



Crop Report

21-Aug-2024

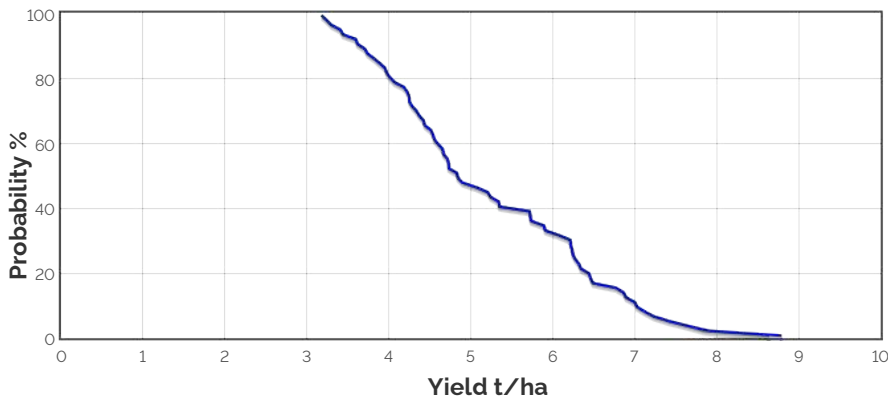
Andrew H Ware:
Cockaleecheie

Crop: Wheat
 Cultivar: Vixen
 Sowing details: 200 plants/m² on 1-Jun
 Expected maturity date: 4-Dec

Paddock Details
 Initial conditions date: 26-Feb
 Soil: Clay Loam over Loamy Medium Clay (Yeelanna No590)
 1200 mm max rooting depth
 Stubble: 1500 kg/ha of Canola
 No till

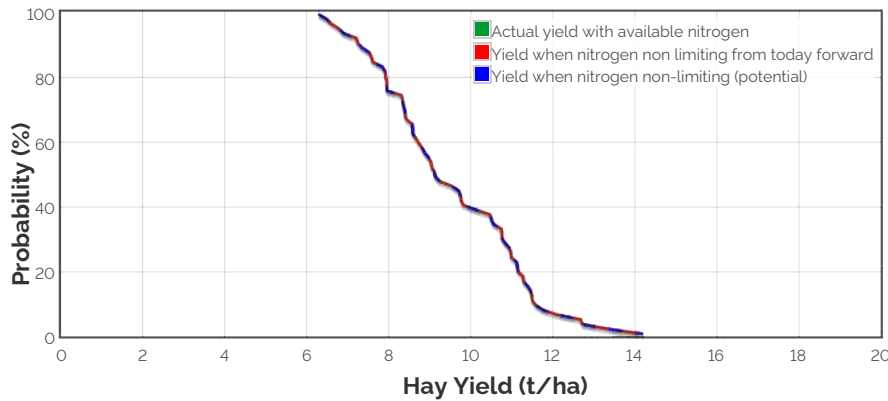
Grain Yield Outcome

- 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.

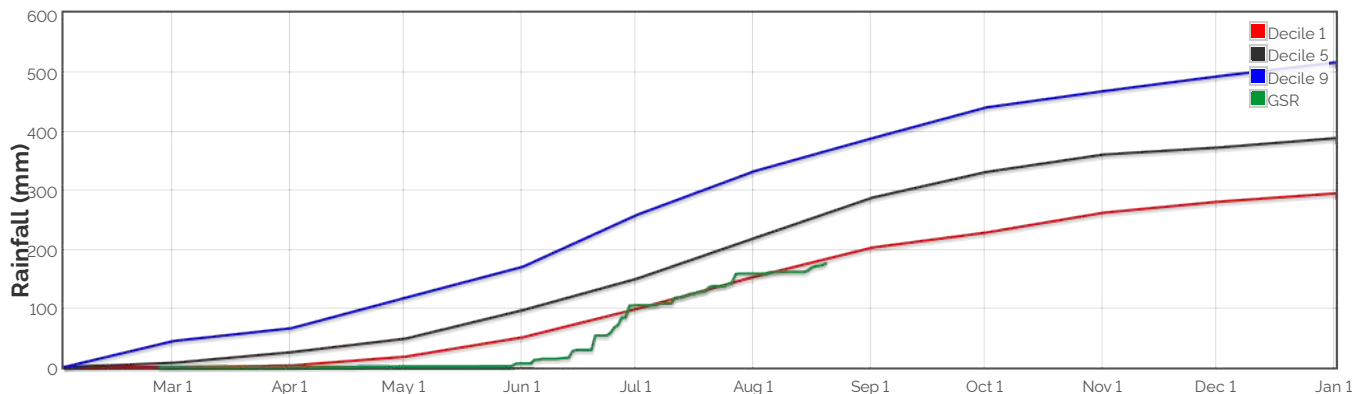
Hay Yield Outcome



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: 3939.451150115886kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	14-Jun	22-Jun	3-Jul	13-Jul	23-Jul	2-Aug
Median	14-Jun	22-Jun	3-Jul	13-Jul	23-Jul	2-Aug
Latest	15-Jun	22-Jun	3-Jul	13-Jul	23-Jul	3-Aug



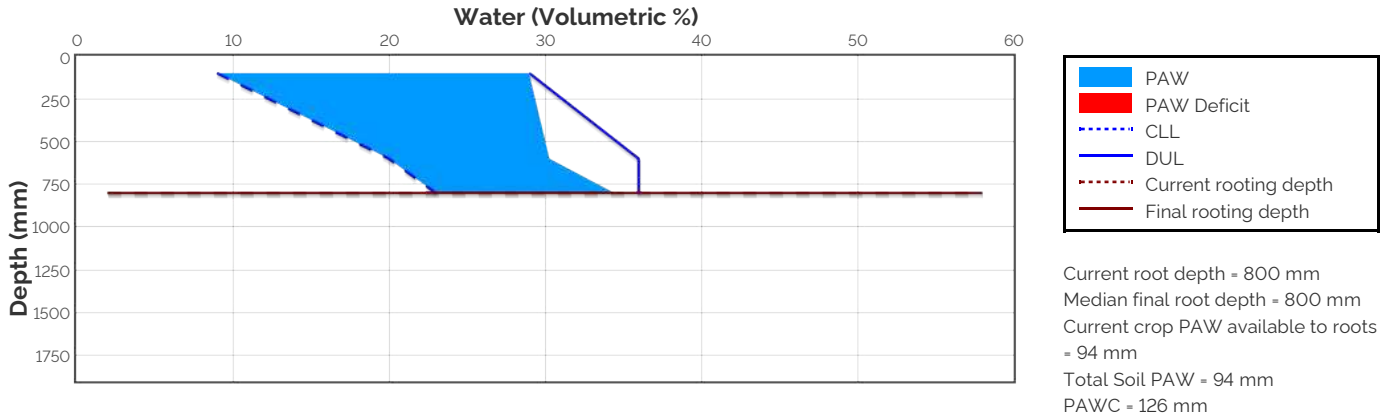
Predicted

Earliest	7-Aug	12-Aug	15-Aug	23-Aug	24-Aug	5-Sep	23-Sep	29-Sep	15-Oct
Median	7-Aug	12-Aug	15-Aug	24-Aug	25-Aug	8-Sep	27-Sep	3-Oct	20-Oct
Latest	8-Aug	14-Aug	16-Aug	25-Aug	27-Aug	11-Sep	2-Oct	8-Oct	26-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		2%	0	mild 32 to 34°C		38%	0
moderate 0 to -2°C during flowering & early grain fill		2%	0	moderate 34 to 36°C		29%	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C		13%	0

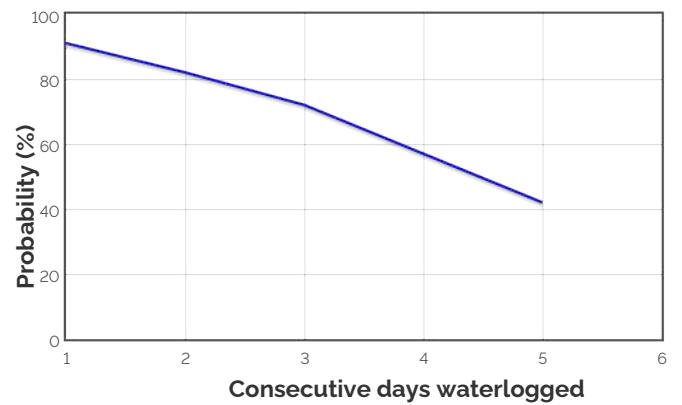
Current Distribution of PAW



Water Budget

Initial PAW status @ 26-Feb	98 mm
Rainfall since 26-Feb	176.7 mm
Irrigations	
Evaporation since 26-Feb	77 mm
Transpiration since 26-Feb	59 mm
Deep drainage since 26-Feb	46 mm
Run-off since 26-Feb	2 mm
Current PAW status:	94 mm

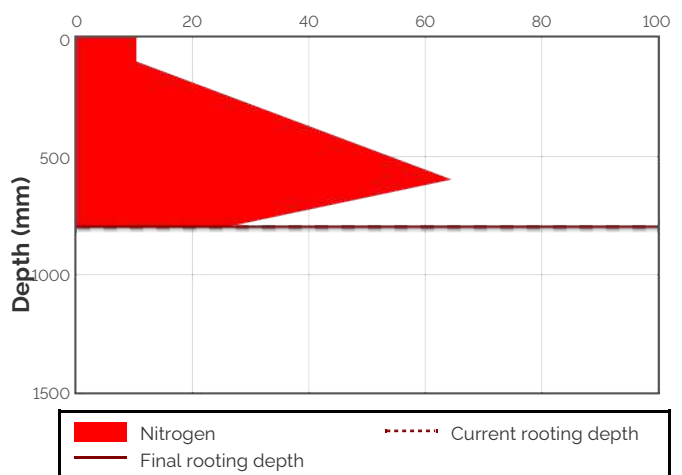
Probability of Future Waterlogging Events



Nitrogen Budget

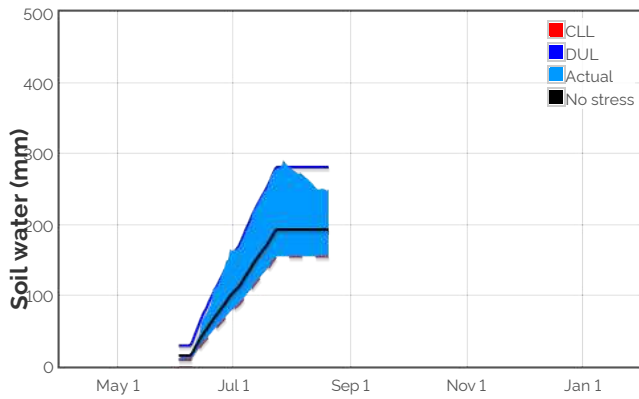
Initial N status @ 26-Feb	104 kg/ha
N mineralisation since 26-Feb	51 kg/ha
N tie up since 26-Feb	0 kg/ha
N applications	
7-May : 22 kg/ha	
25-Jun : 42 kg/ha	
25-Jul : 47.3 kg/ha	
Total N in plant	156 kg/ha
De-nitrification since 26-Feb	0 kg/ha
Leaching since 26-Feb	21 kg/ha
Current N status:	104 kg/ha
Median N mineralisation to maturity = 47.4571685205427 kg/ha	
Median N tie up to maturity = 0 kg/ha	

Current distribution of soil nitrogen (kg/ha)

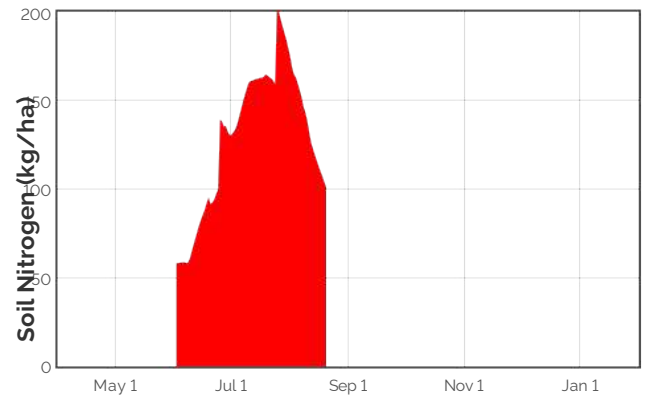


Current Crop Available N = 101 kg/ha
 Total Soil N = 104 kg/ha

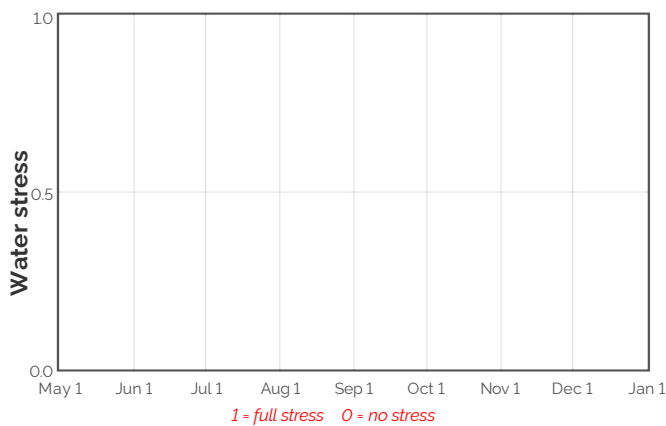
Availability of Water to Growing Roots



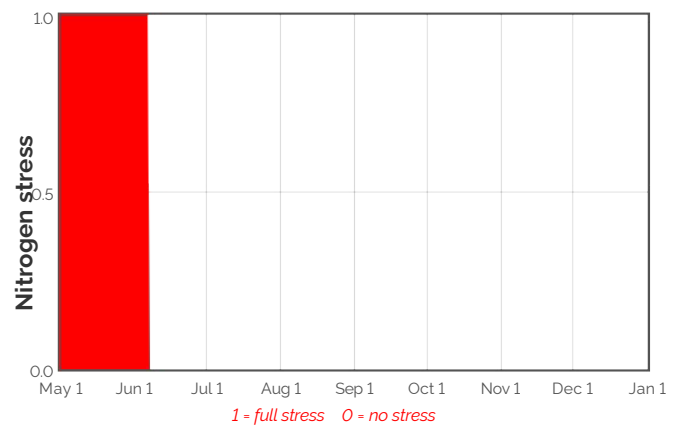
Availability of Soil Nitrogen to Growing Roots



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.

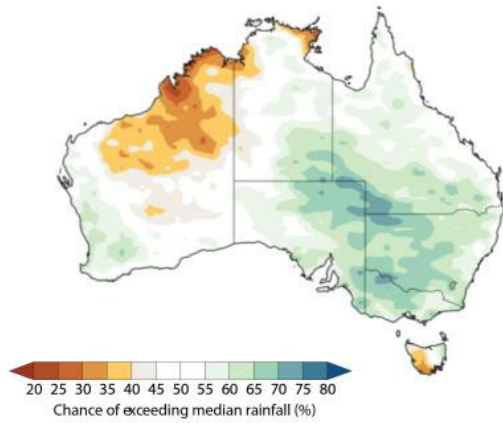
Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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	34.5	0.5	2.0	-2.8	54.5	92.3	100.0	0.2	0.0
23-Aug	36.2	0.5	2.1	-2.6	52.6	90.4	97.6	0.2	0.0
24-Aug	37.8	0.4	1.8	-1.8	49.8	87.6	96.2	0.2	0.0
25-Aug	39.0	0.5	2.2	-0.6	47.8	85.6	95.6	0.2	0.0
26-Aug	39.4	0.4	2.1	-1.8	45.2	83.0	93.7	0.2	0.0
27-Aug	39.8	0.5	2.3	-2.0	42.8	80.6	92.0	0.2	0.0
28-Aug	40.2	0.5	2.2	-2.0	40.4	78.2	90.2	0.2	0.0
29-Aug	40.6	0.5	2.2	-1.8	37.4	75.2	88.5	0.2	0.0
30-Aug	41.0	0.5	2.3	-1.9	34.9	72.7	86.9	0.2	0.0
31-Aug	41.5	0.5	2.0	-1.9	32.2	70.0	85.6	0.2	0.0

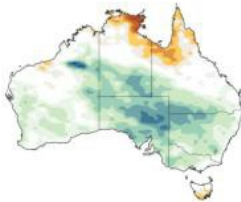
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

Bureau of Meteorology Seasonal and Monthly Outlooks

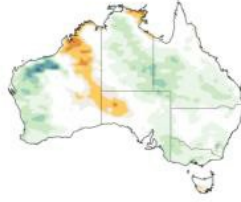
3 MONTH RAINFALL OUTLOOK FOR AUGUST TO OCTOBER



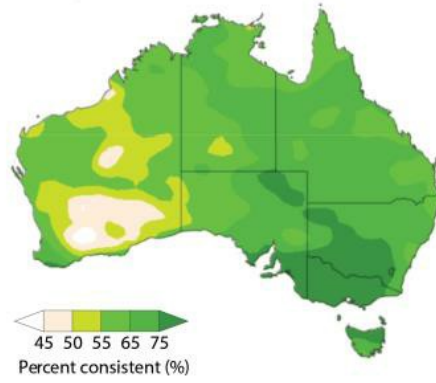
AUGUST RAINFALL OUTLOOK



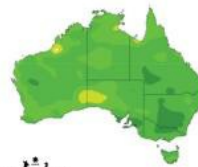
SEPTEMBER RAINFALL OUTLOOK



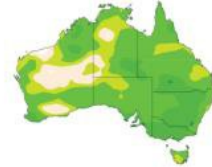
PAST ACCURACY FOR AUGUST TO OCTOBER



PAST ACCURACY FOR AUGUST



PAST ACCURACY FOR SEPTEMBER




Australian Government
Bureau of Meteorology

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