



Crop Report

21-Aug-2024

Andrew H Ware: Port
Kenny

Crop: Wheat

Cultivar: Calibre

Sowing details: 150 plants/m² on 22-Jun

Expected maturity date: 5-Dec

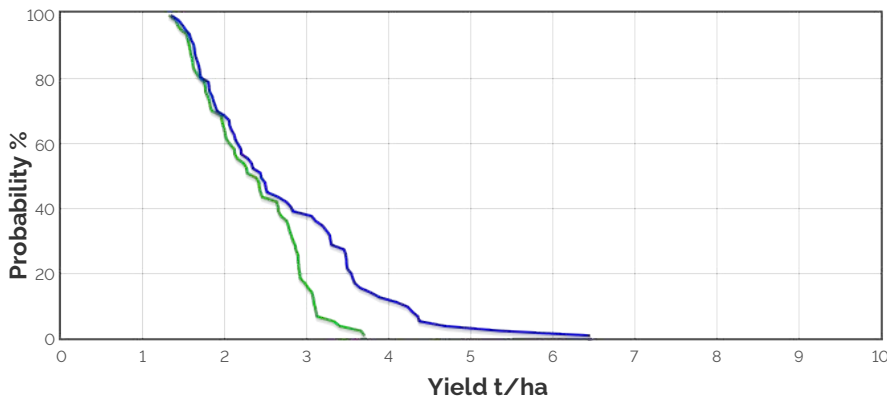
Paddock Details

Initial conditions date: 22-Feb

Soil: Grey Calcareous Sandy Loam
(Piednippie No303)
700 mm max rooting depth
Stubble: 400 kg/ha of Medic
No till

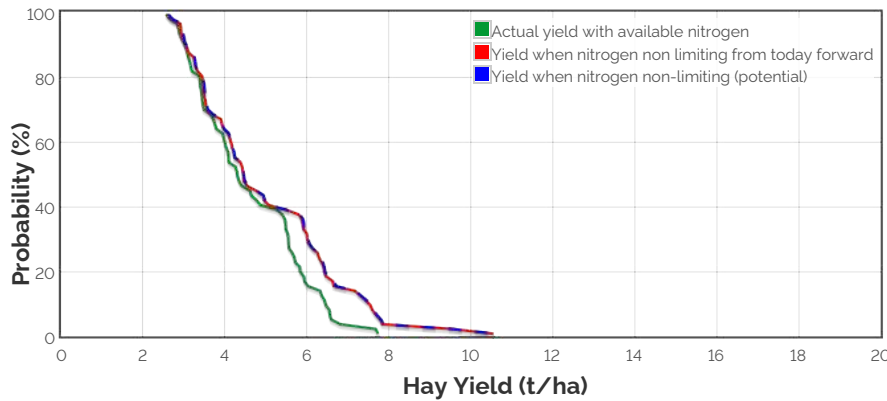
Grain Yield Outcome

- 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.

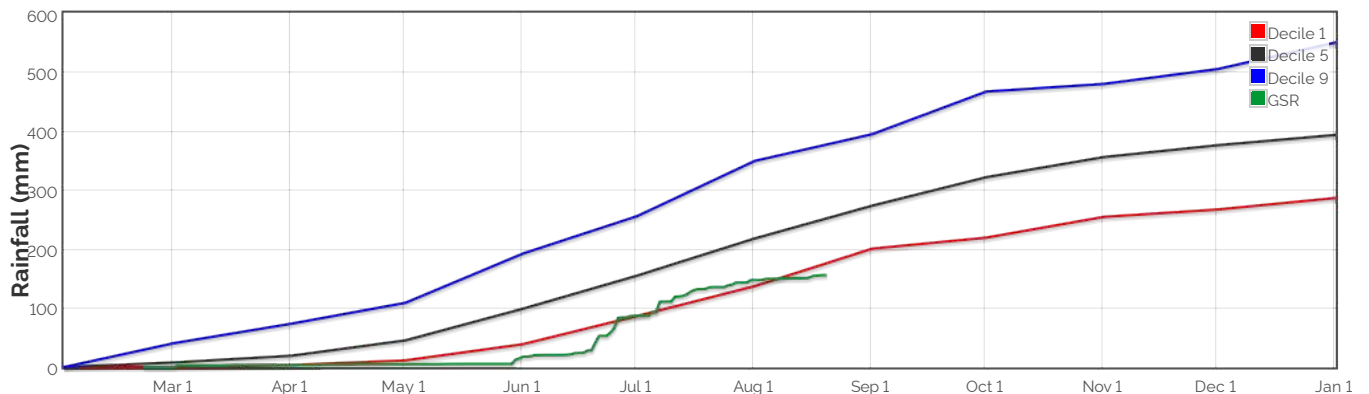
Hay Yield Outcome



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: 1456.5274715824467kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	12-Jul	19-Jul	27-Jul	6-Aug	14-Aug	21-Aug
Median	12-Jul	19-Jul	29-Jul	7-Aug	15-Aug	22-Aug
Latest	12-Jul	19-Jul	29-Jul	7-Aug	15-Aug	23-Aug



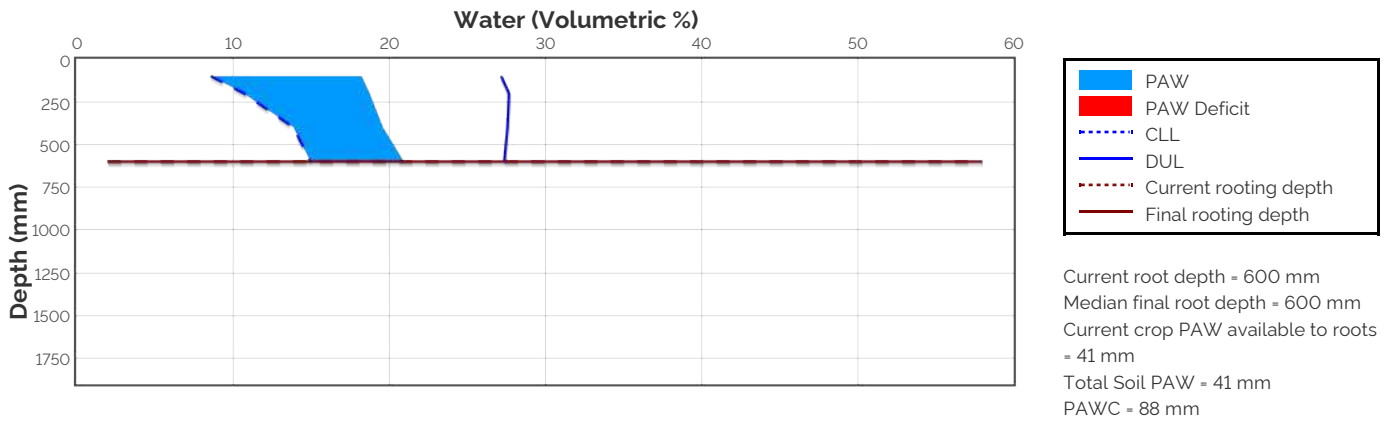
Predicted

Earliest	25-Aug	29-Aug	1-Sep	9-Sep	9-Sep	17-Sep	25-Sep	30-Sep	15-Oct
Median	26-Aug	31-Aug	5-Sep	12-Sep	12-Sep	20-Sep	30-Sep	5-Oct	21-Oct
Latest	28-Aug	3-Sep	8-Sep	16-Sep	17-Sep	25-Sep	4-Oct	11-Oct	27-Oct

Probability and Incidence of Frost and Heat Shock

Frost damage during flowering				Heat damage during grain fill			
	Probability	This Season			Probability	This Season	
mild 2 to 0°C during flowering		0%	0	mild 32 to 34°C		57%	0
moderate 0 to -2°C during flowering & early grain fill		0%	0	moderate 34 to 36°C		42%	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C		25%	0

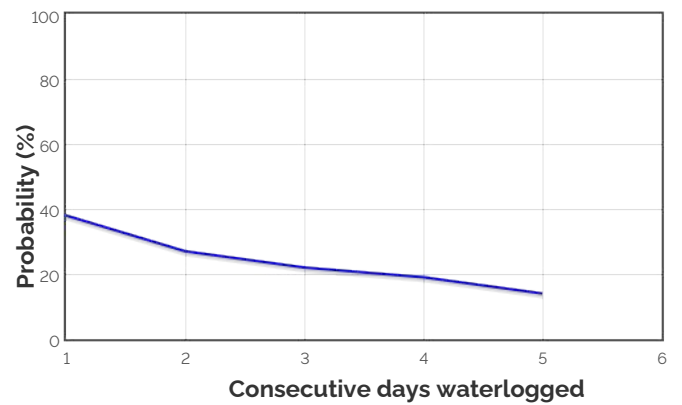
Current Distribution of PAW



Water Budget

Initial PAW status @ 22-Feb	14 mm
Rainfall since 22-Feb	155.9 mm
Irrigations	
Evaporation since 22-Feb	107 mm
Transpiration since 22-Feb	23 mm
Deep drainage since 22-Feb	0 mm
Run-off since 22-Feb	0 mm
Current PAW status:	41 mm

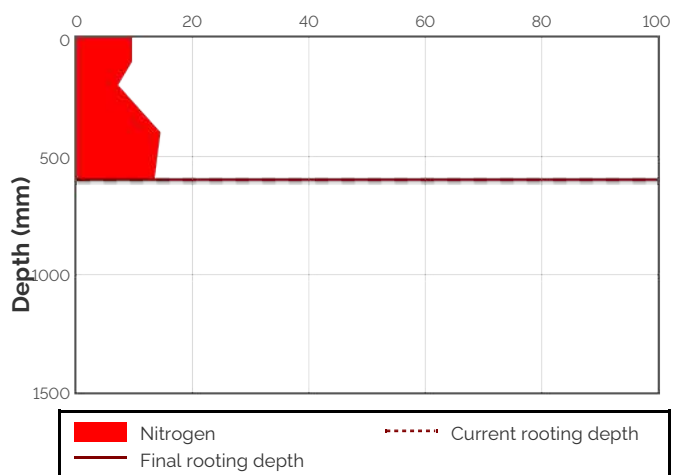
Probability of Future Waterlogging Events



Nitrogen Budget

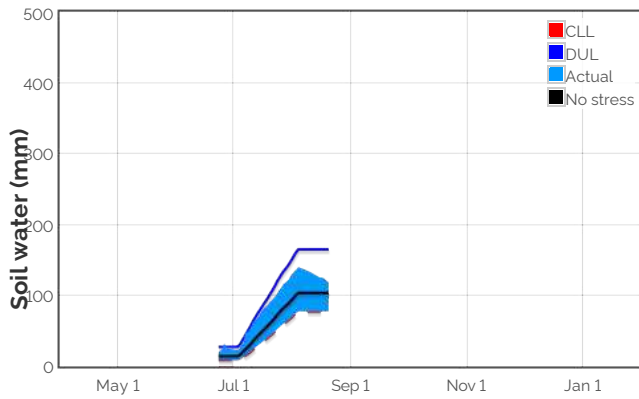
Initial N status @ 22-Feb	58 kg/ha
N mineralisation since 22-Feb	89 kg/ha
N tie up since 22-Feb	0 kg/ha
N applications	
21-Jun : 16 kg/ha	
26-Jul : 37 kg/ha	
Total N in plant	68 kg/ha
De-nitrification since 22-Feb	0 kg/ha
Leaching since 22-Feb	0 kg/ha
Current N status:	45 kg/ha
Median N mineralisation to maturity = 69.5297090029681 kg/ha	
Median N tie up to maturity = 0 kg/ha	

Current distribution of soil nitrogen (kg/ha)

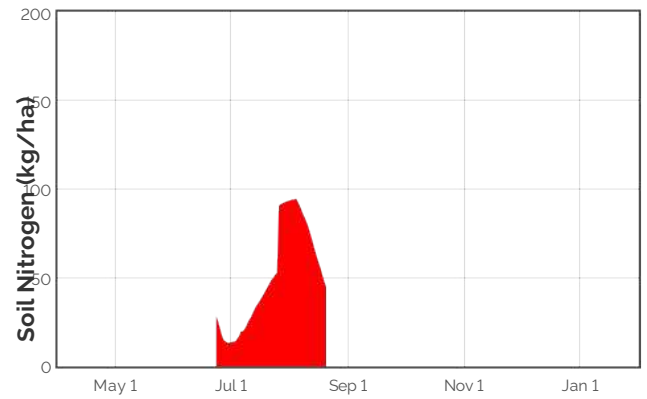


Current Crop Available N = 45 kg/ha
 Total Soil N = 45 kg/ha

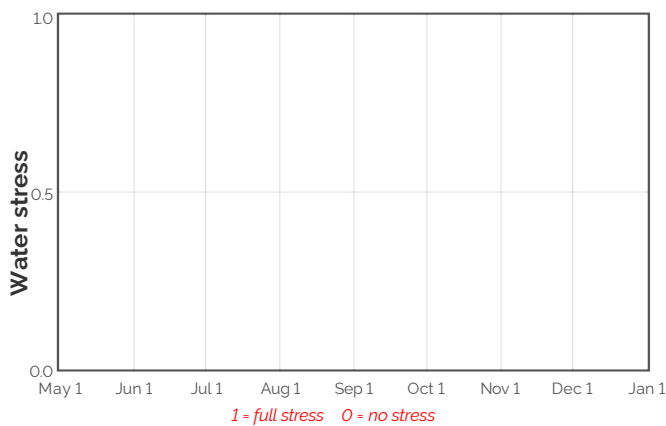
Availability of Water to Growing Roots



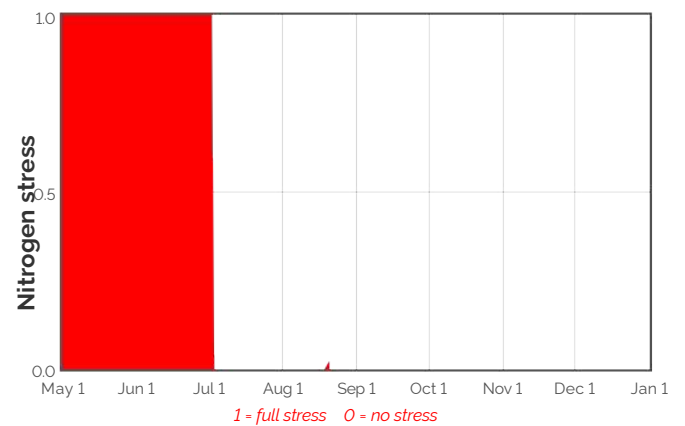
Availability of Soil Nitrogen to Growing Roots



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.

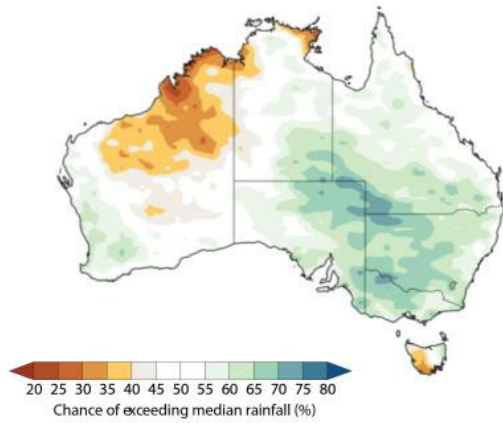
Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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	16.0	0.3	1.4	-2.8	13.6	39.9	42.5	0.4	0.0
23-Aug	16.0	0.3	1.5	-2.4	12.3	38.6	40.2	0.4	0.0
24-Aug	16.0	0.3	1.4	-2.1	10.9	37.2	38.1	0.4	0.0
25-Aug	16.0	0.3	1.6	-1.8	9.0	35.4	36.4	0.4	0.0
26-Aug	30.0	0.2	1.8	-1.6	7.4	33.7	34.9	0.4	0.0
27-Aug	30.2	0.2	1.9	-1.4	5.6	32.0	33.6	0.4	0.0
28-Aug	30.4	0.2	2.0	-1.3	4.2	30.4	32.3	0.4	0.0
29-Aug	30.6	0.2	1.9	-1.1	2.5	28.8	31.3	0.4	0.0
30-Aug	30.8	0.2	2.0	-1.0	1.0	27.4	30.4	0.4	0.0
31-Aug	31.0	0.2	1.8	-0.9	-0.4	26.0	29.5	0.4	0.0

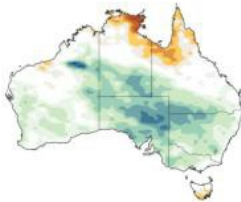
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

Bureau of Meteorology Seasonal and Monthly Outlooks

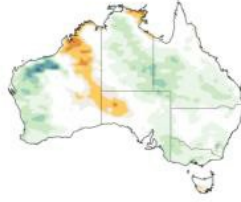
3 MONTH RAINFALL OUTLOOK FOR AUGUST TO OCTOBER



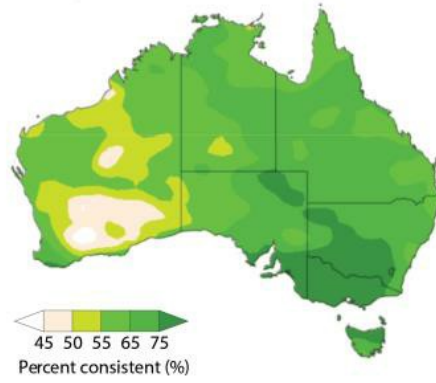
AUGUST RAINFALL OUTLOOK



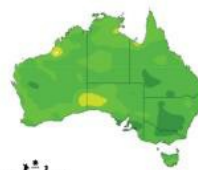
SEPTEMBER RAINFALL OUTLOOK



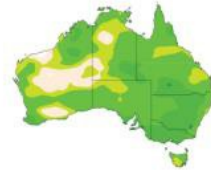
PAST ACCURACY FOR AUGUST TO OCTOBER



PAST ACCURACY FOR AUGUST



PAST ACCURACY FOR SEPTEMBER




Australian Government
Bureau of Meteorology

© Copyright
Commonwealth of Australia 2021 Bureau of Meteorology
<http://www.bom.gov.au/climate>

Issued: 23 July 2024