

Crop Report

21-Aug-2024

Andrew H Ware:
Matthews Cootra

Crop: Wheat

Cultivar: Calibre

Sowing details: 150 plants/m² on 1-Jun

Expected maturity date: 26-Nov

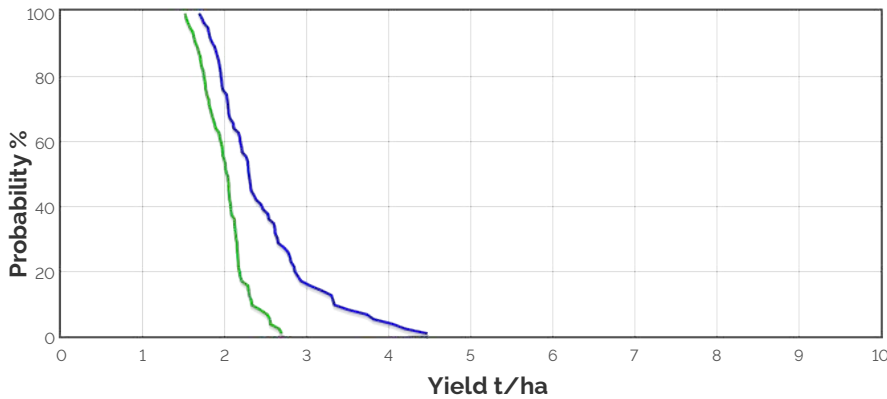
Paddock Details

Initial conditions date: 6-Mar

Soil: Sand (Tuckey No366)
1000 mm max rooting depth
Stubble: 500 kg/ha of Lentil
No till

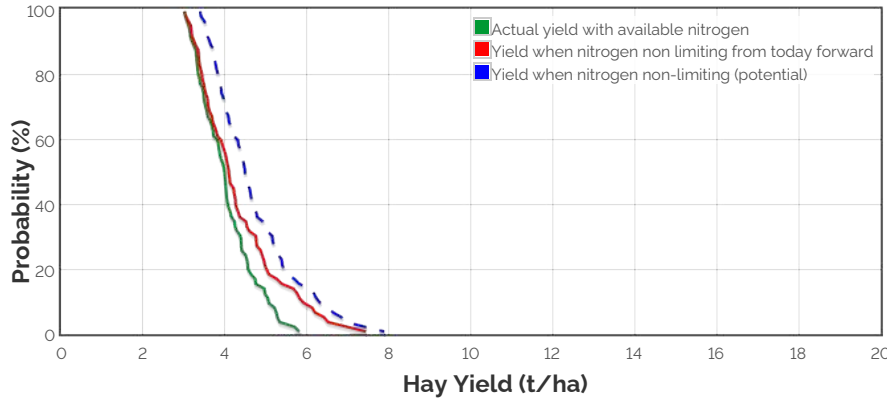
Grain Yield Outcome

- 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.

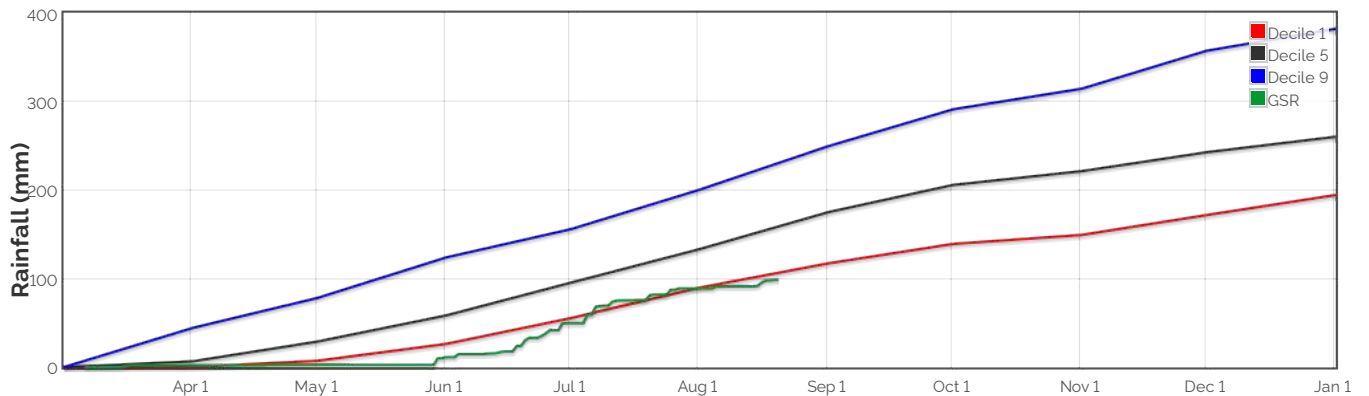
Hay Yield Outcome



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: 2535.163425351382kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

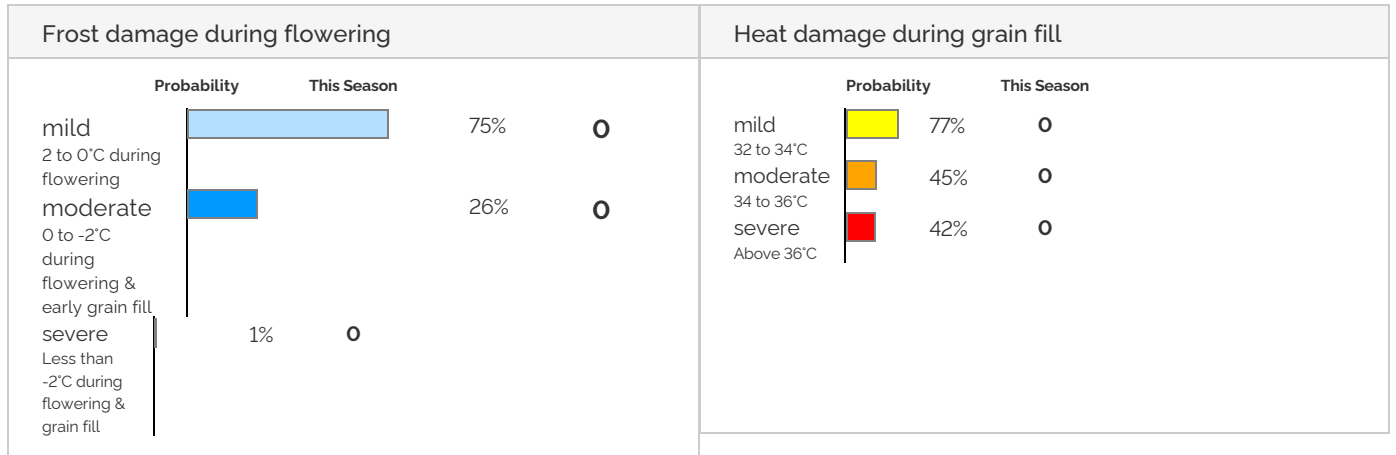
Earliest	19-Jun	27-Jun	8-Jul	18-Jul	27-Jul	7-Aug
Median	19-Jun	27-Jun	8-Jul	18-Jul	27-Jul	7-Aug
Latest	19-Jun	27-Jun	8-Jul	18-Jul	27-Jul	7-Aug



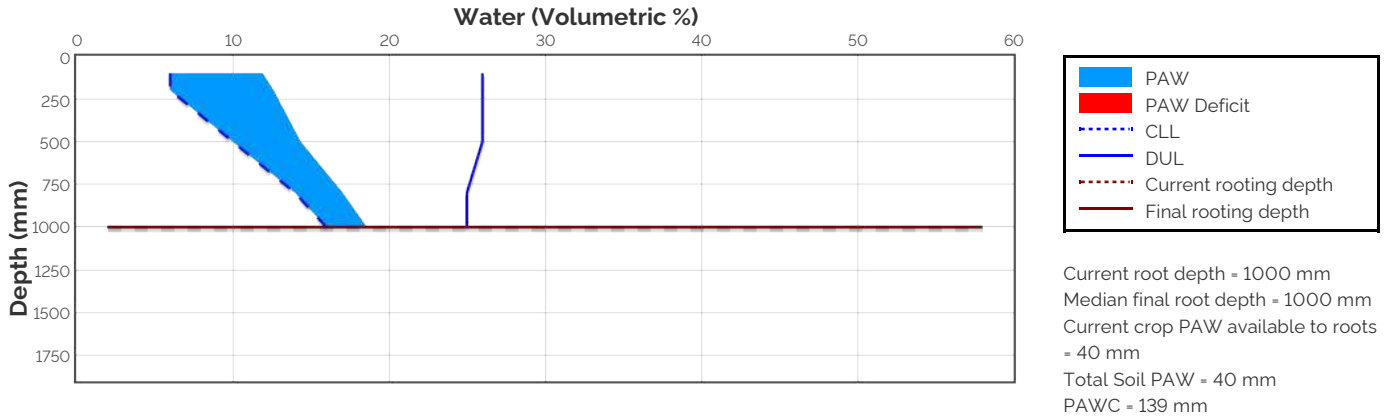
Predicted

Earliest	11-Aug	16-Aug	20-Aug	26-Aug	26-Aug	3-Sep	13-Sep	19-Sep	5-Oct
Median	11-Aug	16-Aug	20-Aug	28-Aug	28-Aug	7-Sep	17-Sep	23-Sep	10-Oct
Latest	11-Aug	16-Aug	20-Aug	30-Aug	30-Aug	10-Sep	21-Sep	27-Sep	17-Oct

Probability and Incidence of Frost and Heat Shock



Current Distribution of PAW

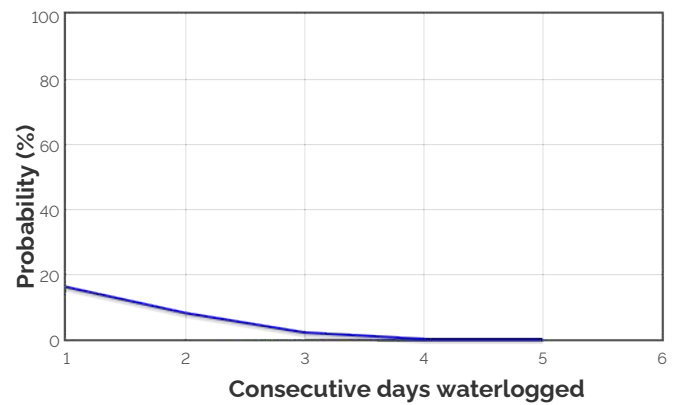


Water Budget

Initial PAW status @ 6-Mar	73 mm
Rainfall since 6-Mar	98.5 mm
Irrigations	
Evaporation since 6-Mar	78 mm
Transpiration since 6-Mar	58 mm
Deep drainage since 6-Mar	0 mm
Run-off since 6-Mar	0 mm

Current PAW status: 40 mm

Probability of Future Waterlogging Events



Nitrogen Budget

Initial N status @ 6-Mar	51 kg/ha
N mineralisation since 6-Mar	152 kg/ha
N tie up since 6-Mar	0 kg/ha
N applications	

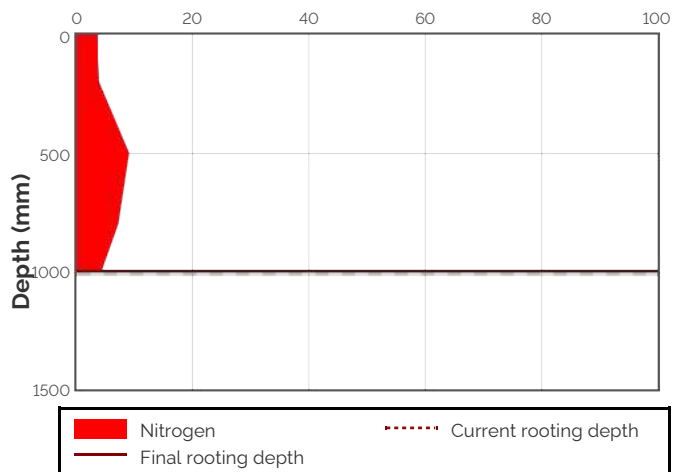
1-May : 24 kg/ha
17-Jun : 29 kg/ha

Total N in plant	71 kg/ha
De-nitrification since 6-Mar	0 kg/ha
Leaching since 6-Mar	0 kg/ha

Current N status: 28 kg/ha

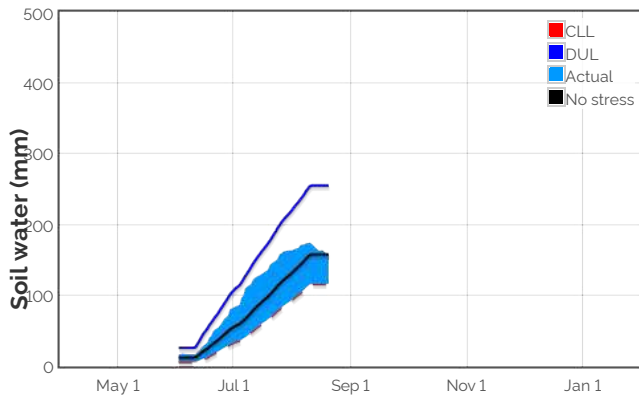
Median N mineralisation to maturity = 104.169307570615 kg/ha
Median N tie up to maturity = 0 kg/ha

Current distribution of soil nitrogen (kg/ha)

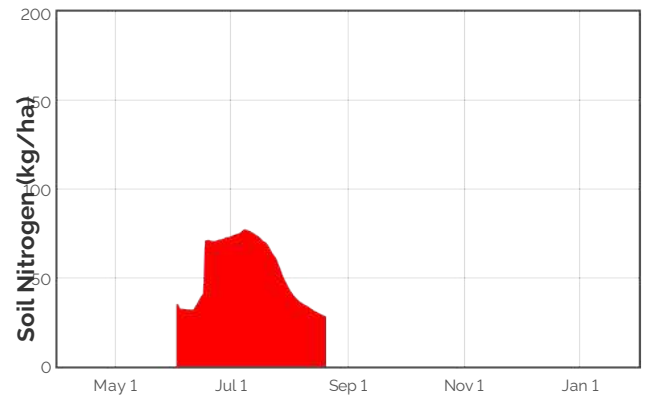


Current Crop Available N = 28 kg/ha
Total Soil N = 28 kg/ha

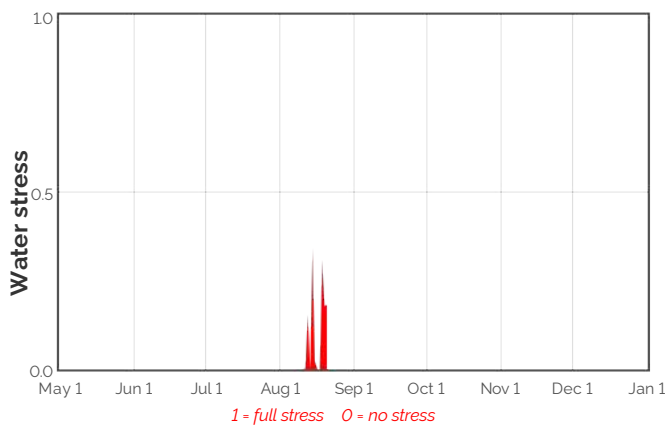
Availability of Water to Growing Roots



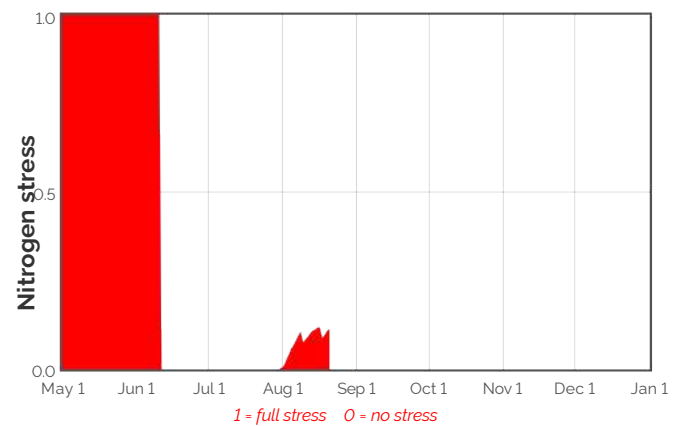
Availability of Soil Nitrogen to Growing Roots



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.

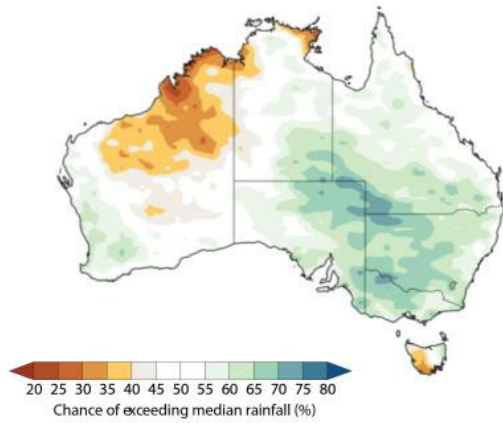
Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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)
22-Aug	32.4	0.6	2.3	-0.4	-3.8	37.8	27.6	0.6	0.0
23-Aug	32.5	0.4	2.2	-0.4	-5.9	35.8	27.3	0.6	0.0
24-Aug	32.6	0.4	2.2	-0.4	-7.7	34.0	26.9	0.6	0.0
25-Aug	32.7	0.4	2.2	-0.3	-9.5	32.2	26.6	0.6	0.0
26-Aug	32.9	0.3	2.3	-0.3	-11.3	30.4	26.3	0.6	0.0
27-Aug	33.0	0.3	2.5	-0.3	-13.0	28.8	26.0	0.6	0.0
28-Aug	39.0	0.3	2.8	-0.3	-14.5	27.2	25.7	0.6	0.0
29-Aug	39.0	0.3	2.6	-0.3	-16.0	25.8	25.5	0.6	0.0
30-Aug	39.0	0.3	2.4	-0.2	-17.3	24.4	25.2	0.6	0.0
31-Aug	39.0	0.3	2.4	-0.2	-18.6	23.0	25.0	0.6	0.0

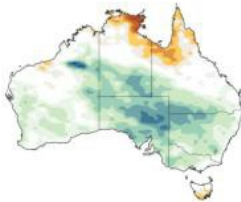
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

Bureau of Meteorology Seasonal and Monthly Outlooks

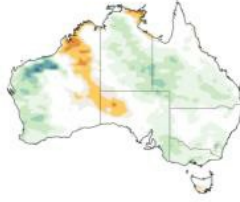
3 MONTH RAINFALL OUTLOOK FOR AUGUST TO OCTOBER



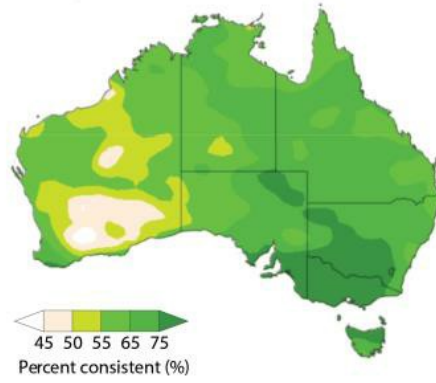
AUGUST RAINFALL OUTLOOK



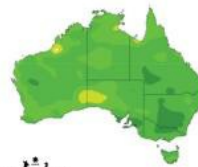
SEPTEMBER RAINFALL OUTLOOK



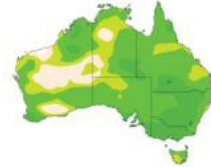
PAST ACCURACY FOR AUGUST TO OCTOBER



PAST ACCURACY FOR AUGUST



PAST ACCURACY FOR SEPTEMBER




Australian Government
Bureau of Meteorology

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