:00pm start

CSD Farms, Culgoora Road, Wee Waa (parking at farm office)

Presentations and topics include:

- Variety and plant stress - Warwick Stiller, Warren Conaty and Carlos Trapero (CSIRO)
- Nutrition and water strategies - Jono Baird (NSW DPI) and Hiz Jamali (CSIRO)
- New tools from CSD - Chris Teague and Alice Curkpatrick (CSD)
- FastStart™ trials and Verticillium wilt - Karen Kirkby (NSW DPI) and Bob Ford (CSD)

BBQ and drinks to follow

Guest speaker - Lucy Brennan (Cotton Australia)

A site tour of CSD's production facilities will be held at 11am at 'Shenstone', 2952 Culgoora Road, Wee Waa. If you are interested in attending this site tour prior to the field day, please RSVP to CSD on (02) 6795 0000.

For more information

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Lower Namoi Cotton Growers' Association Inc.



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- **25th February 2020 – St George LoRaWAN Demo farm field day**
 - Further information: Andrew McKay, CottonInfo REO, St George, Macintyre M. 0407992495 E. Andrew.mckay@cottoninfo.net.au
- **26th February 2020, Darling Downs, Cotton Grower of the Year Field Day**
 - 'Cullingral' 1785 Fairymeadow Road, Miles, QLD
 - Breakfast at 7.30am AEST, field day starts 8.15am AEST
 - For catering, RSVP by 24th February 2020 – Mary O'Brien (maryo@cotton.org.au), 0427 358 806) or Annabel Twine (annabel.twine@cottoninfo.net.au, 0447 176 007)
- **Thursday 5th March Workshop 1: WHS & HR FUNDAMENTALS. Flyer attached**
 - Do you want to improve WHS and staff management in your business?
 - Do you want to understand the bones of a great WHS management system?

- *Do you want to understand your legal obligations when it comes to staff?*
- *Do you want some tips on attracting and retaining staff?*
- *Do you want to effectively manage staff performance and get the best out of your team?*
- *Do you want to ensure your paperwork and systems are practical but compliant?*
- IF YES, this course is for you!
- In response to industry request, Tocal have developed a WHS & HR course for supervisors and managers (and those aspiring to those roles). It is tailored to meet the requirements of the cotton and grains industries and will be delivered regionally through face to face workshops and online.

● **Thursday 5th March GRDC Grains Research Update, Mungindi**

- <https://grdc.com.au/events/list/submitted/grdc-grains-research-update-mungindi>

Mungindi Hall, Wirrah Street, Mungindi NSW 2406

New research that's ready for the paddock in 2020 at the Mungindi GRDC Grains Research Update. Discuss how to make practical use of the latest information with researchers, agronomists and leading growers.

Topics:

- **Climate change, production risk and frost.** Steven Crimp (ANU)
- **Maintaining wheat yield and quality under high temperatures** - status and prospects for improvement. How do current cultivars compare with what's coming? Richard Trethowan (University of Sydney)
- **Sowing grain sorghum early** - reducing risk of water and heat stress at flowering and increasing chances of double cropping to chickpeas or of ratooning irrigated sorghum into a second harvest. Local trials at Mungindi. Loretta Serafin (NSW DPI)
- **Upgrading nutritional strategies to feed the farming system** - P & K placement, impact & economics over time. When should you start to worry about deep P reserves in soils that have not been cropped for as long? Impact of P and K on N placement. Mike Bell (UQ)
- **Deep P application** - a grower experience. Tom Woods (Woods Pastoral)
- **Nutrition discussion session** led by Mike Bell (UQ), Tom Woods (Woods Pastoral) and Bede O'Mara (Incitec Pivot)
- **New technologies for the Australian grains industry** - observations from a four month Fulbright Fellowship study tour of the USA and Germany. Craig Baillie (USQ)
- **Modifying variety and sowing date with frost risk and slope** - how big are the potential gains and why? Matt Gardner (AMPS Research)
- **Cover crops for fallow efficiency** - soil water, health, nutrition and crop performance. Andrew Erbacher (DAF Qld)
- **Dealing with the drought and planning for recovery** - Discussion led by Sam Heagney (South Bunarba Agriculture) and Tom Greentree (ATD Farming)

Registration: 8:30am for a 9am start. Finish 3pm. Cost: \$30 pp. (Cheques payable to ICAN Pty. Ltd.). Lunch, morning tea and proceedings provided.

To RSVP / register, or for further information or agenda, please contact John Cameron or Erica McKay on [02 9482 4930](tel:0294824930) or e-mail erica@icanrural.com.au or register on line at <http://www.icanrural.com.au>

(Agenda subject to change)

- **Wednesday 25th March 2020, Bayer Cotton Grower of the Year Field Day**
 - 'Fairfield' Boggabilla - hosted by Tom and Charm Arnott
- **Wednesday 1st April 2020, AgTeCH20 Demo Day and StartUp Alley, Mungindi, NSW**

Janelle Montgomery

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