

Crop Report

8-Oct-2024

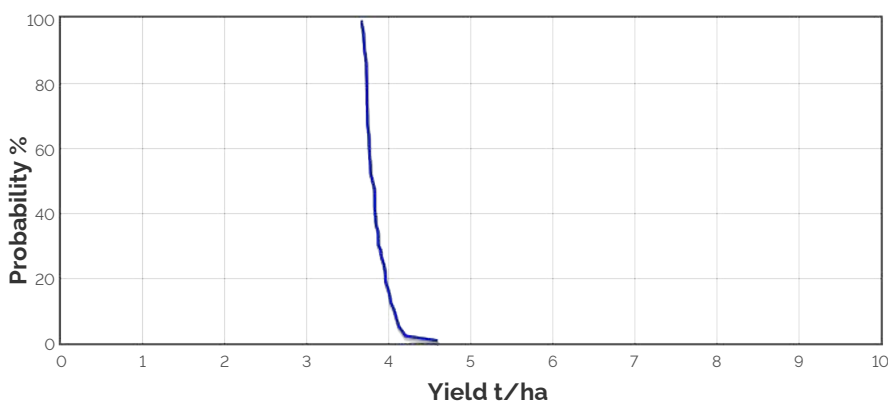
Andrew H Ware:
Cockaleecheie

Crop: Wheat
Cultivar: Vixen
Sowing details: 200 plants/m² on 1-Jun
Expected maturity date: 2-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

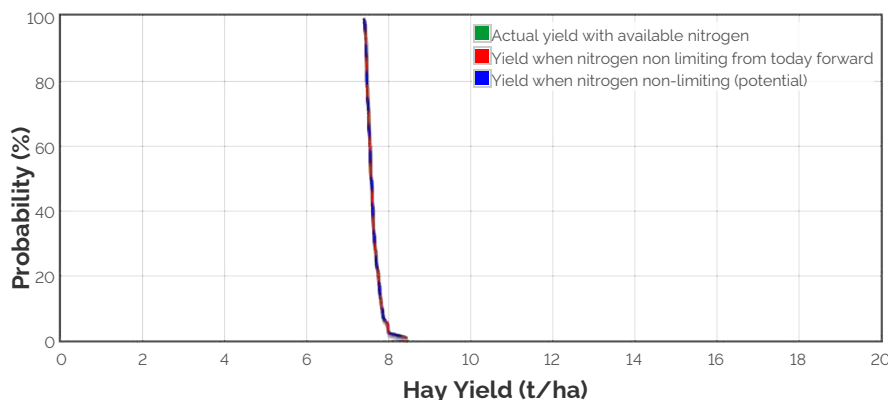
Grain Yield Outcome

- 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.

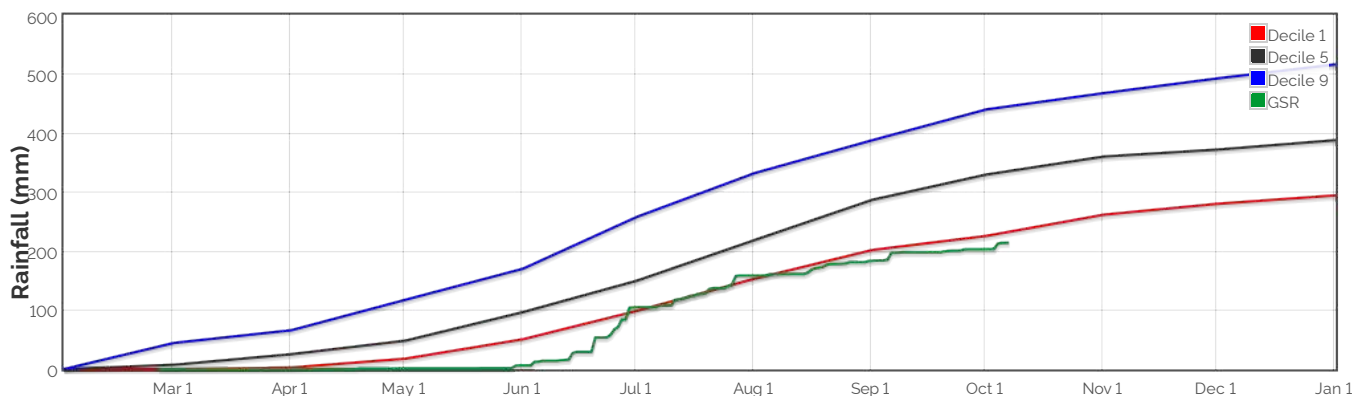
Hay Yield Outcome



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: 8633.833642030222kg/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



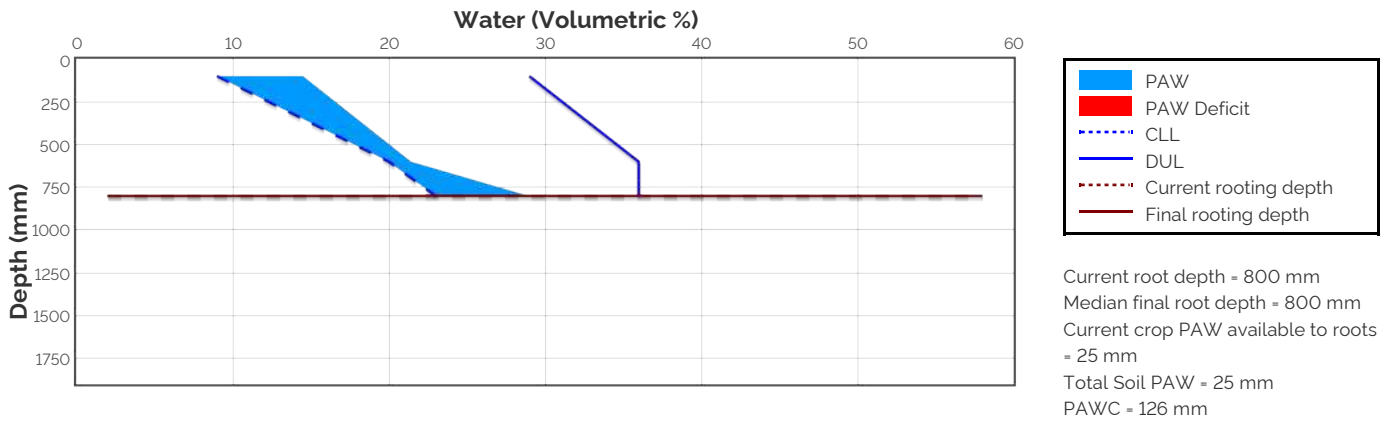
Predicted

Earliest	7-Aug	12-Aug	15-Aug	24-Aug	24-Aug	5-Sep	24-Sep	30-Sep	16-Oct
Median	7-Aug	12-Aug	15-Aug	24-Aug	24-Aug	5-Sep	24-Sep	30-Sep	17-Oct
Latest	8-Aug	14-Aug	16-Aug	24-Aug	25-Aug	6-Sep	25-Sep	1-Oct	21-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	1%	0		mild 32 to 34°C	38%	0	
moderate 0 to -2°C during flowering & early grain fill	1%	0		moderate 34 to 36°C	26%	0	
severe Less than -2°C during flowering & grain fill	0%	0		severe Above 36°C	10%	0	

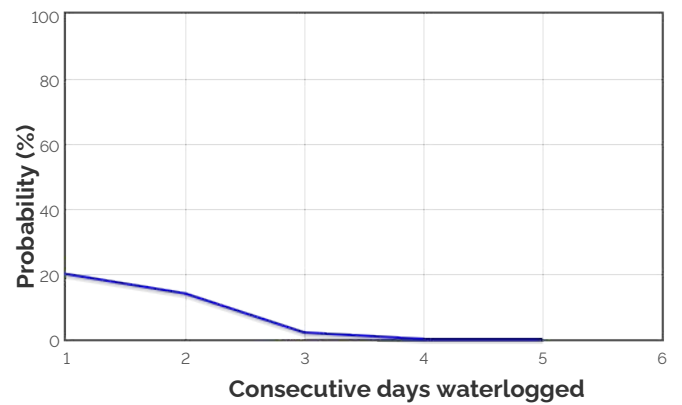
Current Distribution of PAW



Water Budget

Initial PAW status @ 26-Feb	98 mm
Rainfall since 26-Feb	214.2 mm
Irrigations	
Evaporation since 26-Feb	105 mm
Transpiration since 26-Feb	192 mm
Deep drainage since 26-Feb	46 mm
Run-off since 26-Feb	2 mm
Current PAW status:	25 mm

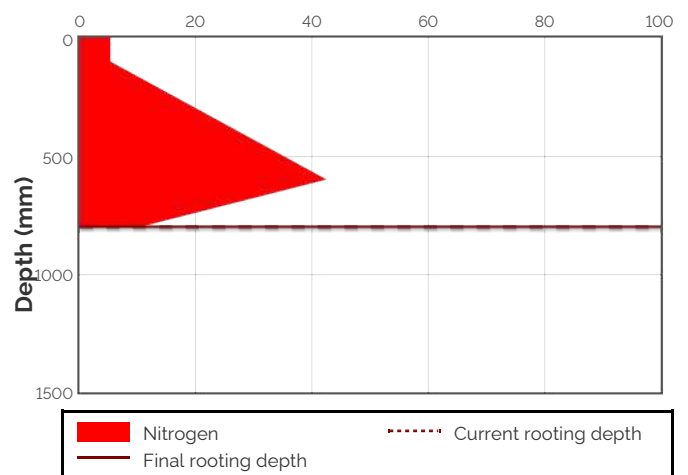
Probability of Future Waterlogging Events



Nitrogen Budget

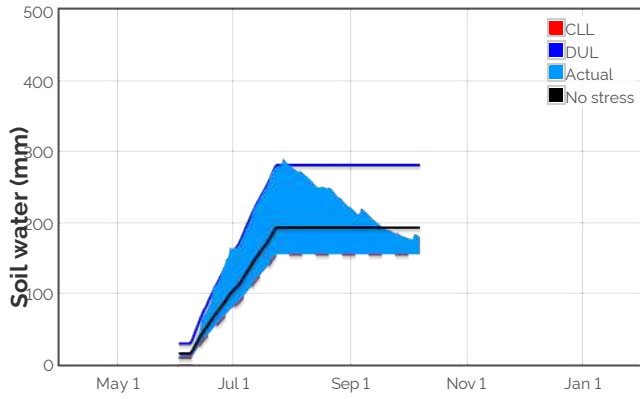
Initial N status @ 26-Feb	104 kg/ha
N mineralisation since 26-Feb	63 kg/ha
N tie up since 26-Feb	0 kg/ha
N applications	
7-May : 22 kg/ha	
25-Jun : 42 kg/ha	
25-Jul : 47.3 kg/ha	
Total N in plant	205 kg/ha
De-nitrification since 26-Feb	0 kg/ha
Leaching since 26-Feb	21 kg/ha
Current N status:	59 kg/ha
Median N mineralisation to maturity = 45.6842846362597 kg/ha	
Median N tie up to maturity = 0 kg/ha	

Current distribution of soil nitrogen (kg/ha)

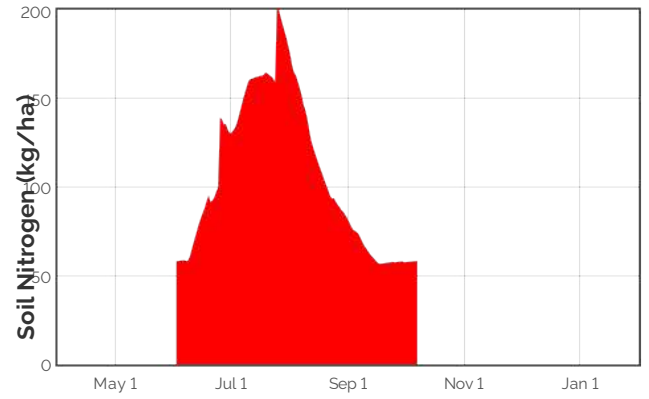


Current Crop Available N = 58 kg/ha
 Total Soil N = 59 kg/ha

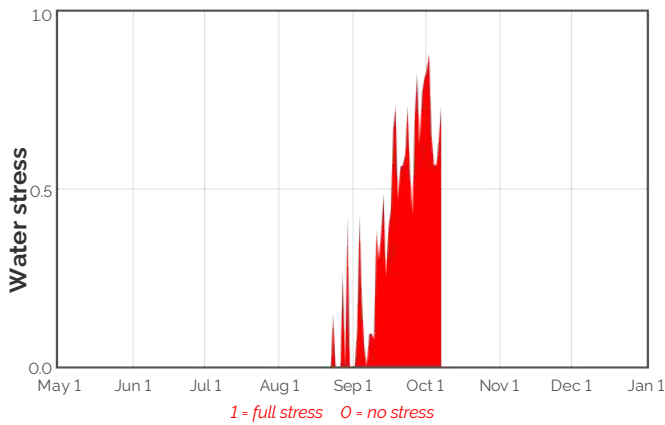
Availability of Water to Growing Roots



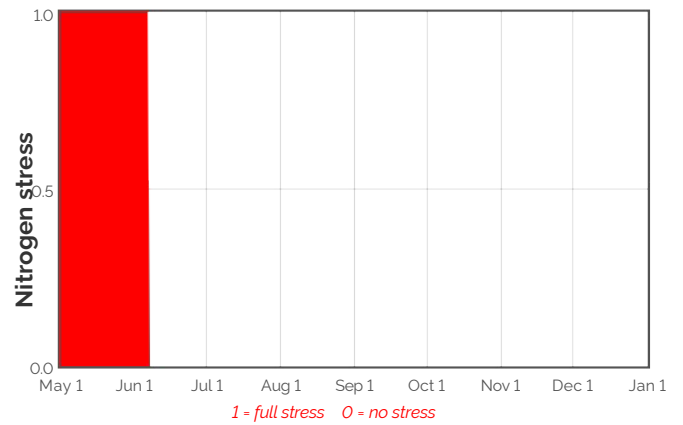
Availability of Soil Nitrogen to Growing Roots



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.

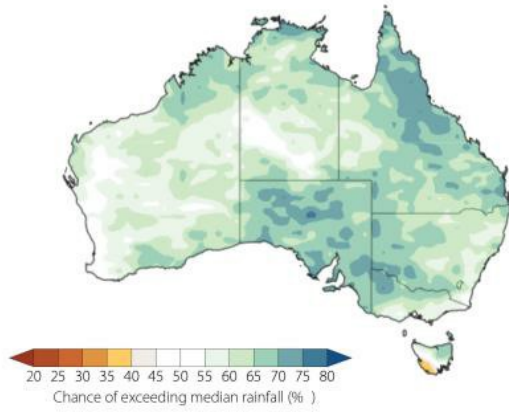
Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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)
9-Oct	71.5	0.9	2.4	0.0	-15.4	22.4	58.9	0.3	0.0
10-Oct	72.0	0.8	2.0	0.0	-16.9	20.9	59.0	0.3	0.0
11-Oct	72.4	0.6	1.6	-0.4	-18.2	19.6	58.8	0.3	0.0
12-Oct	72.8	0.5	1.5	-0.6	-19.3	18.5	58.3	0.3	0.0
13-Oct	73.3	0.5	1.3	-0.6	-20.3	17.5	57.8	0.3	0.0
14-Oct	73.7	0.4	1.2	-0.6	-21.2	16.6	57.2	0.2	0.0
15-Oct	74.1	0.4	0.9	-0.5	-21.9	15.9	56.8	0.2	0.0
16-Oct	74.6	0.4	0.7	-0.5	-22.6	15.2	56.4	0.2	0.0
17-Oct	75.0	0.3	0.6	-0.5	-23.3	14.5	56.0	0.2	0.0
18-Oct	75.4	0.3	0.4	-0.4	-24.0	13.8	55.6	0.2	0.0

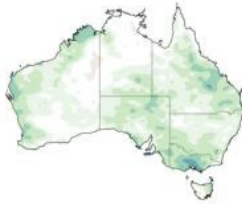
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

Bureau of Meteorology Seasonal and Monthly Outlooks

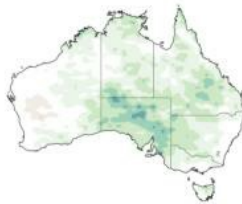
3 MONTH RAINFALL OUTLOOK FOR OCTOBER TO DECEMBER



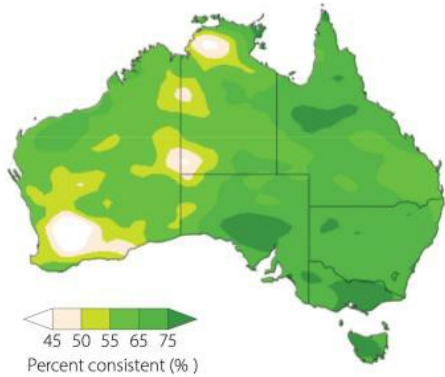
OCTOBER RAINFALL OUTLOOK



NOVEMBER RAINFALL OUTLOOK



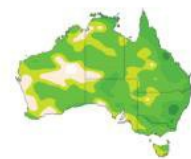
PAST ACCURACY FOR OCTOBER TO DECEMBER



PAST ACCURACY FOR OCTOBER



PAST ACCURACY FOR NOVEMBER




Australian Government
Bureau of Meteorology

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

Issued: 17 September 2024