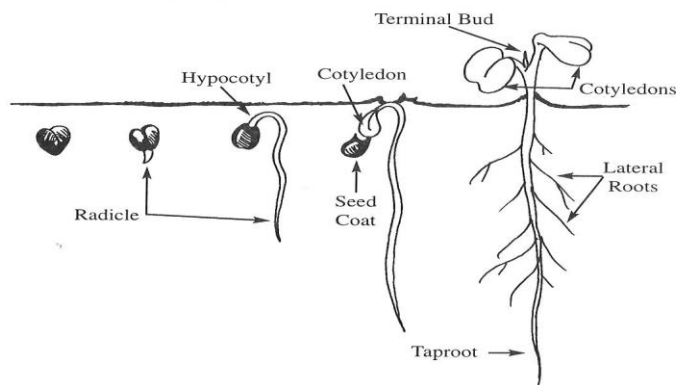




the **cotton tale**

October - Getting a good start



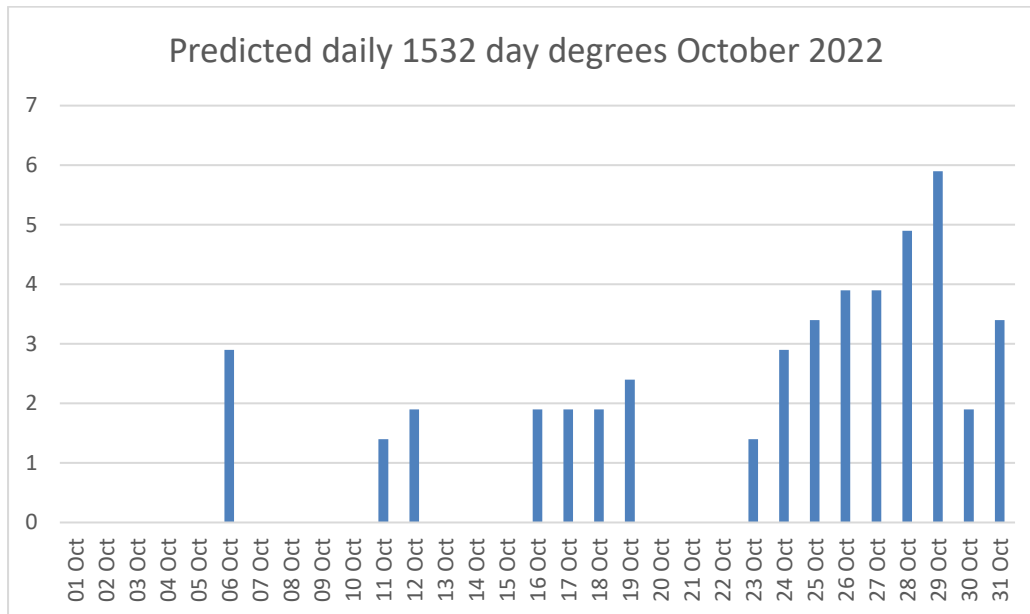
As mentioned in the last newsletter “[Timing of the planting operation can be critical to get a uniform plant stand](#)”.

Three things to consider lessening the risk of poor establishment (for a cotton plant) include the following:

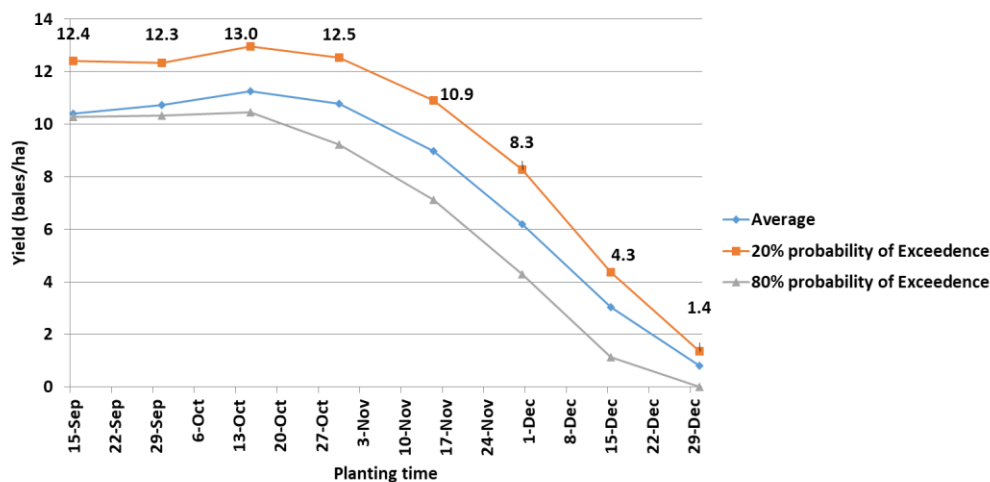
1. Is your soil temperature where it needs to be? Look for 10 cm depth soil temperatures (as close as possible) to 14 °C at 9 am.
2. Is there enough energy in the system after you have planted to take the germinated seed and make it grow, such to be properly establish? Day degrees represent the temperature and the energy that can help crop establishment.
3. Are air temperatures on a consistent rising plane. It is not so good if there are some really warm days early and then it goes cold again. Hence, sometimes you can have enough day degrees but they might only happen over 1 or 2 days, not over the whole period of 7 days.

If we look at predicted temperatures and 1532 day degrees into the rest of October the potentially least risky planting opportunity will be in the last third of October.

This is still in the planting window.



Most locations in the south will maintain yields with mid to the end of October planting. An example is given here for Carrathool. Good yields are maintained to the end of October with a small drop off in average yields. The results here are generated with the OZCOT crop simulation model (CSIRO) utilising a high fruit retention variety with adequate water and N inputs.



In our calculations of day degrees, we use a base 15.6°C air temperature representing the temperature at which there is little growth and development. Although seeds can germinate at low temperatures, research from various sources has shown that there is little growth when an average daily temperature is below 15.6°C cotton plants struggle to continue to grow (see picture below).



Figure: The effect of temperature on 7 day germination of seed from the same AUSlot. Note that at 16°C the seed has germinated but the plants are not developing.

From the latest CottonInfo Moisture manager

The weather patterns are currently under the influence of a wet phase IOD and Jon Welsh CottonInfo Technical lead Climate and Energy suggests that we should experience “A mild-warm growing season without too much rain. I wouldn’t expect to get anything like 2021-22 again this year, as the wet phase of the IOD tends to flip into a drier summer across the East coast”.

- El Niño-Southern Oscillation has reached La Niña thresholds. Models anticipate a weak La Niña condition to peak in November before decaying thereafter.
- The Indian Ocean Dipole continues in wet phase and is predicted to weaken in October.

Cotton conference videos

[\(1\) The case for changing our understanding of temperature responses of cotton - Mick Bange.mp4 - YouTube](#)

[Where Did My Nitrogen Go - Jon Baird - YouTube](#)

[Smart sensing & automation - John Hornbuckle - YouTube](#)

[Automation & irrigation - a perfect fit - Rob Houghton - YouTube](#)

[SOS stop off-target spraying - Matt Toscan & Kieran O'Keeffe - YouTube](#)

Spray Inversion Network Project

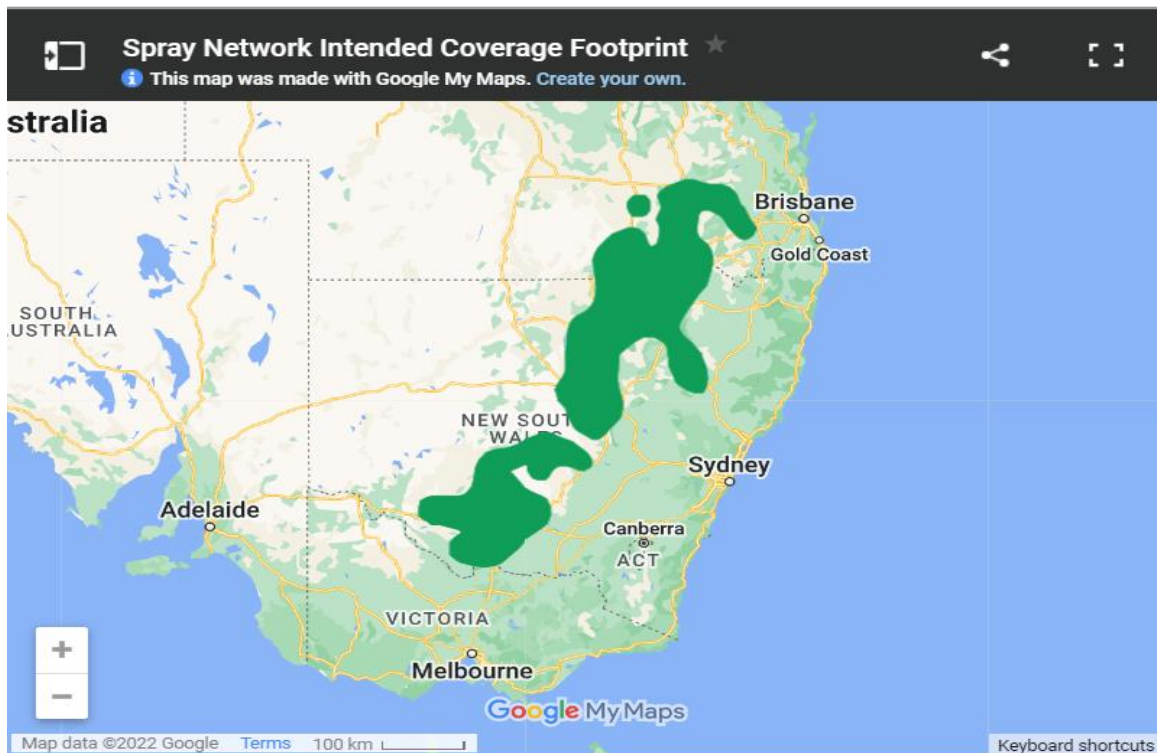
Grains Research and Development Corporation (GRDC) and Cotton Research and Development Corporation (CRDC) are working in partnership with Goanna Ag to develop a spray drift hazardous weather warning system that will provide real-time weather data and alerts to growers and spray operators about the presence of temperature inversions.

Goanna Ag will establish, operate, and maintain a network of 100 Profiling Automatic Weather Stations (PAWS) across the grain and cotton regions of NSW, southern and central QLD. The PAWS have remote sensing capability and new proprietary software to provide growers and spray contractors real-time weather data every 10 minutes.

Being able to accurately identify the presence of hazardous temperature inversions will reduce the spray drift risk for growers and spray contractors. Currently regulations do not permit spraying agricultural chemicals when hazardous surface temperature inversions are present.

The network will provide a 24-hour forecast, broken into two hourly segments of hazardous temperature inversions periods, significantly helping growers and spray contractors to plan the logistics of spray operations.

The below map shows the intended coverage of the network.



To register interest in the network and to keep abreast of project updates, including when the network is being installed in your area or when the beta-version of the app is ready for user testing, go to this link to register.

[Spray Inversion Network — Goanna Ag](#)



XtendFlex® cotton Spray App

The XtendFlex cotton Spray App helps you plan sprays more effectively by providing weather forecasts including inversion risk probability.

The forecast feature helps growers and applicators identify weather conditions and surface temperature inversion conditions prior to spray applications.

- A field-level location-specific forecast (hour-by-hour) of temperature, relative humidity, wind speed, rainfall probability, Delta T, and surface temperature inversion risk.
- The inversion-risk forecast shows the probability (in percent) of a surface temperature inversion occurring at a specific location.
- The weather forecasts leverage both publicly available weather data from the US National Oceanic and Atmospheric Administration (NOAA) Service and unique models created by Climate Corporation weather scientists to forecast weather conditions and surface temperature inversions.

[XtendFlex cotton Spray App | Tools | Bayer Crop Science Australia](#)

Events coming up

Spraypass conference 27th and 28th October



Suitable for all spray contractors, farmers, agronomists, advisors and equipment manufacturers and dealers who are responsible for the safe and efficient application of agricultural chemicals.

- [SprayPASS Conference](#): *Advances & Challenges in Ag Spraying* @ the Coro Club, Griffith October 27 & 28. All information on attached flyer.
- [SprayPASS - Registration Form](#)

September quiz answer - Little black Cormorant



October quiz – Where is this?



Regards Kieran

Disclaimer:

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 in this presentation or from any errors or omissions in this document