

# Crop Report

26-Jul-2023

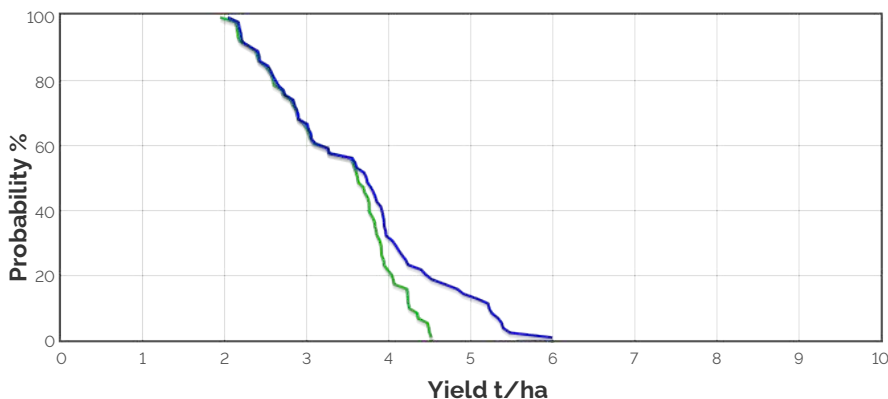
Andrew H Ware: Lock

**Crop: Wheat**  
**Cultivar: Scepter**  
 Sowing details: 150 plants/m<sup>2</sup> on 6-May  
 Expected maturity date: 10-Nov

**Paddock Details**  
 Initial conditions date: 8-Jun  
 Soil: Sandy Loam (Tuckey No348)  
 800 mm max rooting depth  
 Stubble: 3000 kg/ha of Wheat  
 No till

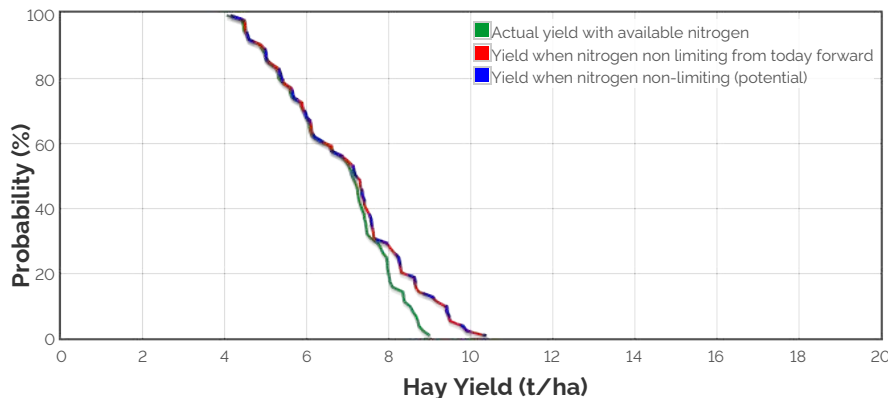
## Grain Yield Outcome

- Nitrogen limited Yield
- Water limited Yield
- Nitrogen limited Yield with Frost and heat Effects
- Water limited Yield with Frost and heat Effects



This graph shows the probability of exceeding a range of yield outcomes this season. It takes into account your pre-season soil moisture, the weather conditions so far, soil N and agronomic inputs. The long term record from your nominated weather station is then used to simulate what would have happened from this date on in each year of the climate record. The yield results are used to produce this graph.

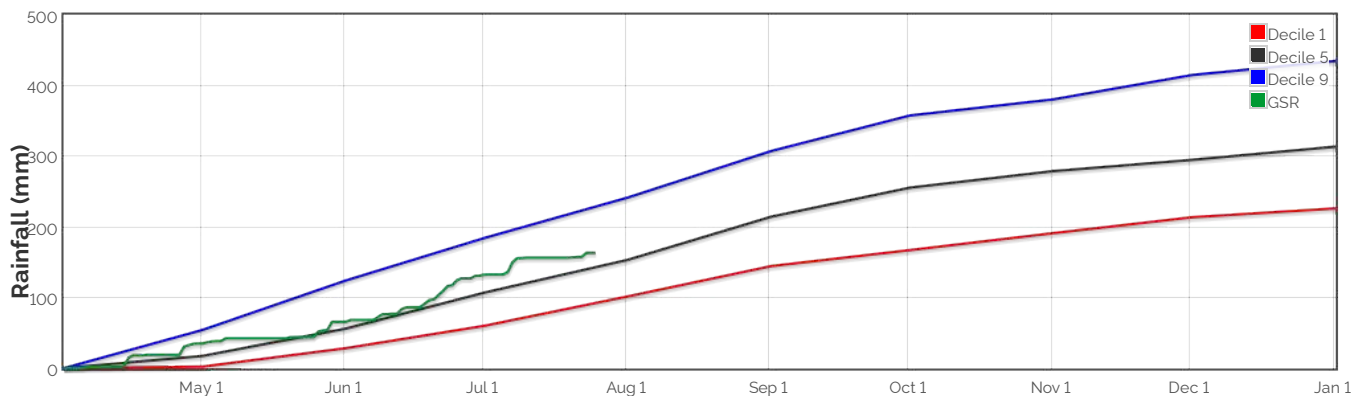
## Hay Yield Outcome



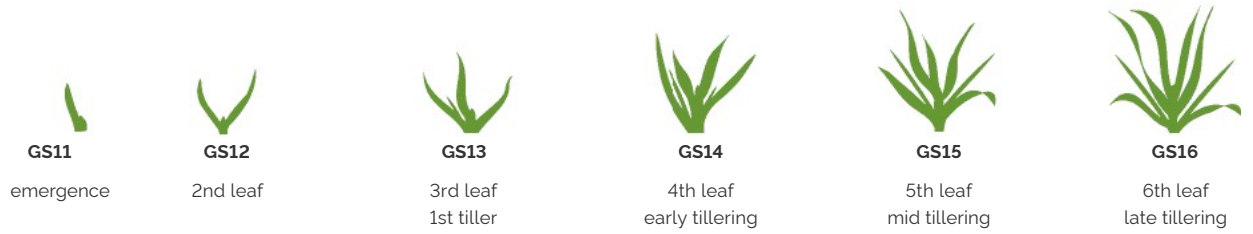
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is between 2 and 12t/ha, hay yield is assumed to be between 70 and 75% of dry matter (sliding scale). When dry matter is above 12t/ha, hay yield is assumed to be between 75 and 80% (sliding scale).

Current dry matter: 3769.6067180662867kg/ha

## The Season So Far - Growing Season Rainfall Deciles



# Simulated and Predicted Crop Growth Stage



## Predicted

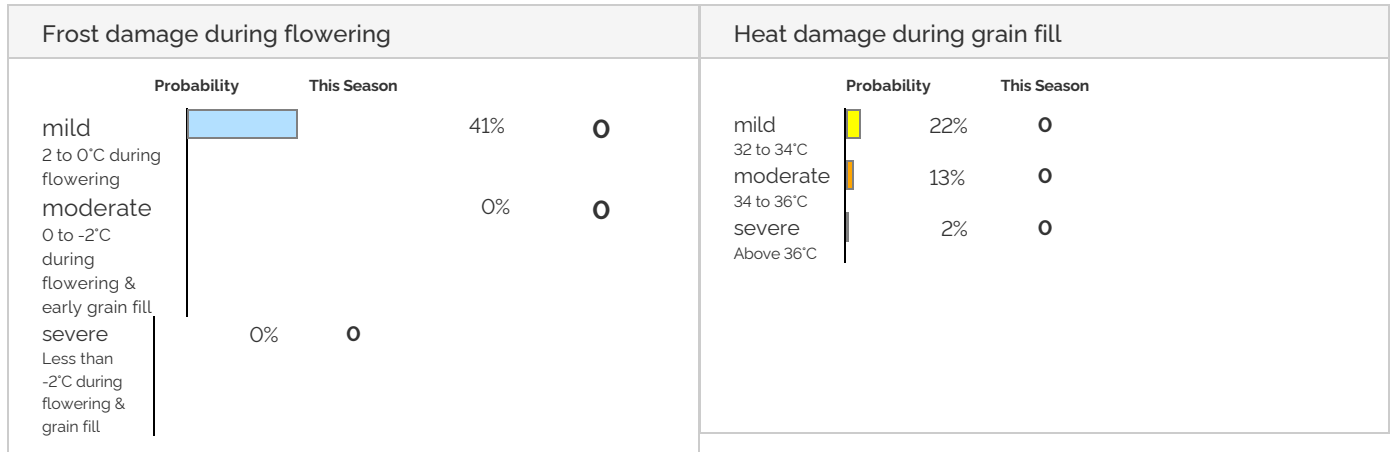
Earliest	23-May	30-May	5-Jun	13-Jun	22-Jun	3-Jul
Median	23-May	30-May	5-Jun	13-Jun	22-Jun	3-Jul
Latest	23-May	30-May	5-Jun	13-Jun	22-Jun	3-Jul



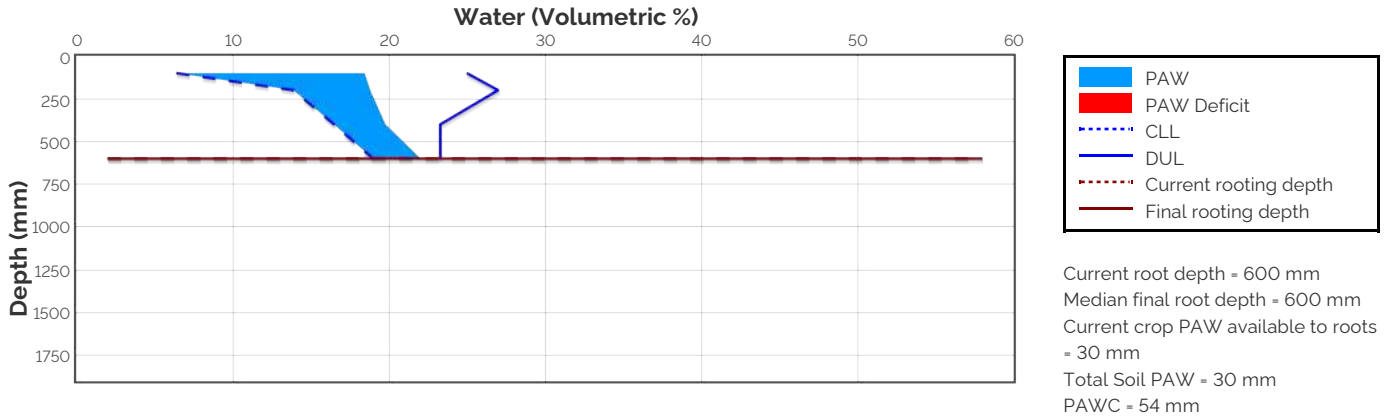
## Predicted

Earliest	13-Jul	19-Jul	31-Jul	4-Aug	5-Aug	13-Aug	24-Aug	30-Aug	15-Sep
Median	13-Jul	19-Jul	1-Aug	6-Aug	8-Aug	16-Aug	28-Aug	3-Sep	23-Sep
Latest	13-Jul	19-Jul	3-Aug	8-Aug	10-Aug	20-Aug	2-Sep	9-Sep	29-Sep

# Probability and Incidence of Frost and Heat Shock



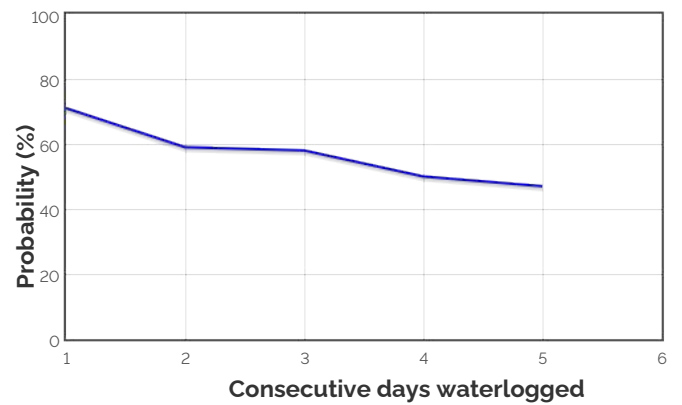
## Current Distribution of PAW



## Water Budget

Initial PAW status @ 8-Jun	43 mm
Rainfall since 8-Jun	95.1 mm
Irrigations	
Evaporation since 8-Jun	38 mm
Transpiration since 8-Jun	54 mm
Deep drainage since 8-Jun	27 mm
Run-off since 8-Jun	0 mm
<b>Current PAW status:</b>	<b>30 mm</b>

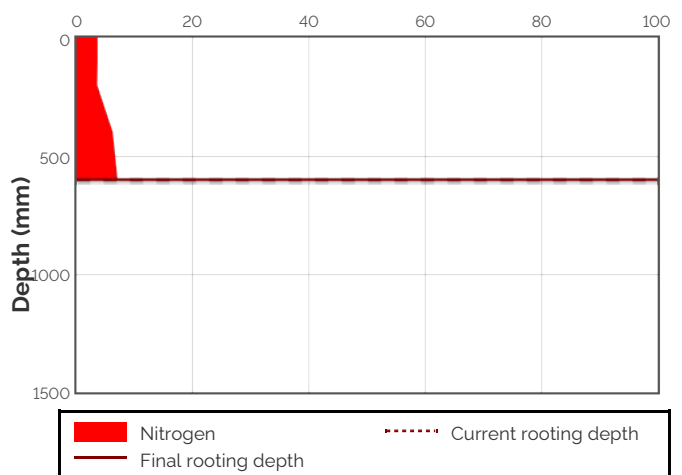
## Probability of Future Waterlogging Events



## Nitrogen Budget

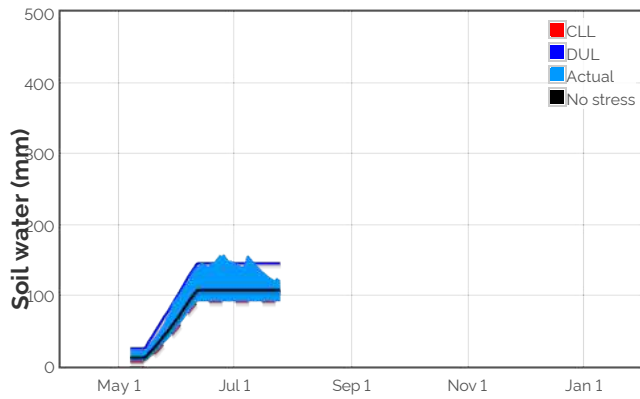
Initial N status @ 8-Jun	78 kg/ha
N mineralisation since 8-Jun	9 kg/ha
N tie up since 8-Jun	0 kg/ha
N applications	
4-May : 17 kg/ha	
9-Jun : 55.2 kg/ha	
29-Jun : 19 kg/ha	
Total N in plant	13 kg/ha
De-nitrification since 8-Jun	0 kg/ha
Leaching since 8-Jun	10 kg/ha
<b>Current N status:</b>	<b>23 kg/ha</b>
Median N mineralisation to maturity = 40.7143911413042 kg/ha	
Median N tie up to maturity = 0 kg/ha	

## Current distribution of soil nitrogen (kg/ha)

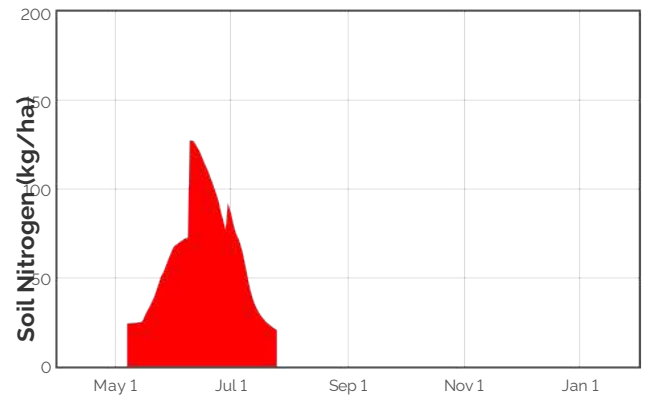


Current Crop Available N = 20 kg/ha  
 Total Soil N = 23 kg/ha

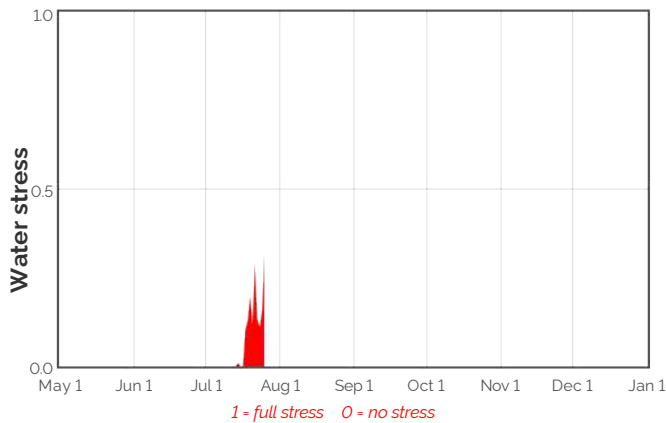
## Availability of Water to Growing Roots



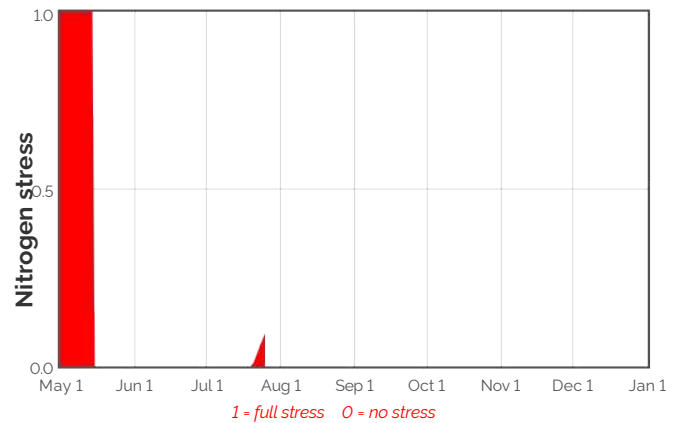
## Availability of Soil Nitrogen to Growing Roots



## Water Stress



## Nitrogen Stress



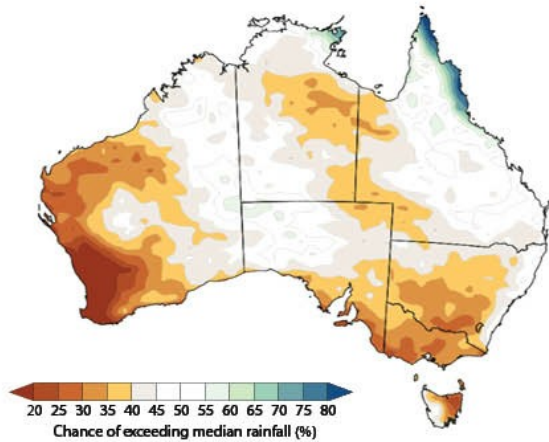
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

## Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

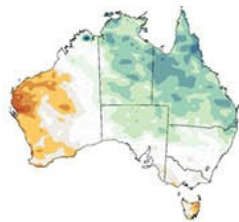
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
27-Jul	31.8	0.4	1.5	-0.6	11.9	28.1	19.8	0.2	0.0
28-Jul	31.8	0.4	1.6	-0.6	10.4	26.6	19.3	0.2	0.0
29-Jul	31.8	0.4	1.6	-0.5	9.0	25.2	18.8	0.2	0.0
30-Jul	31.8	0.4	1.6	-0.5	7.5	23.7	18.3	0.2	0.0
31-Jul	31.8	0.4	1.7	-0.4	6.1	22.3	17.9	0.2	0.0
1-Aug	32.8	0.4	1.7	-0.4	4.6	20.8	17.5	0.2	0.0
2-Aug	32.9	0.4	1.7	-0.4	3.3	19.5	17.2	0.2	0.0
3-Aug	33.6	0.4	1.8	-0.4	2.1	18.3	16.8	0.2	0.0
4-Aug	34.8	0.4	1.8	-0.3	1.0	17.1	16.5	0.2	0.0
5-Aug	36.1	0.4	1.7	-0.3	-0.2	16.0	16.2	0.2	0.0

The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

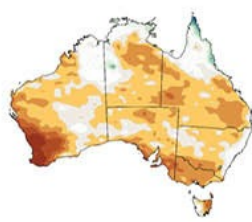
3 MONTH RAINFALL OUTLOOK FOR JULY TO SEPTEMBER



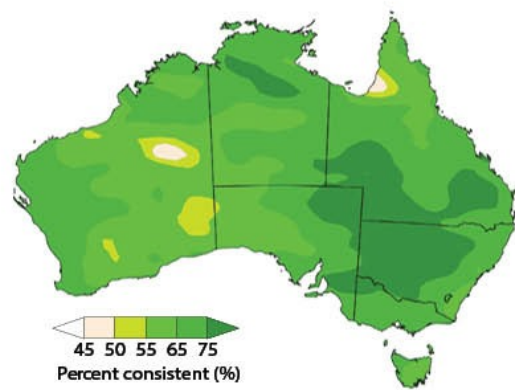
JULY RAINFALL OUTLOOK



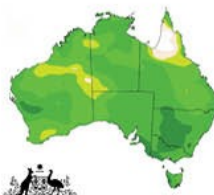
AUGUST RAINFALL OUTLOOK



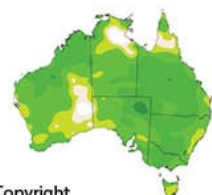
PAST ACCURACY FOR JULY TO SEPTEMBER



PAST ACCURACY FOR JULY



PAST ACCURACY FOR AUGUST



Australian Government  
Bureau of Meteorology

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