



Information when you need it

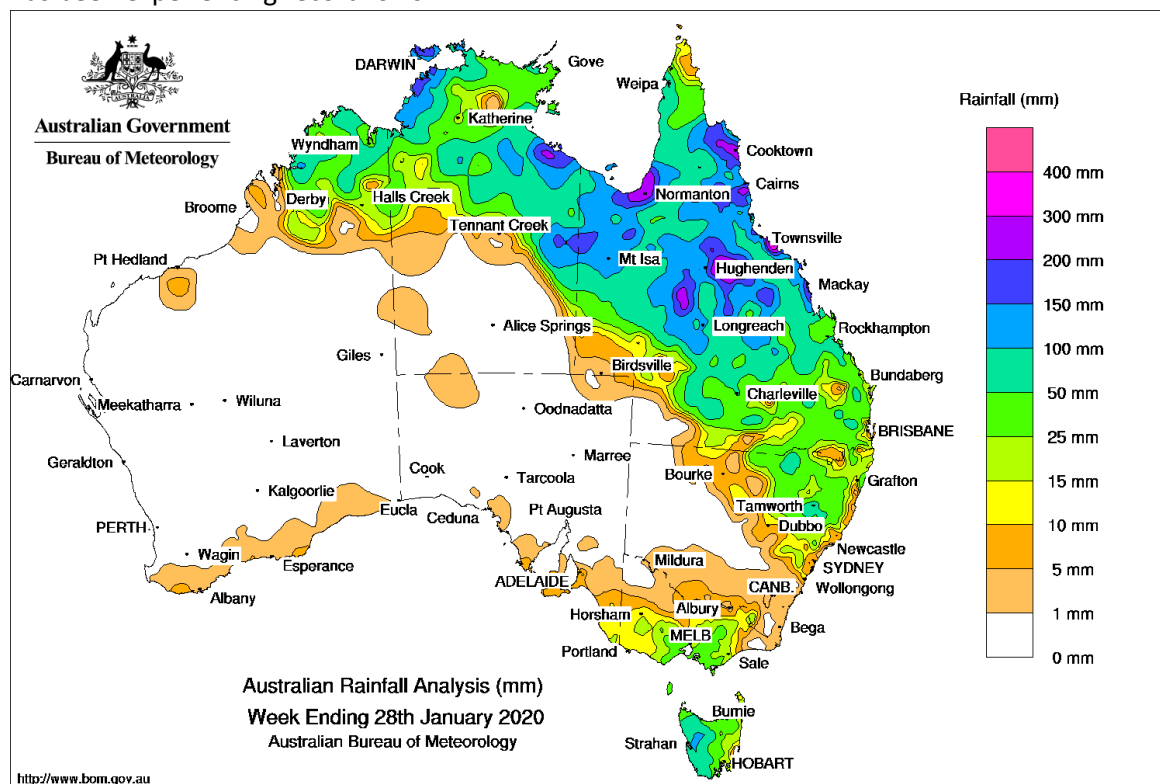


Macquarie bale up

JANUARY 2019

SEASON SUMMARY

The last month has seen some more extreme temperatures and weather conditions. Rainfall has been very low and storm activity has meant that some areas have had some rain but the majority has been experiencing record lows.



As we can see it is raining in some areas which is a good sign, for the latest weather summary make sure you subscribe to the cottoninfo moisture manager <https://www.cottoninfo.com.au/subscribe>



Day Degree Calculator Update

As per the report in my last newsletter, CSD and CSIRO have collaborated to introduce the new metric for Day Degrees calculation. The new day degree calculator located on their website www.csd.new.au/ddc uses weather station data from over 70 locations, it is easy to use and can be accessed by a phone or tablet on the go. For the remainder of this season we will present both metrics as a transition. The main benefit of the new system is that it is more accurate as it prevents excessive day degree accumulation particularly in periods that are unlikely to contribute to plant growth and development. As you will see this number is generally lower than the current industry standard (base 12).

REGION – Upper Macquarie

Narromine

Location	Latitude	Longitude	Date range		
ARROMINE AIRPOR	-32.2167	148.2333	15 Oct - 02 Feb		
	2019	2018	2017	2016	10 year mean
Base 12	1588.3	1565.3	1421	1392.8	1385.8
DD1532	959.4	980	872.1	814	843.1
Cold shock days	15	11	14	28	16.6
Days above 36°C	45	41	31	35	28.8
Nights above 25°C	7	12	4	6	3.8
Days above 40°C	21	19	12	9	8.6
Average temperature (°C)	26.1	26	24.6	24	24.2

Fig 1. Day degree summary page (source csd.net.au/ddc) Note this is using the planting date of October 15th.

NARROMINE AIRPORT

Date range: 15 October, 2019 to 2 February, 2020 (111 days).

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Summary Seasonal comparison

	2019	2018	2017	2016	2015	10 year mean
Base 12	1588.3	1565.3 ▼	1421.0 ▼	1392.8 ▼	1355.5 ▼	1385.8 ▼
DD1532*	959.4	980.0 ▲	872.1 ▼	814.0 ▼	859.4 ▼	843.1 ▼
Cold shock days	15	11 ▼	14 ▼	28 ▲	4 ▼	16.6 ▲
Days above 36°C	45	41 ▼	31 ▼	35 ▼	23 ▼	28.8 ▼
Nights above 25°C	7	12 ▲	4 ▼	6 ▼	1 ▼	3.8 ▼
Days above 40°C	21	19 ▼	12 ▼	9 ▼	5 ▼	8.6 ▼
Average temperature (°C)	26.1	26.0 ▼	24.6 ▼	24.0 ▼	24.2 ▼	24.2 ▼

Fig 2. Source www.csd.net.au/ddc

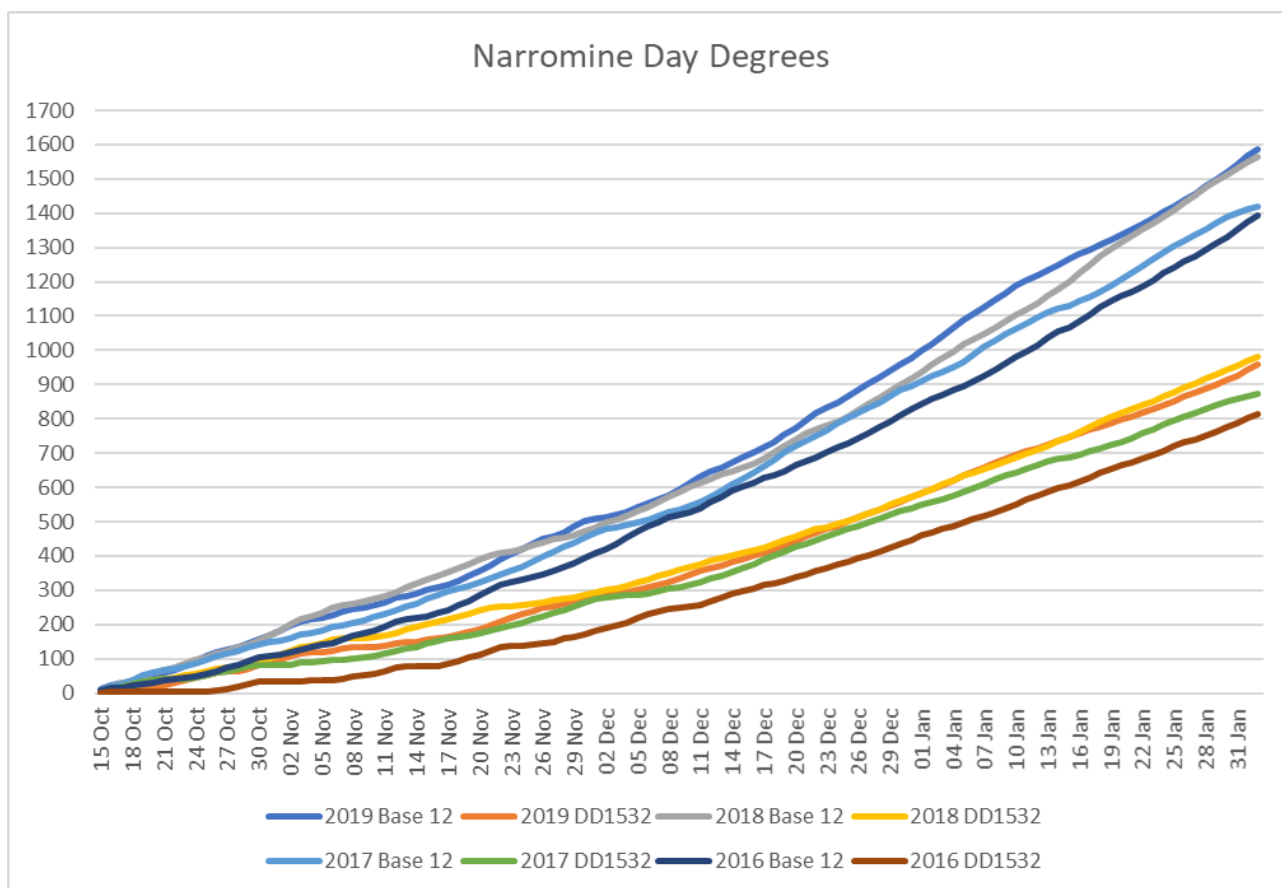


Fig 3. Day Degree comparison using the base 12 and 1532. Source www.csd.net.au/ddc

GEURIE POST OFFICE

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Date range: 15 October, 2019 to 2 February, 2020 (111 days).

Summary Seasonal comparison

	2019	2018	2017	2016	2015	10 year mean
Base 12	1472.3	1431.8 ▼	1315.3 ▼	1302.5 ▼	1243.5 ▼	1281.5 ▼
DD1532*	865.7	876.8 ▲	795.8 ▼	749.5 ▼	769.9 ▼	756.8 ▼
Cold shock days	24	15 ▼	14 ▼	32 ▲	6 ▼	21.9 ▼
Days above 36°C	38	35 ▼	24 ▼	24 ▼	16 ▼	22.0 ▼
Nights above 25°C	5	4 ▼	0 ▼	5	0 ▼	1.7 ▼
Days above 40°C	16	9 ▼	6 ▼	6 ▼	1 ▼	5.2 ▼
Average temperature (°C)	24.8	24.7 ▼	23.6 ▼	23.0 ▼	23.1 ▼	23.1 ▼

Fig 4. Season summary Geurie NSW : Source www.csd.net.au/ddc

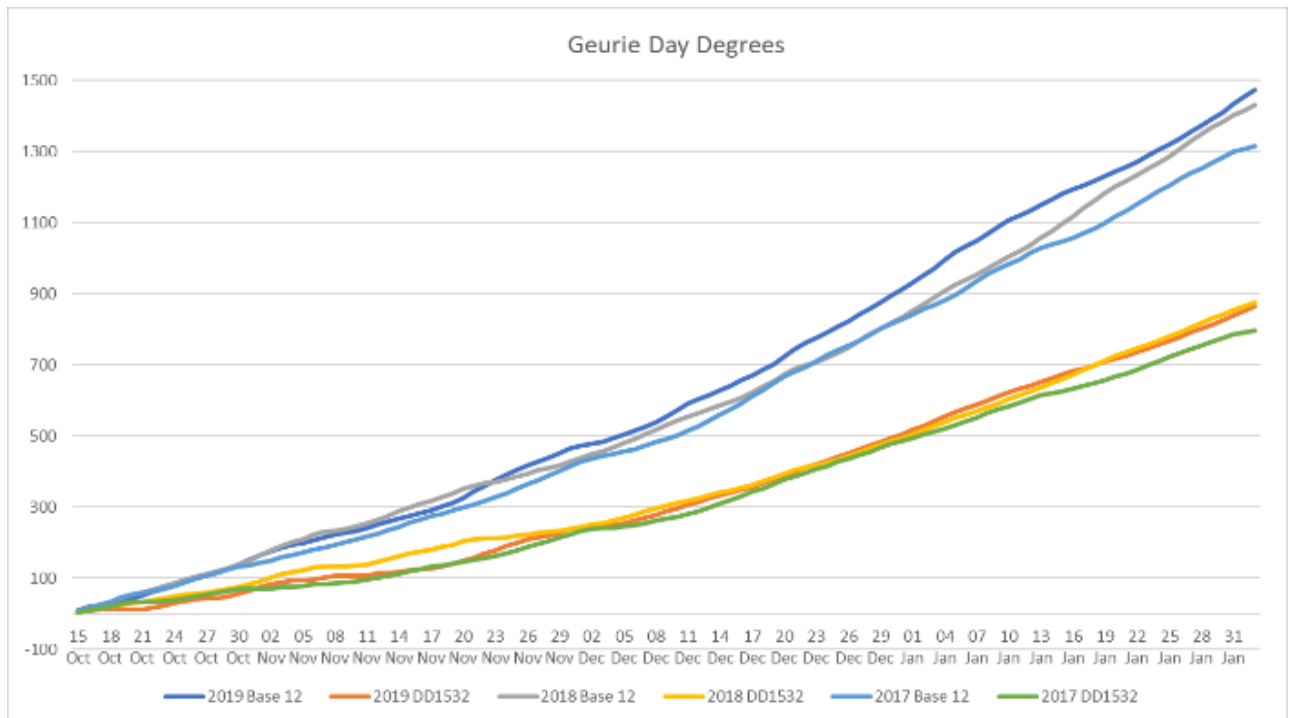


Fig 5. Day Degree comparison using the base 12 and 1532. Source www.csd.net.au/ddc

REGION – Upper Lachlan

Forbes

FORBES AIRPORT AWS

Date range: 15 October, 2019 to 2 February, 2020 (111 days).

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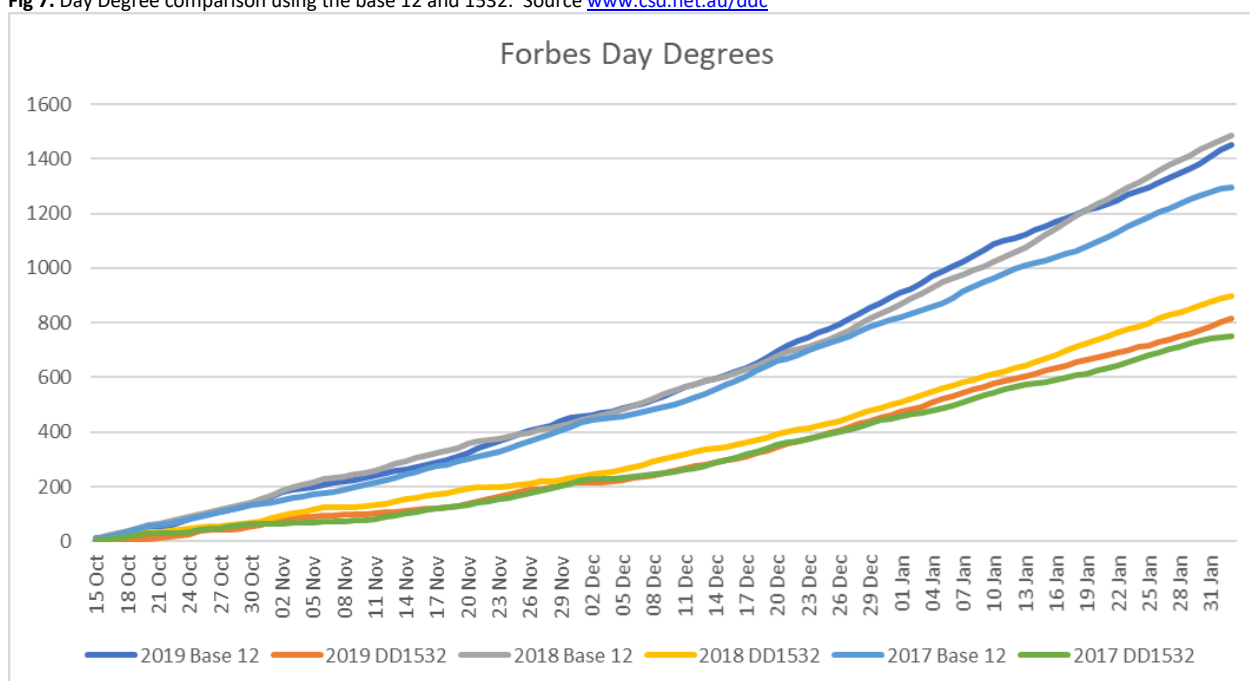
Summary Seasonal comparison

	2019	2018	2017	2016	2015	10 year mean
Base 12	1451.3	1486.7 ▲	1297.7 ▼	1299.0 ▼	1288.9 ▼	1290.8 ▼
DD1532*	815.2	898.1 ▲	752.7 ▼	717.9 ▼	779.0 ▼	738.0 ▼
Cold shock days	29	19 ▼	22 ▼	34 ▲	15 ▼	27.2 ▼
Days above 36°C	39	38 ▼	24 ▼	28 ▼	22 ▼	24.6 ▼
Nights above 25°C	4	10 ▲	2 ▼	1 ▼	1 ▼	2.3 ▼
Days above 40°C	15	16 ▲	9 ▼	6 ▼	6 ▼	7.2 ▼
Average temperature (°C)	24.5	25.1 ▲	23.3 ▼	23.0 ▼	23.4 ▼	23.1 ▼

Fig 6. <https://www.csd.net.au/ddc/results>

Location	Latitude	Longitude	Date range		
FORBES AIRPORT AWS	-33.3627	147.9205	15 Oct - 02 Feb		
	2019	2018	2017	2016	10 year mean
Base 12	1451.3	1486.7	1297.7	1299	1290.8
DD1532	815.2	898.1	752.7	717.9	738
Cold shock days	29	19	22	34	27.2
Days above 36°C	39	38	24	28	24.6
Nights above 25°C	4	10	2	1	2.3
Days above 40°C	15	16	9	6	7.2
Average temperature (°C)	24.5	25.1	23.3	23	23.1

Fig 7. Day Degree comparison using the base 12 and 1532. Source www.csd.net.au/ddc



WEATHER STATIONS

CSD [CSD Weather Station network](#)

MCGA weather stations at "Mt Foster" and "Farrendale" [MCGA weather stations](#)

Thanks to the ongoing support of the MCGA we also have 7 weather stations that have inversion monitoring capabilities, see the link to the information on how to register and get the app for access to the sites. The great thing about this, is the ability to go in and download past history [..\..\spray drift campaign\Macquarie Valley spray drift reduction tools package 2018.pdf](#)

Oz forecast [Oz forecast](#)

WEATHER STIES

<http://www.australianweathernews.com>

CottonInfo has held some workshops on climate that have some good links to the models, here is a summary page from those meetings. [climate workshop cheat sheet](#)
 You can also sign up to the moisture manager that comes out each fortnight. [moisture manager subscription](#) for a great summary page and insight from Jon Welsh.

CSD AMBASSADOR UPDATE (JANUARY) –CENTRAL NSW

By Craig McDonald



In the last newsletter we introduced you to the new CSD tool STEFF (Simulated Time to Establish First Flower).

This tool enables us to predict when the crop would reach 1st flower (1/m) based on location and time of watering up. For each of the CSD Ambassador and Variety trial sites in Central NSW the STEFF tool was mostly within 1-6 days of the crop physically reaching this target.

<https://www.csd.net.au/steff>

Below is a summary of the Predicted First Flower date by STEFF compared to the actual First Flower dates. The initial STEFF prediction was run on the 10/12/19. As can be seen most dates are close given the varieties of the season and the intense heat leading up to Christmas and New Year.

STEFF run date	Water up date	Site	STEFF predicted FF	Actual FF date
10/12/19	14/10/19	Corinella – Forbes - Furrow	10/01/20	03/01/20
10/12/19	16/10/19	Forbes - Furrow	08/01/20	04/01/20
10/12/19	15/10/19	Narromine - Furrow	02/01/20	29/12/19
10/12/19	23/10/19	Narromine - Pivot	08/01/20	03/01/20
10/12/19	22/10/19	Narromine - lateral	06/01/20	07/01/20
10/12/19	14/11/19	Narromine – Double skip Irr.	22/01/20	21/01/20

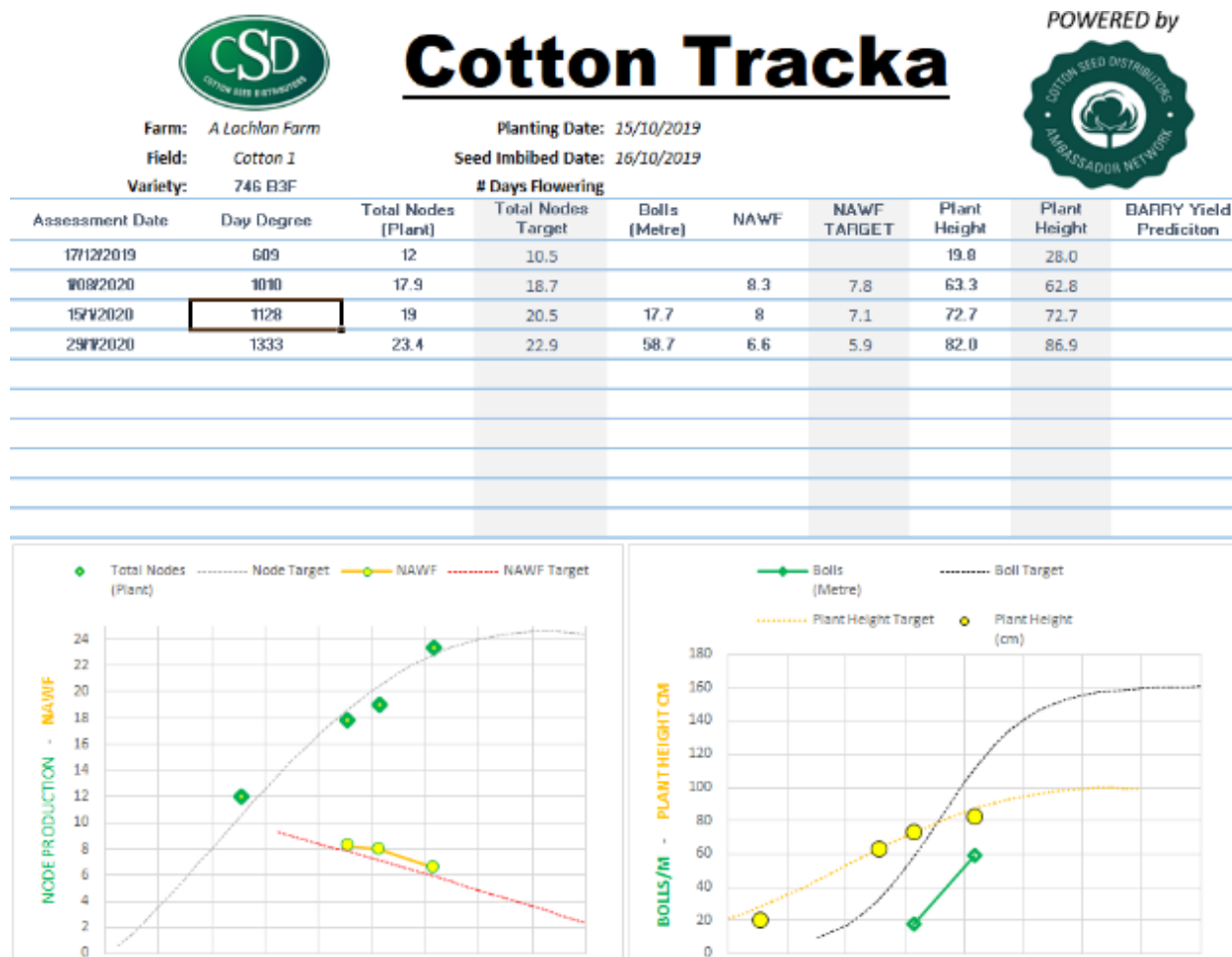
As we now move through the flowering phase, CSD has another tool that is available, BARRY (Biometric Agronomy for Realising Representative Yield). BARRY has come from looking at relationships and patterns within the CSD Ambassador and Variety trial data sets. Here we are able



to see where the crop is compared to other valleys at different growth stages. You can see how you are performing in relation to key crop targets for maximum yield and also see what your projected yield potential is.

Below are the graphs so far from a Forbes farm and a Narromine farm that are within the Ambassador program in Central NSW.

If growers would like to track their crop through BARRY and Cotton Tracka please contact Craig McDonald CSD Extension and Development Agronomist 0484 513 566 or cmcdonald@csd.net.au or Ella Steinfort, CSD E&D Agronomist M. 0428950033 E.steinfort@csd.net.au



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.
*Note - Targets indicate Ambassador network 4 year means and are therefore intended as a guide only.

To get access to this and many more benefits become a member of CSD.

Membership costs \$20 per year and is open to anyone who is directly and regularly engaged the Australian cotton industry.

Go to <https://www.csd.net.au/membership> to find out more.



SILVER LEAF WHITEFLY UPDATE



Fig 8. Evaluating levels of silverleaf whitefly (SLW) parasitism in fields (Source; Jamie Hopkins)

CottonInfo & CRDC have invested resources into getting a better handle on evaluating levels of silverleaf whitefly (SLW) parasitism in fields across each region. It is hard to see with the naked eye and as a result each REO has a microscope that will be able to assist in evaluation of leaves for parasitism levels. Next crop check will have information on how to collect leaf samples and get them analysed to better understand what is happening in the field. Contact your REO if you have a growing population of SLW to arrange resistance testing and parasitism evaluation.

With sightings of SLW adults in some fields within the valley we need to start considering the control options going forward. See the fact sheet attached to this email to point you in the right direction.

Remember: do not rely on potential end of season rainfall to remove trehalose from open bolls!!

The Macquarie valley pyriproxyfen window is the 1st of Feb – 1st of March, and the upper Lachlan 7th of Feb - 7th of March please

WAR ON WEEDS

Windmill grass: With such a dry summer in most areas, weed control has not been at the front of mind. However, we are seeing some weed numbers increase and they are not being controlled with herbicide options that have worked in the past. In this newsletter we are looking at Windmill grass (*Chloris Truncata*) as it was voted most popular to succeed (in resistance) by growers across the valley last season. It is a prolific seed producer and has been on the increase since zero till has increased. This plant can be perennial with large root systems making it very hard to control. Eric Koetz from CottonInfo has pulled together this fact sheet that will help growers to get on top of this ever growing problem. See link <https://bit.ly/2udfDxe>

NSW DPI. Getting on top of fleabane and windmill grass:

https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0018/431271/Getting-on-top-offleabane-and-windmill-grass.pdf

DATES FOR THE DIARY

- Thursday 20th February – Wee Waa CSD & Lower Namoi CGA Field Day (FLYER ATTACHED)
- Thursday 27th of Feb – Nutrition workshop in Narromine (flyer will come out next week)
- Thursday 9th April WHS & HR fundamentals in Dubbo (must register by 12 March) Flyer attached

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