

Crop Report

2-Jul-2024

Andrew H Ware: Heddle
Minnipa

Crop: Wheat

Cultivar: Calibre

Sowing details: 150 plants/m² on 1-Jun

Expected maturity date: 24-Nov

Paddock Details

Initial conditions date: 22-Feb

Soil: Red sandy clay loam (Minnipa No909)

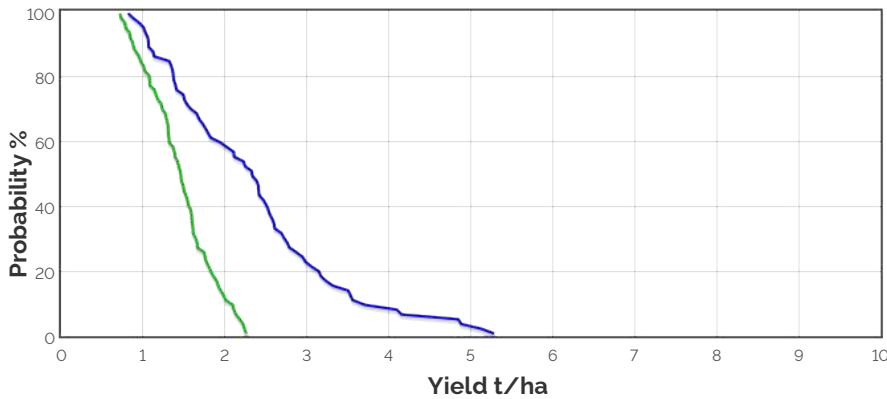
1000 mm max rooting depth

Stubble: 500 kg/ha of Lentil

No till

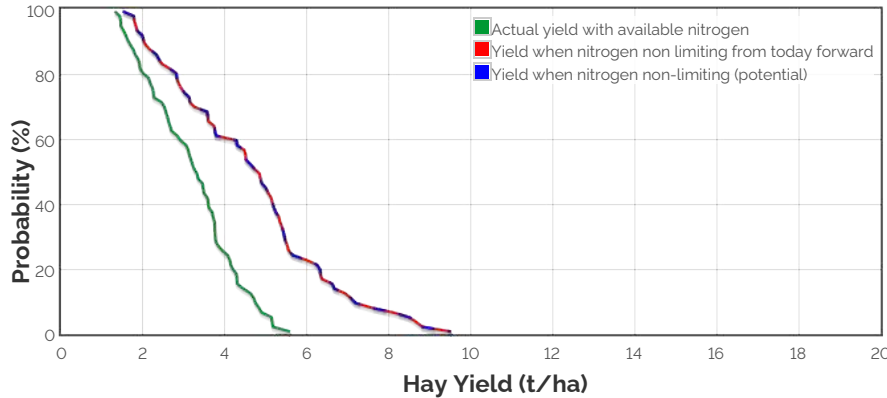
Grain Yield Outcome

- 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.

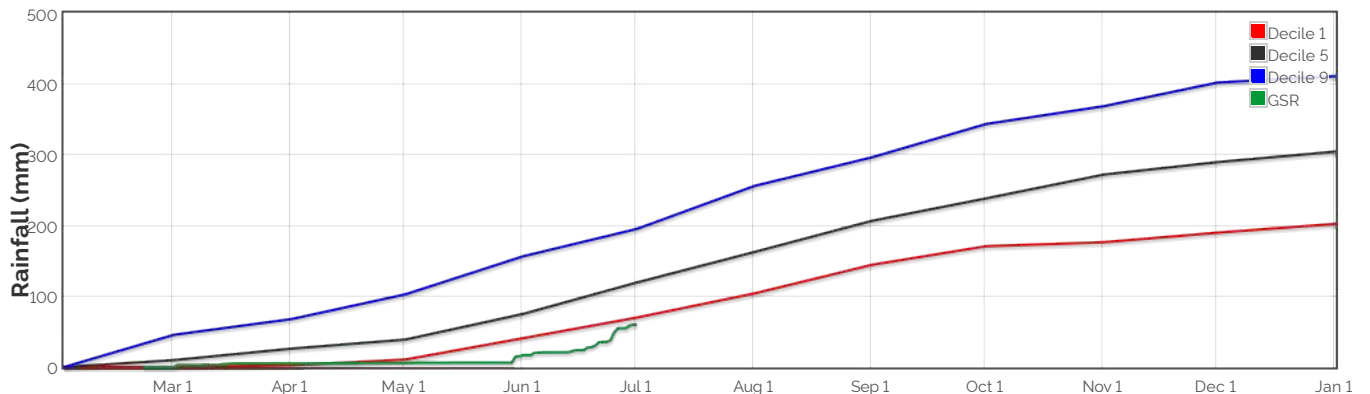
Hay Yield Outcome



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: 66.88018043987972kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	18-Jun	26-Jun	5-Jul	13-Jul	23-Jul	1-Aug
Median	18-Jun	26-Jun	6-Jul	17-Jul	27-Jul	5-Aug
Latest	19-Jun	27-Jun	9-Jul	20-Jul	31-Jul	11-Aug



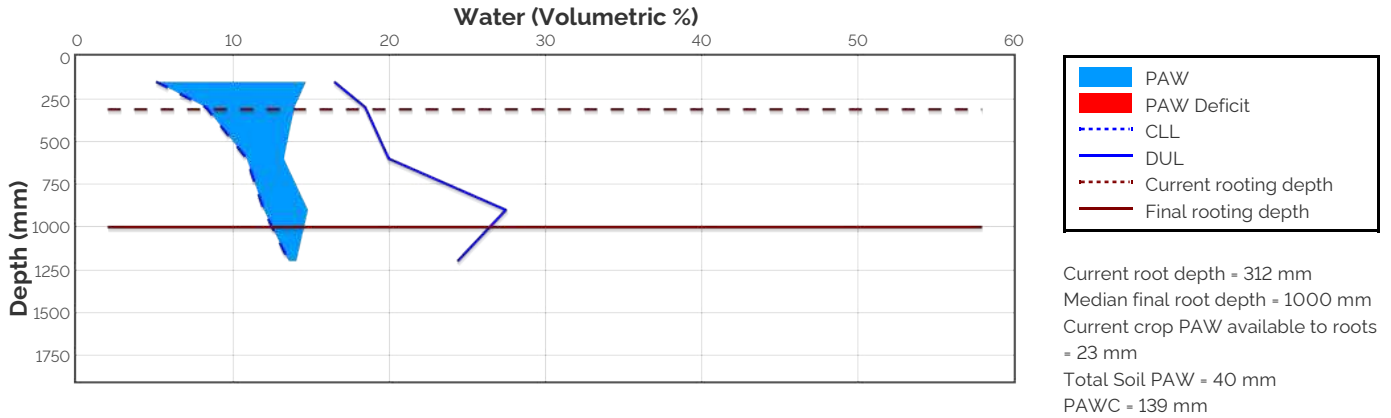
Predicted

Earliest	8-Aug	13-Aug	18-Aug	25-Aug	25-Aug	2-Sep	12-Sep	17-Sep	2-Oct
Median	11-Aug	17-Aug	23-Aug	30-Aug	31-Aug	7-Sep	17-Sep	23-Sep	10-Oct
Latest	18-Aug	26-Aug	31-Aug	9-Sep	9-Sep	16-Sep	26-Sep	3-Oct	20-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		5%	0	mild 32 to 34°C		69%	0
moderate 0 to -2°C during flowering & early grain fill		0%	0	moderate 34 to 36°C		39%	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C		29%	0

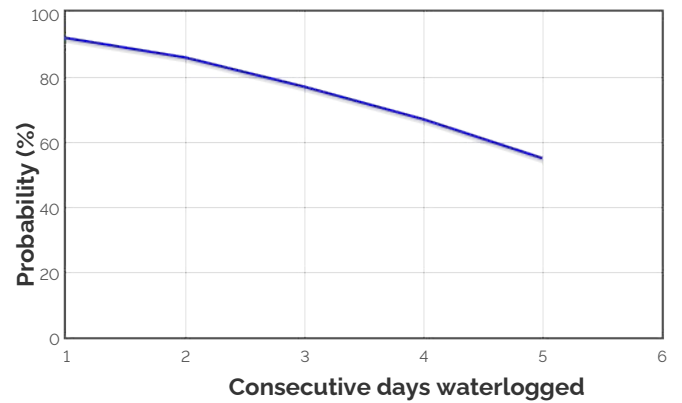
Current Distribution of PAW



Water Budget

Initial PAW status @ 22-Feb	29 mm
Rainfall since 22-Feb	59.9 mm
Irrigations	
Evaporation since 22-Feb	47 mm
Transpiration since 22-Feb	1 mm
Deep drainage since 22-Feb	0 mm
Run-off since 22-Feb	0 mm
Current PAW status:	40 mm

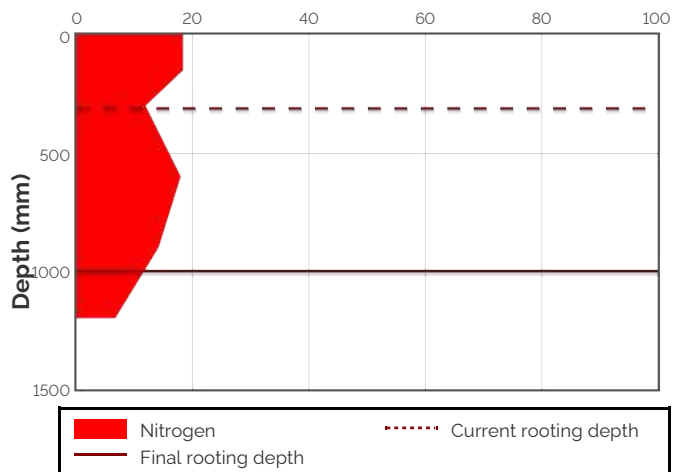
Probability of Future Waterlogging Events



Nitrogen Budget

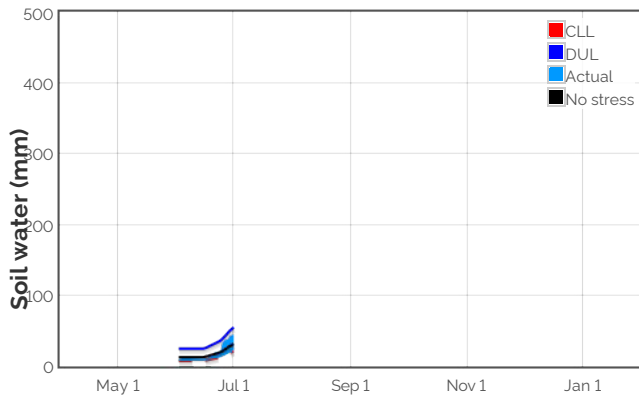
Initial N status @ 22-Feb	60 kg/ha
N mineralisation since 22-Feb	32 kg/ha
N tie up since 22-Feb	0 kg/ha
N applications	
1-May : 16 kg/ha	
Total N in plant	4 kg/ha
De-nitrification since 22-Feb	0 kg/ha
Leaching since 22-Feb	0 kg/ha
Current N status:	77 kg/ha

Current distribution of soil nitrogen (kg/ha)

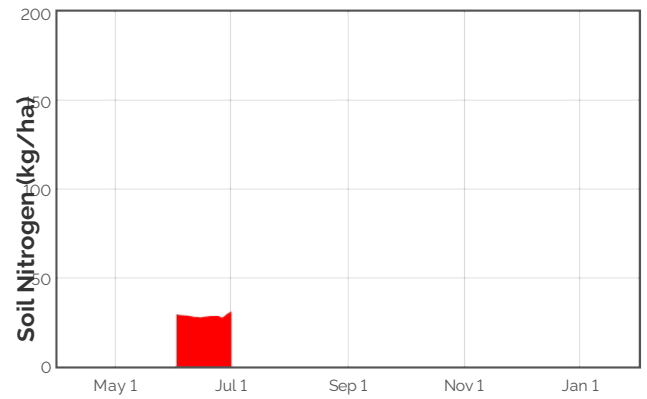


Median N mineralisation to maturity = 40.4358234240783 kg/ha
 Median N tie up to maturity = 0 kg/ha

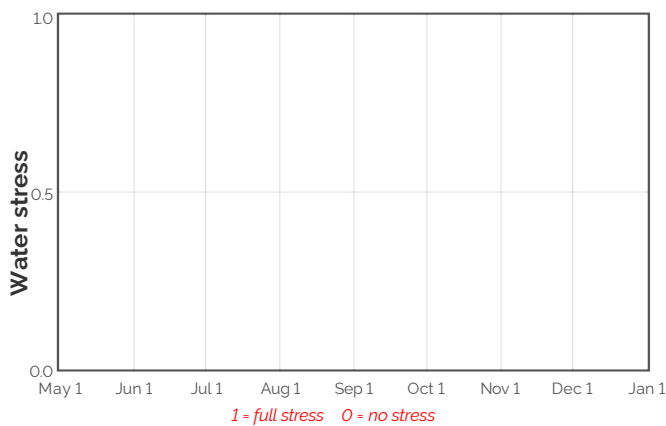
Availability of Water to Growing Roots



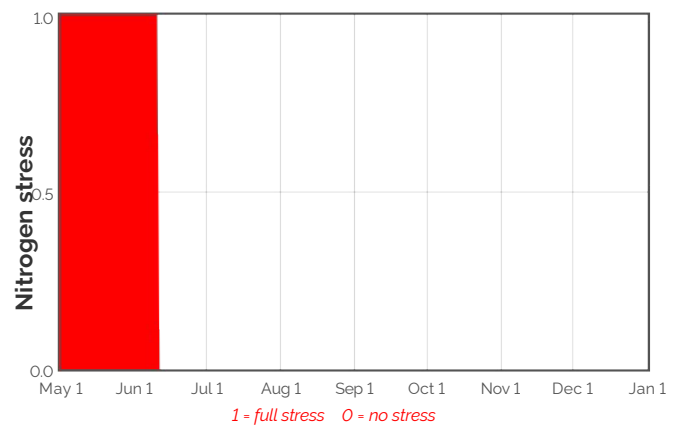
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



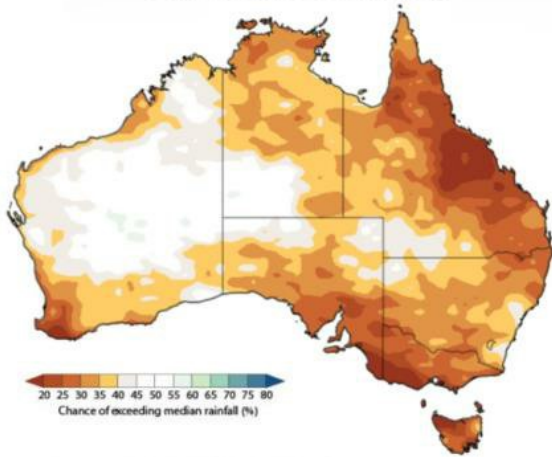
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

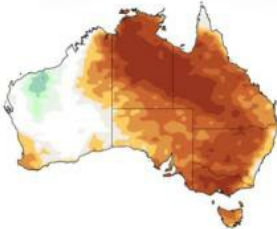
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
3-Jul	12.7	1.1	0.1	-0.3	11.6	22.2	31.7	0.2	0.0
4-Jul	12.8	0.8	0.1	-0.3	10.6	21.6	32.2	0.2	0.0
5-Jul	12.9	0.6	0.1	-0.3	9.8	21.3	32.7	0.2	0.0
6-Jul	13.0	0.5	0.1	-0.4	9.1	21.1	33.1	0.2	0.0
7-Jul	13.1	0.5	0.1	-0.5	8.6	20.9	33.6	0.2	0.0
8-Jul	13.2	0.4	0.1	-0.5	8.0	20.7	34.0	0.2	0.0
9-Jul	13.3	0.4	0.1	-0.5	7.4	20.6	34.3	0.2	0.0
10-Jul	13.4	0.4	0.1	-0.6	6.8	20.4	34.7	0.2	0.0
11-Jul	13.5	0.3	0.1	-0.6	6.4	20.3	35.0	0.2	0.0
12-Jul	13.6	0.3	0.2	-0.6	5.9	20.2	35.2	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.

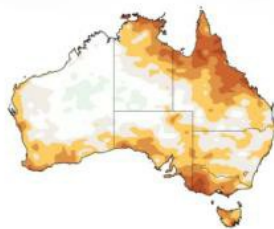
3 MONTH RAINFALL OUTLOOK FOR OCTOBER TO DECEMBER



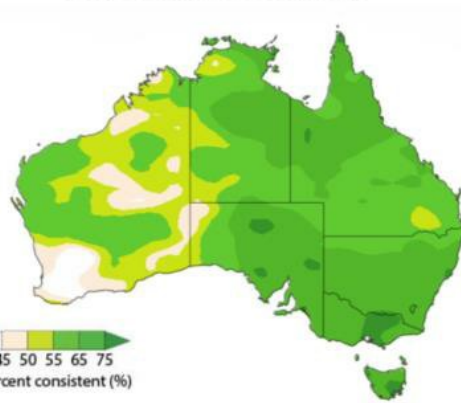
OCTOBER RAINFALL OUTLOOK



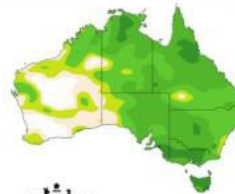
NOVEMBER RAINFALL OUTLOOK



PAST ACCURACY FOR OCTOBER TO DECEMBER



PAST ACCURACY FOR OCTOBER



PAST ACCURACY FOR NOVEMBER

