



Crop Report

8-Oct-2024

Andrew H Ware: Heddle
Minnipa

Crop: Wheat

Cultivar: Calibre

Sowing details: 150 plants/m² on 1-Jun

Expected maturity date: 19-Nov

Paddock Details

Initial conditions date: 22-Feb

Soil: Red sandy clay loam (Minnipa No909)

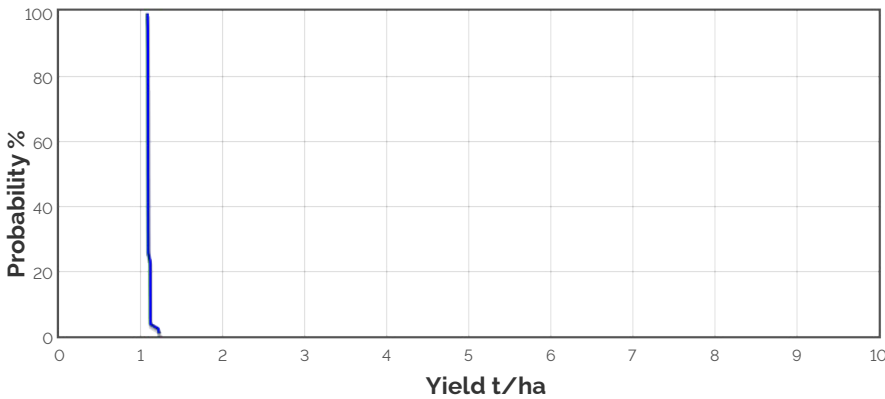
1000 mm max rooting depth

Stubble: 500 kg/ha of Lentil

No till

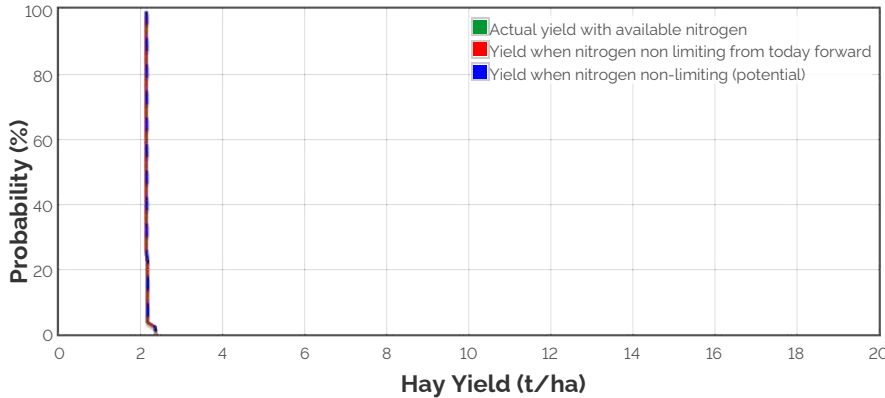
Grain Yield Outcome

- 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.

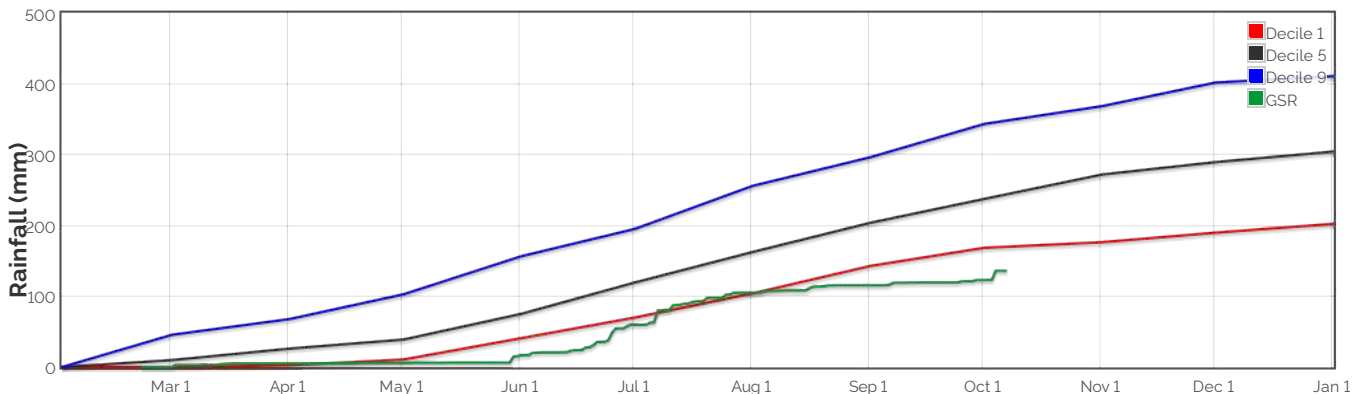
Hay Yield Outcome



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: 2656.3737617962693kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	18-Jun	26-Jun	7-Jul	17-Jul	26-Jul	6-Aug
Median	18-Jun	26-Jun	7-Jul	17-Jul	26-Jul	6-Aug
Latest	19-Jun	27-Jun	8-Jul	18-Jul	27-Jul	7-Aug



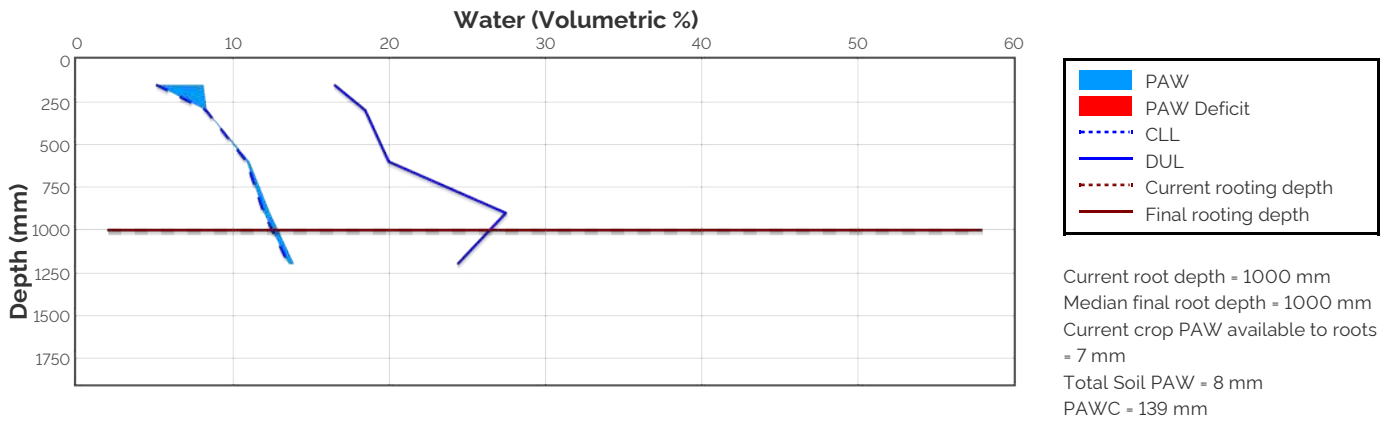
Predicted

Earliest	12-Aug	16-Aug	20-Aug	26-Aug	27-Aug	2-Sep	11-Sep	17-Sep	5-Oct
Median	12-Aug	16-Aug	20-Aug	26-Aug	27-Aug	2-Sep	11-Sep	18-Sep	5-Oct
Latest	12-Aug	17-Aug	20-Aug	27-Aug	27-Aug	2-Sep	11-Sep	18-Sep	5-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	38%	0	0
moderate 0 to -2°C during flowering & early grain fill		0%	0	moderate 34 to 36°C	19%	0	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C	11%	0	0

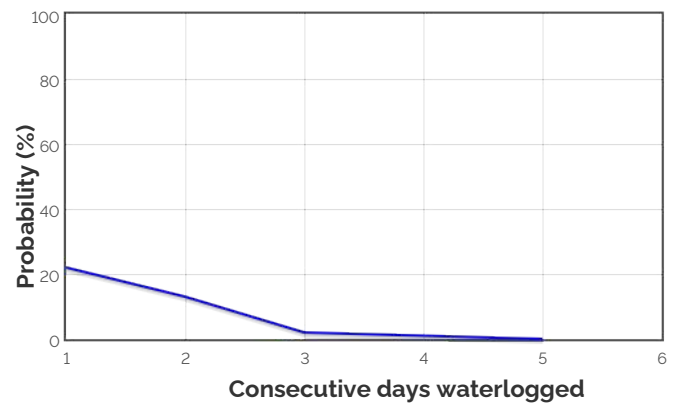
Current Distribution of PAW



Water Budget

Initial PAW status @ 22-Feb	29 mm
Rainfall since 22-Feb	136.2 mm
Irrigations	
Evaporation since 22-Feb	113 mm
Transpiration since 22-Feb	99 mm
Deep drainage since 22-Feb	0 mm
Run-off since 22-Feb	0 mm
Current PAW status:	8 mm

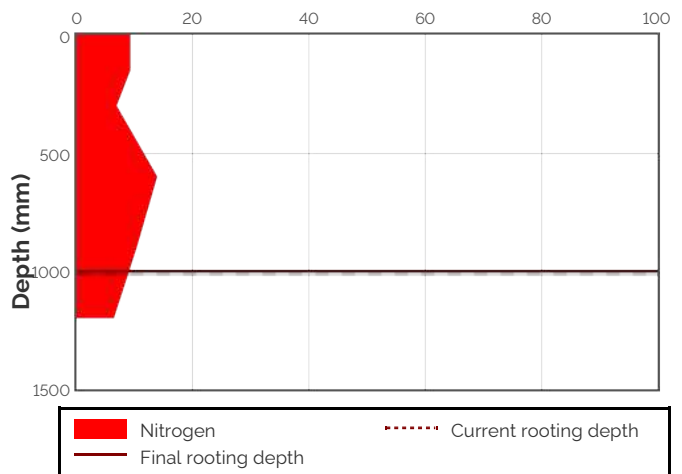
Probability of Future Waterlogging Events



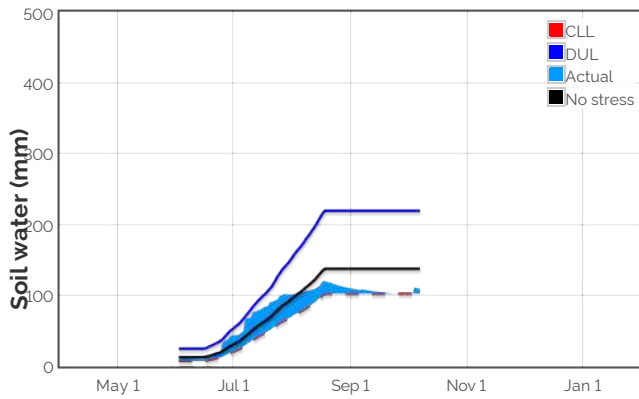
Nitrogen Budget

Initial N status @ 22-Feb	60 kg/ha
N mineralisation since 22-Feb	50 kg/ha
N tie up since 22-Feb	0 kg/ha
N applications	
1-May : 16 kg/ha	
31-May : 24 kg/ha	
17-Jul : 34.5 kg/ha	
Total N in plant	82 kg/ha
De-nitrification since 22-Feb	0 kg/ha
Leaching since 22-Feb	0 kg/ha
Current N status:	54 kg/ha
Median N mineralisation to maturity = 31.0076340131605 kg/ha	
Median N tie up to maturity = 0 kg/ha	

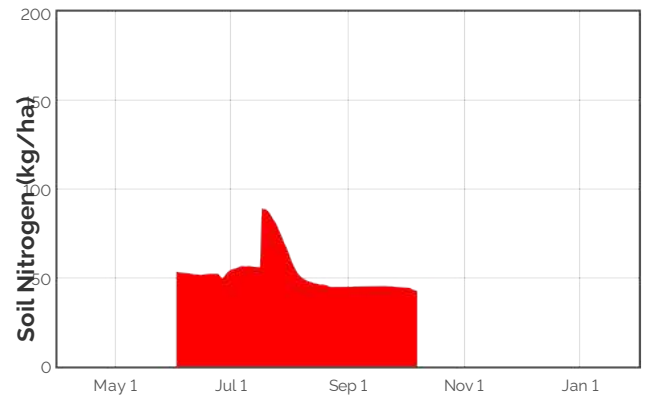
Current distribution of soil nitrogen (kg/ha)



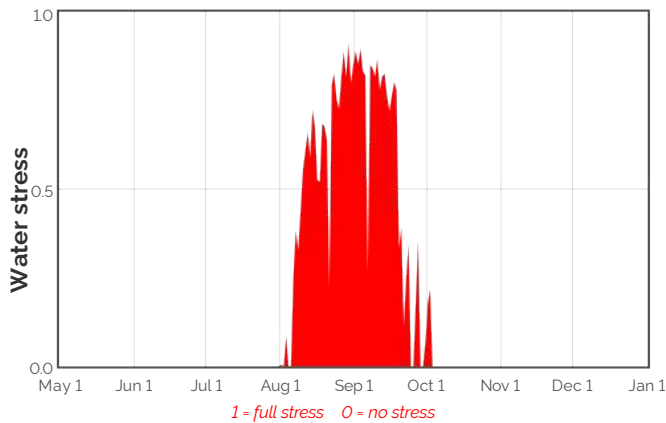
Availability of Water to Growing Roots



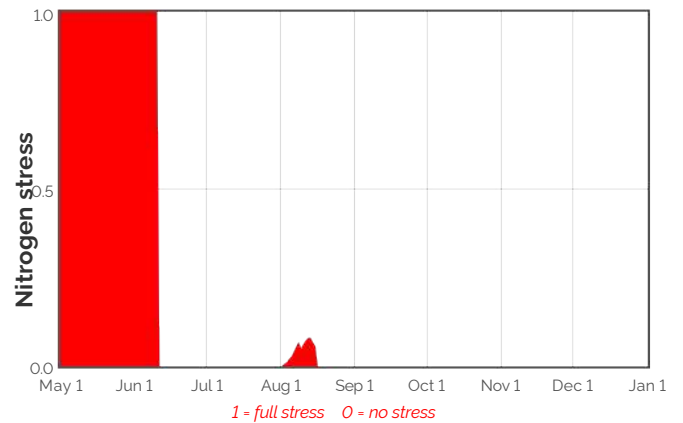
Availability of Soil Nitrogen to Growing Roots



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.

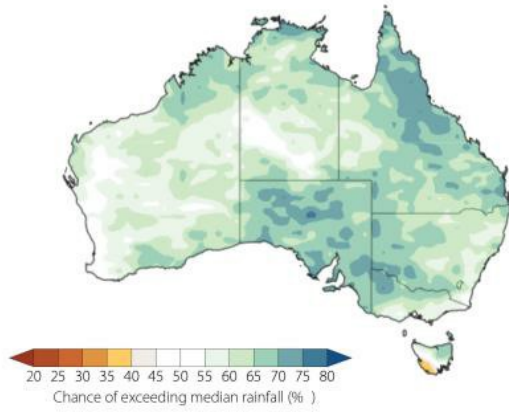
Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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	77.3	0.4	0.0	-0.3	-29.2	5.9	41.5	0.2	0.0
10-Oct	77.8	0.4	0.0	-0.2	-29.6	5.5	41.3	0.2	0.0
11-Oct	78.2	0.4	0.0	-0.2	-30.0	5.1	41.1	0.2	0.0
12-Oct	78.7	0.3	0.0	-0.2	-30.4	4.7	41.0	0.2	0.0
13-Oct	79.1	0.3	0.0	-0.1	-30.7	4.4	40.9	0.2	0.0
14-Oct	79.6	0.3	0.0	0.0	-31.1	4.0	40.9	0.2	0.0
15-Oct	80.0	0.3	0.0	0.0	-31.4	3.7	40.9	0.2	0.0
16-Oct	80.5	0.3	0.0	0.0	-31.7	3.4	40.9	0.2	0.0
17-Oct	81.0	0.3	0.0	0.0	-32.0	3.1	41.0	0.1	0.0
18-Oct	81.4	0.3	0.0	0.0	-32.3	2.8	41.0	0.1	0.0

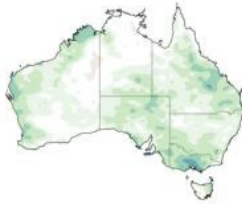
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

Bureau of Meteorology Seasonal and Monthly Outlooks

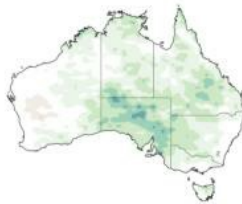
3 MONTH RAINFALL OUTLOOK FOR OCTOBER TO DECEMBER



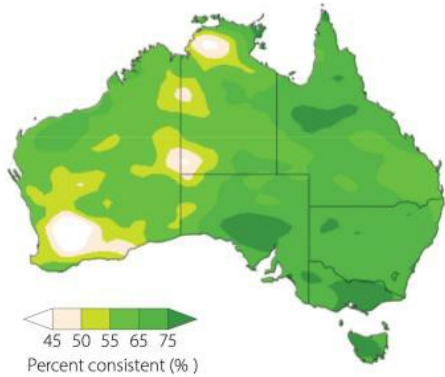
OCTOBER RAINFALL OUTLOOK



NOVEMBER RAINFALL OUTLOOK



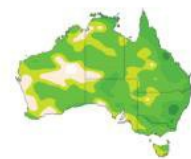
PAST ACCURACY FOR OCTOBER TO DECEMBER



PAST ACCURACY FOR OCTOBER



PAST ACCURACY FOR NOVEMBER




Australian Government
Bureau of Meteorology

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