



the gwydir grower

20th February 2023

Aphids and Cotton Bunchy Top Disease

Cotton Bunchy Top has been reported on a number of fields in the last fortnight. Murray Sharman, QDAF is interested to have some samples sent to him for formal ID. He monitors plant viruses for the cotton industry. He has also updated CottonInfo's Cotton Bunchy Top Factsheet which is available here: <https://www.cottoninfo.com.au/publications/disease-idm-cotton-bunchy-top>

Paul Grundy and Murray Sharman have provided the following information:

- Be aware that both Aphids and Cotton Bunchy Top (CBT) are about this season. Aphids are the vector that spreads CBT.
- Be aware that there have been detections of high levels of resistance in Aphids to Group 1 (OP's and Carbamates) insecticides. If you have used a dimethoate for the control of mirids or other pests this season do not use pirimor for example for aphid control. Use another group and follow the [IRMS](#).
- Aphids vector CBT by feeding on an infected host and then flying to a new host. This process only takes an hour so controlling aphids to slow the spread of CBT is not a viable approach.
- The best approach is to limit the source of CBT (old cotton ratoons, malvaceous weeds) and control aphids normally.
 - Generally aphids are well controlled by natural enemies so take steps to preserve these.
 - Aphids should only be controlled when they reach threshold from a crop damage or lint stickiness perspective.
 - CBT takes 3-8 weeks to show up after a plant is infected. Therefore, currently infected CBT plants were likely infected a long time ago.
- The impact of CBT is greater when plants are infected early in the life of the crop. Aphids moving CBT around within a crop is much less concerning from cutout onwards as the crop canopy is fully developed and therefore cannot be stunted. The stunting from early CBT infection is the primary driver for yield loss. Therefore, if crops are approaching cutout, and aphid transmission takes 3-8 weeks to show up, there is not likely to be any advantage in controlling aphids at sub-threshold levels with the objective of slowing virus transmission at this stage of the season. Focus on good IPM and preservation of beneficials and if economic thresholds indicate the need to spray, refer to the IRMS for insecticide options.
- A key consideration going forward to ensure effective crop destruction, particularly for infected fields to prevent CBT carrying over to next season.

BREAK THE GREEN BRIDGE! To reduce your risk of CBT next year, don't give the virus & its vector a home for the winter. Plan for good crop destruction to reduce ratoons. Control all ratoons & volunteers & other hosts.



Further Information:

<https://www.cottoninfo.com.au/publications/disease-idm-cotton-bunchy-top>

CottonInfo Video:

- [Identifying cotton bunchy top disease](#)
- [Cotton bunchy top management](#)

Sending samples of suspected CBT for identification

- Take a small sample of the plant, top 10cm of the plant that is showing CBT symptoms
- Place it into a plastic bag with some damp paper towel, seal up the bag.
- Place in a 2nd plastic bag (double bag for biosecurity reasons)
- Express Post to:

Murray Sharman

QDAF

2C-West Ecosciences Precinct

GPO Box 267

Brisbane QLD 4001

M: 0467 721 400

Email: murray.sharman@qld.gov.au

Meet your cotton researcher – Simone Heimoana, Research Scientist – Entomology, CSIRO

Simone is based at with CSIRO at the Australian Cotton Research Institute (ACRI) in Narrabri. Working in Entomology for the last 25 years, she started her Cotton Career with Lewis Wilson and has been researching IPM solutions and fibre quality.

Simone tells me “*CBT first appeared at the end of the 1990’s when we did most of our aphid work. By 2004, with the introduction of Bollgard, aphid work was impossible due to the number of predators reducing our infestation efforts. The lower spraying and preservation of beneficials in Bollgard cotton have kept aphids and thereby CBT infections low in the past two decades. However, condition have favoured aphids this season and unfortunately we are seeing some resistance to some products*”.



Simone arrived from Germany to study Agriculture at Gatton College, started in livestock production & pasture agronomy. She then diversified by moving into plants and fruit fly management, working on the South Pacific Regional Fruit Fly Project in Tonga. Simone said she applied for her cotton job via fax 3 weeks late and got the job despite having a phone interview on a party line!!

“I love how connected and proactive the industry is and that we maintain the knowledge and research to grow good cotton”.

Simone's latest project funding by CRDC: Developing proactive approaches to IPM in cotton production systems

This IPM project is driven by the current use of pesticides in the cotton industry and the identified need to develop feasible sustainability targets in order to better report on environmental performance. The most common cotton pests managed with seed treatments or by spraying are mirids, thrips, mites, whiteflies and soil pests, and the chemicals registered for this use largely contribute to current pesticide use in cotton. Several of these chemicals are under review or have severe impacts on the environment and non-targets, hence the objective of this project is to review their use in the cotton production system (Year 1), identify research gaps and explore alternative management techniques to manage these pests (Years 2 & 3). In years 2 and 3 we are primarily focusing on mirids and shield bugs.

How will it benefit the grower?

"We are aiming to provide better pest management guidelines so growers may reduce the use of pesticides which contribute to production costs"

How will it benefit the industry?

"We are working towards improved pest management strategies that will allow the industry continued freedom to operate by managing pests in an environmentally responsible way"

Key Findings to date:

"We analysed the risk of fipronil for mirid control and contemplated what would happen if we could not use it anymore given its still under APVMA review. This led to a gap analysis in mirid research which included the need for a better understanding of mirid feeding behaviour in irrigated and dryland cotton, as well as a mirid population dynamics.

In our field trials, we are finding very few mirids in the crop and suspect that the proximity of our "mirid source crops" (pigeon pea and lucerne <3 km away) are pulling the mirids out of the cotton"

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

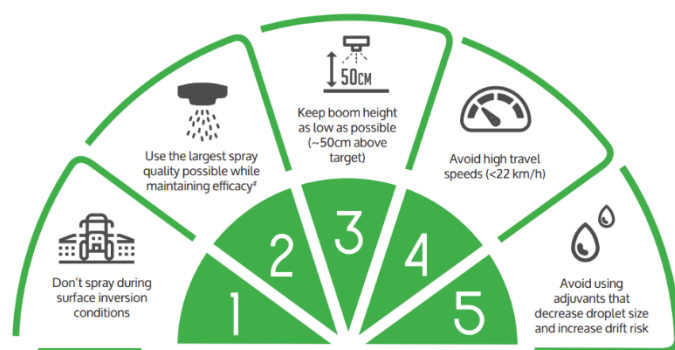
"Cooking, reading, relaxing, pottering around in my garden, travelling and catching up with friends"

Damaging Spray drift continues to be reported in the Gwydir Valley

While Group 4 (formally Group I) are often associated with spray drift, the fact is, all chemical can drift, including our [defoliation products](#) if applied during the wrong conditions or not following spray best practice.

The [WAND Inversion Tower system](#) only detects hazardous inversions. It's not a licence to spray. **You must still monitor conditions on the field you are spraying and follow the 5 commandments during all spray operations.**

Five commandments according to SOS



* Observe label directions for minimum and maximum droplet size. Water rates may need to be modified with increased droplet sizes

Advanced Spray Application training – Craig Day, Spray Safe & Save in Bellata

Spray application training with a one day workshop and then a workplace visit for each enterprise that attends. Workplace visit takes about two hours.

This course is **fully funded** by the NSW Government under the AgSkilled program for those who meet the criteria:

- Aust/NZ citizen or permanent resident;
- live/work in NSW;
- grow grain/rice/cotton
- and our requirement is that you are experienced in spray application – growers, spray rig operators, contractors, advisors

Click on this link to register: <https://nswtrade.wufoo.com/forms/zoe0rpa1n8g6gm/>

Workshop: Wednesday 15th March 2023, 8.45am start

Venue: Bellata Golf Club, 80 Berrigal Creek-Bellata Rd, Bellata NSW 2397

Start/Finish: 8.45 am until 4.30pm

Individual Workplace visits: Thurs – Fri, 16-17 March (approximately 2 hours per individual workplace)

Catering provided – morning tea and lunch. Bring a pen and reading glasses, if required.

Chemical accreditation for those who successfully complete all course requirements.

The course has two parts –

- one day workshop covering weather, drift management, nozzle selection, water quality, mixing order, WHS, legislation, spray planning, fence line spraying and much more.
- a workplace visit to create winter and summer spray plans, calibrate spray equipment and fine tune application.

At the workshop we will work out a schedule for the workplace visits. Please let me know if you have a preferred time/day. Re the visit: Please ensure your sprayer is clean and operational, has about 1500-2000L of water and that the fresh tank is full. Have gumboots on hand as well as your machine operating manual. If you have recently had a water test done, have the test results there if you would like Craig to look at them.

For more information contact Cath from Spray Safe & Save – 0437 455 818 or email craig.day@bigpond.com

Dates for the diary

27-28/02/23: [Tocal Pest Management Course Cotton](#), Narrabri

28/02 – 01/03/23: GRDC Grains Research Update Goondiwindi
<https://grdc.com.au/events/list?etype=grains-research-update>

01/03/23: [CSD Field Day , Wee Waa](#)

14/03/23: CottonInfo Cotton Marketing and Fibre Quality Workshop, 10:30am (Qld Time) Goondiwindi

14/03/23: CottonInfo Cotton Marketing and Fibre Quality Workshop, 4pm Mungindi

14/03/23: Bellata Craig Day, Spray Safe & Save Advanced Spray Application training in Bellata, Wednesday 15 March 2023, 8.45am start. Register [here](#)

15/03/23: [Farms of the Future Ag Tech Training](#), Moree



- 20/03/23: CottonInfo Biodiversity kayak adventure for the Cotton Community, Moree
- 21/03/23: CottonInfo Biodiversity kayak adventure – NRM Research Organisations Community of Practice Event, Moree
- 22/03/23: Macintyre Valley Field Day, Goondiwindi
- 30/03/23: DCRA/CSD/CottonInfo Dryland Research Field day – Ingle Plains, Ashley 9am
- 30/03/23: DCRA/CSD/CottonInfo Dryland Research Field day –“Dobikin” Bellata 3pm
- 31/03/23: DCRA/CSD/CottonInfo Dryland Research Field day – Tulloona, 9am (TBC)
- 10/05/23 [Farms of the Future Ag Tech Training](#), Moree
- 5-7/09/23 [AACS Cotton Research Conference](#), Toowoomba, Qld

Regards

Janelle

Janelle Montgomery

Regional Extension Officer | Gwydir, Mungindi | CottonInfo

M 0428 640 990 | **E** janelle.montgomery@cottoninfo.net.au | **W** www.cottoninfo.com.au

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