



Information when you need it



Darling Downs

February 2021

Welcome to the February Edition

TIMS COMMITTEE NOTICE: Regional 30-day pyriproxyfen windows nominated by the CGA to address Silverleaf Whitefly resistance risks for the 2020-21 cotton season.

Please see below the opening and closing dates for pyriproxyfen use for the Darling Downs:

Darling Downs CGI (Central Downs) 28 January - 28 February

Darling Downs CGI (Chinchilla - Brigalow - Tara) 20 January - 20 February

Darling Downs CGI (Murgon-Byee) 10 February - 10 March



Best Practice



Cotton PestDetect

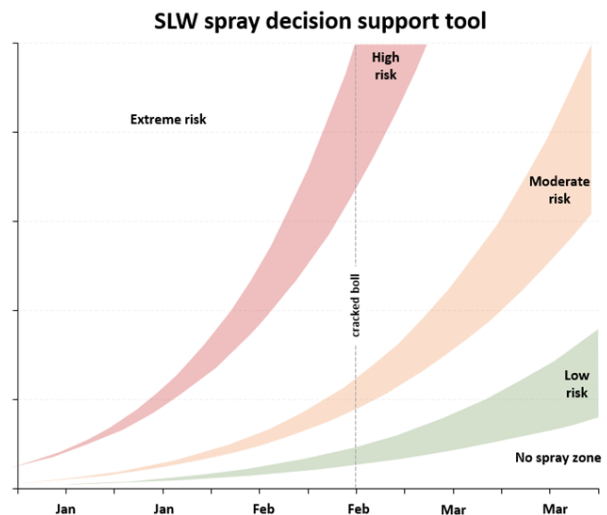
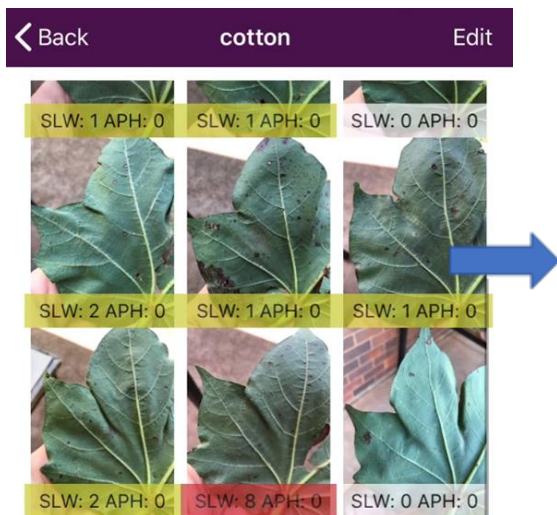
Smart phones join the hunt for whitefly



The Cotton PestDetect App is a digital tool in development to assist with sampling for silverleaf whitefly nymphs and cotton aphids by providing image-derived insect counts using the phone's camera. The app had an initial test run last year, during which thousands of photos were captured by researchers and agronomists. Over the past 8 months, the project team and the University of Southern Queensland and Queensland Department of Agriculture & Fisheries have been improving the accuracy of the camera app using the thousands of photos taken by researchers and consultants and building in new features.

The biggest of those new features is the automatic plotting of results on the latest decision support tools. The app automatically records the accumulated day degrees for each field based on the provided GPS location, and so you can see the latest results for that field as soon as you are finished taking photos.

A beta version of the App is about to be released for this cotton season, and the development team is inviting all interested growers and consultants to try it out when sampling for whitefly and aphids in the coming weeks. You can get started by contacting Derek Long from USQ (derek.long@usq.edu.au) who will create an account for you and send a link to the App.



New silverleaf whitefly decision support tool by Dr Richard Sequeira (CRDC project DAQ1903).



Retention/Compensation Trials – Darling Downs



Above is a snapshot of a trial I am conducting this season looking at both early and late season damage and its impact on subsequent yield potential and maturity for high yielding cotton.

Early and late season damage can occur for a number of reasons. There are 4 replicated treatments – undamaged, damage fruiting branches 1-5, damage fruiting branches 6-10 and damage fruiting branches 1-10.

The photo above was taken in a crop of Sicot 746 BRF. The plant was approx. 19 nodes and damage has been inflicted on fruiting branches 1-5.

Watch this space for further results.



Roundup Ready Extend Spray App

To support the Roundup Ready Xtend Crop System in the US, Bayer has developed and published the RRXtend Spray App.

The RRXtend Spray App is a convenient and easy-to-use digital tool that provides growers and applicators with location-specific weather forecasts, digital record keeping capabilities, and educational resources related to the XtendiMax® with VaporGrip® Technology herbicide, used over-the-top of XtendFlex cotton. The forecast feature helps applicators identify weather conditions and inversion risk as they plan their applications.

The RRXtend Spray App provides location specific, hourly forecasts of temperature, relative humidity, wind and inversion risk; that are developed using publicly available weather data and machine learning (ML) models developed at The Climate Corporation. In the RRXtend Spray App, the inversion risk forecast function indicates the probability (by percentage) of an inversion occurring at a particular location and hour of the day; the forecast function gives applicators an approximate inversion risk reading for the next 100 hours.

In order to train the model for Australia, Bayer require real-time weather station data.

Bayer has installed five weather towers across cotton growing regions that measure: temperature at multiple heights, wind speed, relative humidity, solar intensity and rainfall. Data from these towers will be



used to test and train the existing model for Australia, with plans to launch an Australian version of the RRXtend Spray App. Underpin and improve the Herbicide Resistance Management Strategy and put in place guidelines and protocols for the stewardship and management of new herbicide tolerance traits in cotton. This is important to prolong the efficacy and use pattern of glyphosate in the Australian cotton farming system. Monitor and identify herbicide resistance and put in place tactics to manage emerging issues.

Soil Your Undies

Over the past few weeks I have been working with local consultant David Hall in the ‘**Soil your Undies**’ space. David has been running soils workshops in the North and they have buried undies as an activity. Below is a photo of some undies that have been dug up from a lychee orchard in Yeppoon.

Dug up Christmas Day – Now that is dedication.



Right are the ones buried in the plant line (under lychee trees) and Left are from the inter row.

DALBY AIRPORT

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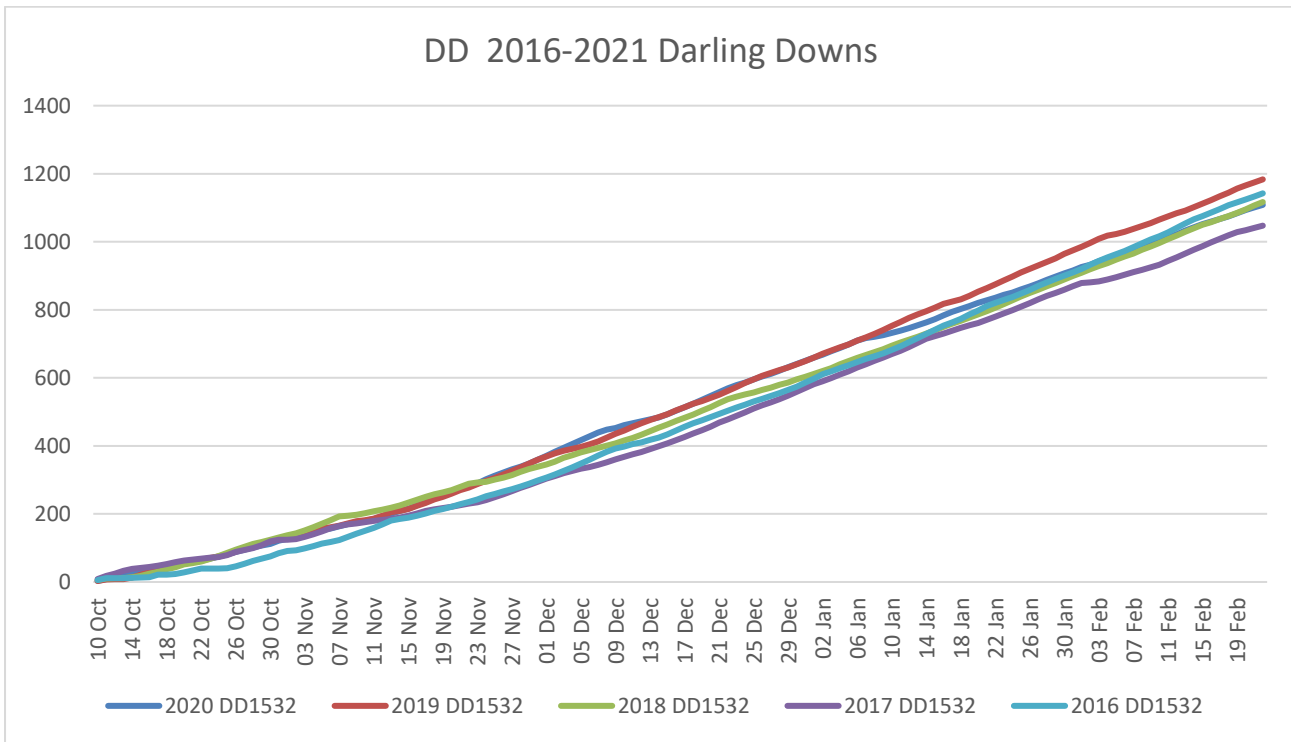
Date range: 10 October, 2020 to 22 February, 2021 (136 days).

Summary Seasonal comparison

| | 2020 | 2019 | 2018 | 2017 | 2016 | 10 year mean |
|--------------------------------------|--------|----------|----------|----------|----------|--------------|
| Base 12 | 1710.5 | 1875.7 ▲ | 1724.2 ▲ | 1651.2 ▼ | 1823.5 ▲ | 1707.7 ▼ |
| DD1532* | 1108.4 | 1183.4 ▲ | 1116.7 ▲ | 1047.3 ▼ | 1142.3 ▲ | 1098.2 ▼ |
| Cold shock days (≤ 11°C) | 9 | 13 ▲ | 4 ▼ | 10 ▲ | 14 ▲ | 8.4 ▼ |
| Days above 36°C | 21 | 42 ▲ | 25 ▲ | 19 ▼ | 35 ▲ | 21.7 ▲ |
| Nights above 25°C | 0 | 0 | 0 | 1 ▲ | 3 ▲ | 0.5 ▲ |
| Days above 40°C | 4 | 3 ▼ | 1 ▼ | 3 ▼ | 4 | 2.2 ▼ |
| Total rainfall (mm) | 231.0 | 253.2 ▲ | 300.4 ▲ | 358.5 ▲ | 240.2 ▲ | 233.7 ▲ |
| Total radiation (MJ/m ²) | 2892.6 | 3194.4 ▲ | 3127.3 ▲ | 3145.7 ▲ | 3209.5 ▲ | 2819.6 ▼ |
| Average temperature (°C) | 24.5 | 25.6 ▲ | 24.6 ▲ | 24.0 ▼ | 25.1 ▲ | 24.4 ▼ |

* Experimental calculation.

General guide only; not comprehensive or specific technical advice. Circumstances vary from farm to farm. To the fullest extent permitted by law, CSD expressly disclaims all liability for any loss or damage arising from reliance upon any information, statement or opinion on this website or from any errors or omissions on this website. Climate observations and data are obtained via the State of Queensland SILO patched point dataset.



Regional Seasonal Updates from CSD

Source: CSD Cotton Yarns 2021

Fraser Coast

Early planted cotton has had a second defoliation, with picking looking likely around the end of February. Late December planted crops have just started to come into first flower, 59 days after planting. Crops are holding lower retention, with some as low as 65%, however there is good growth and plants are very uniform across the fields. Plants are averaging around 60cm in height, 8.5 NAWF and approximately 16.8 nodes.

Burnett Region

Cotton at Bye is currently at cut-out, with some good boll numbers, ranging from 120 – 175 bolls/m. Crops are around 18 squaring nodes and 24 nodes in total. Currently, growers have around 1-2 irrigations left, which will be very tight to finish off the crop. The crop at Mundubbera flowered for four weeks before it cut out in mid-February. It accumulated fruit rapidly during this time, resulting in nodes above white flower (NAWF) declining. At its cut-out point, the crop had over 180 bolls/m, with around 22.7 total nodes.

Brisbane/Lockyer Valley

Early planted cotton in the Brisbane Valley is coming into cut-out stage, with low insect pressure to date. Flowering progression counts are seeing boll numbers up to and over 150/m. The mid-December planted crop is currently coming into first flower and holding high retention. In the Lockyer Valley, cotton at Gatton is disappointingly all but finished, following no rain or water for irrigation. The crop is beginning to see open bolls and is currently at six nodes above cracked boll (NACB). The first defoliation is likely to start as early as the end of February. Cotton at Forest Hill is looking extremely good on the other hand, with the irrigated crop at cut-out and approximately 180 bolls/m. The dryland crop has finished up and is currently at five NACB. It will have its first defoliation before the end of February. Boll numbers are low – at around 80 bolls/m.

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