



# Crop Report

26-Jul-2023

Andrew H Ware: Heddle  
Minnipa

Crop: Wheat

Cultivar: Calibre

Sowing details: 150 plants/m<sup>2</sup> on 8-May

Expected maturity date: 11-Nov

Paddock Details

Initial conditions date: 18-Apr

Soil: Red sandy clay loam (Minnipa No909)

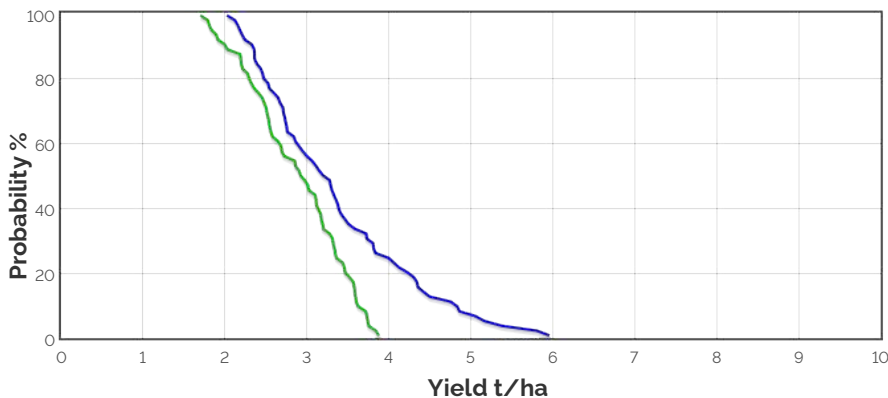
1000 mm max rooting depth

Stubble: 1000 kg/ha of Lentil

No till

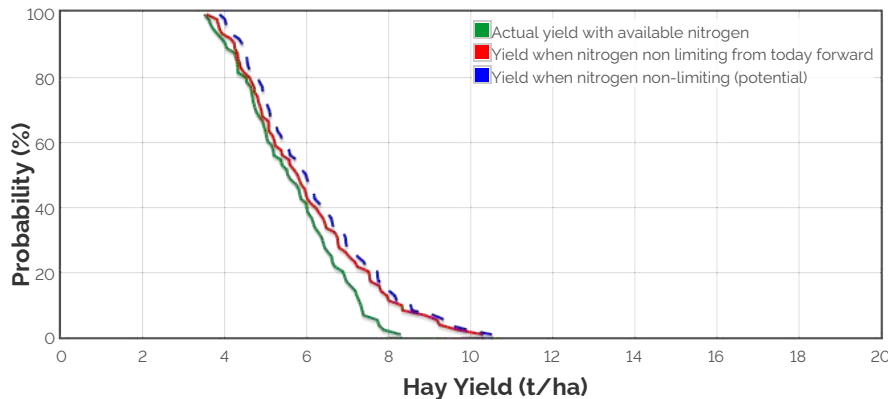
## Grain Yield Outcome

- 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.

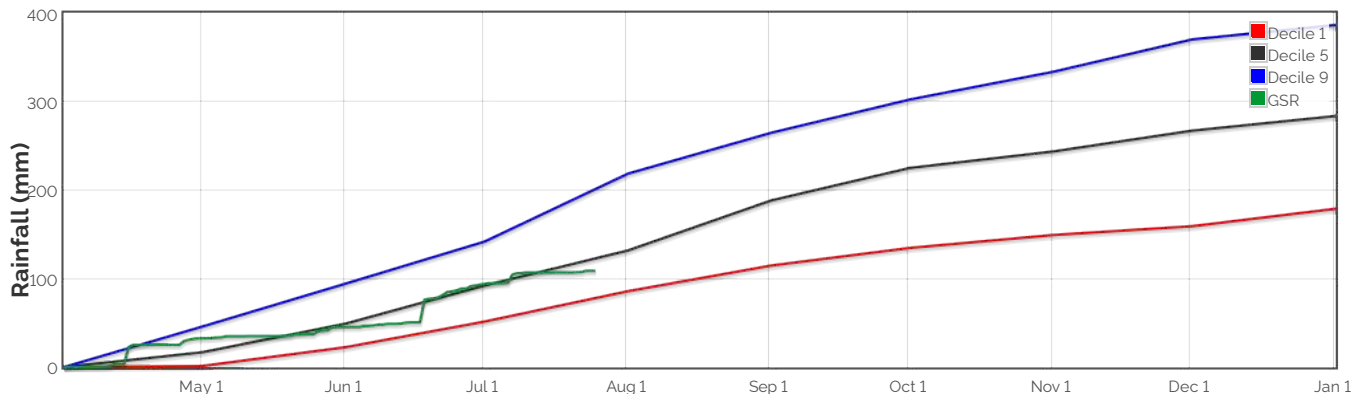
## Hay Yield Outcome



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: 3349.0893024704746kg/ha

## The Season So Far - Growing Season Rainfall Deciles



# Simulated and Predicted Crop Growth Stage



## Predicted

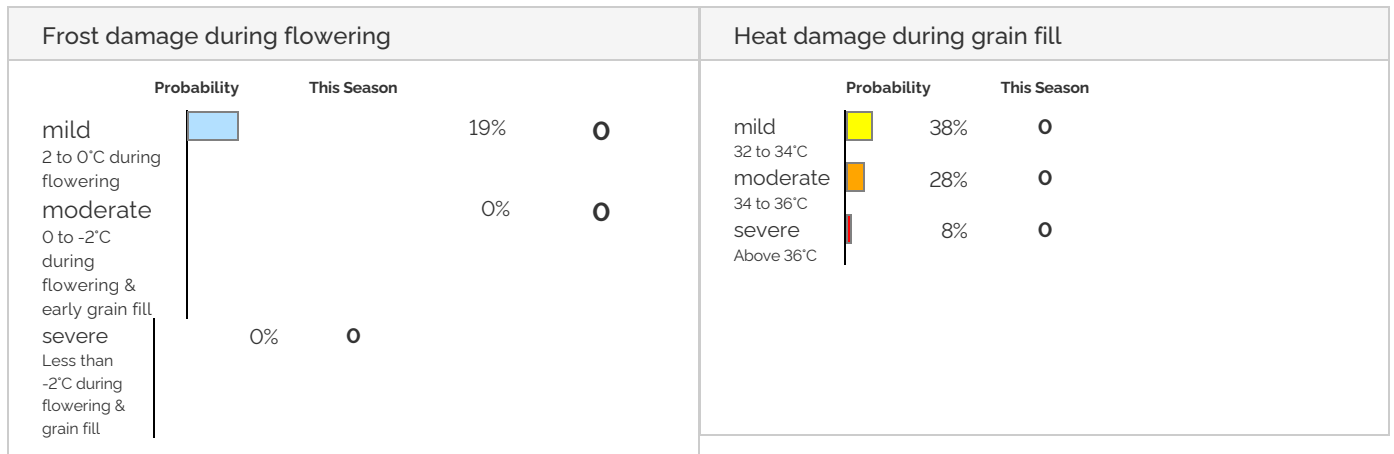
Earliest	24-May	30-May	6-Jun	14-Jun	24-Jun	5-Jul
Median	24-May	30-May	6-Jun	14-Jun	24-Jun	5-Jul
Latest	24-May	30-May	6-Jun	14-Jun	24-Jun	5-Jul



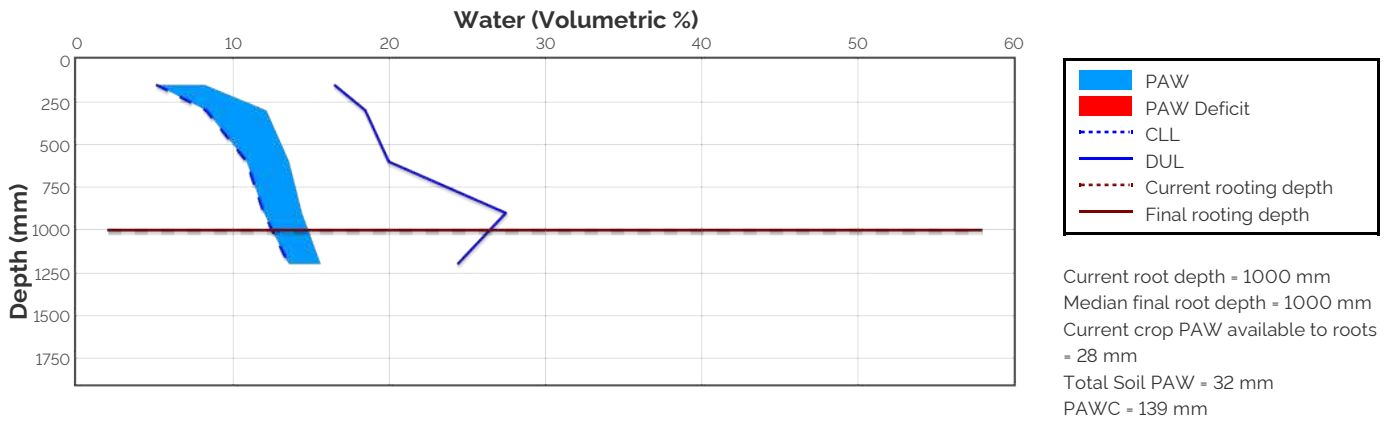
## Predicted

Earliest	18-Jul	27-Jul	31-Jul	9-Aug	10-Aug	17-Aug	26-Aug	31-Aug	18-Sep
Median	18-Jul	27-Jul	2-Aug	12-Aug	13-Aug	21-Aug	1-Sep	7-Sep	25-Sep
Latest	18-Jul	27-Jul	4-Aug	16-Aug	18-Aug	27-Aug	9-Sep	15-Sep	4-Oct

# Probability and Incidence of Frost and Heat Shock



## Current Distribution of PAW



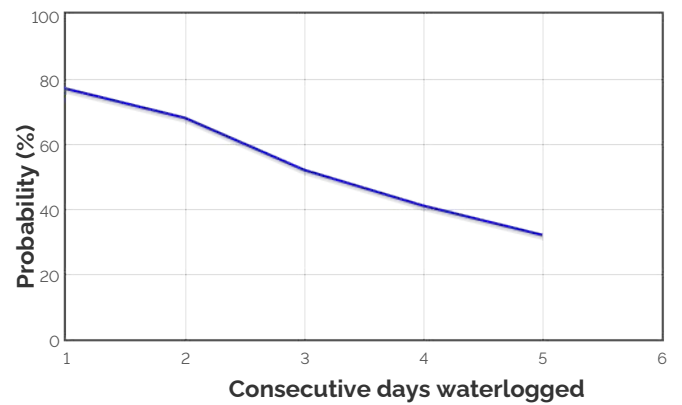
## Water Budget

Initial PAW status @ 18-Apr  
 Rainfall since 18-Apr  
 Irrigations  
 Evaporation since 18-Apr  
 Transpiration since 18-Apr  
 Deep drainage since 18-Apr  
 Run-off since 18-Apr

46 mm  
 83.6 mm  
 63 mm  
 54 mm  
 0 mm  
 0 mm  
**32 mm**

**Current PAW status:**

## Probability of Future Waterlogging Events



## Nitrogen Budget

Initial N status @ 18-Apr  
 N mineralisation since 18-Apr  
 N tie up since 18-Apr  
 N applications

124 kg/ha  
 25 kg/ha  
 0 kg/ha

Total N in plant  
 De-nitrification since 18-Apr  
 Leaching since 18-Apr

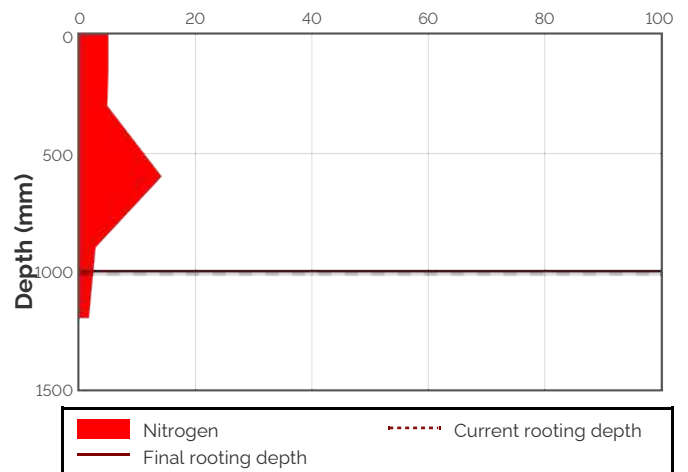
8-May : 10 kg/ha  
 11 kg/ha  
 0 kg/ha  
 0 kg/ha

**Current N status:**

**30 kg/ha**

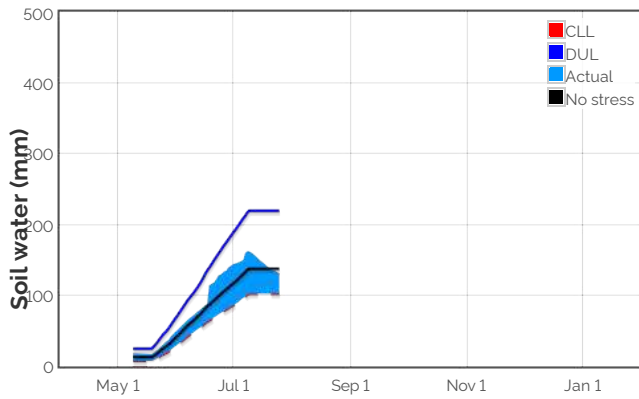
Median N mineralisation to maturity = 42.1330912846528 kg/ha  
 Median N tie up to maturity = 0 kg/ha

## Current distribution of soil nitrogen (kg/ha)

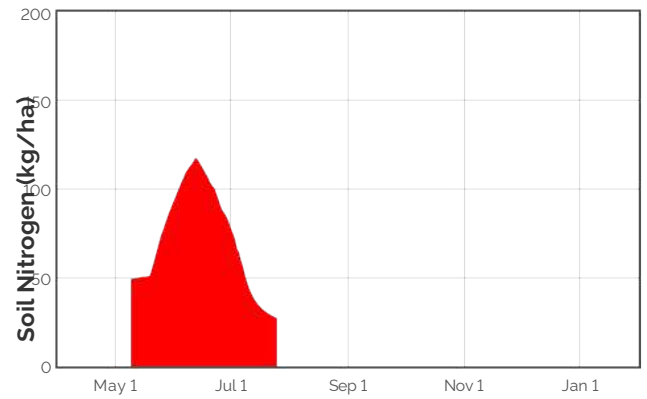


Current Crop Available N = 27 kg/ha  
 Total Soil N = 30 kg/ha

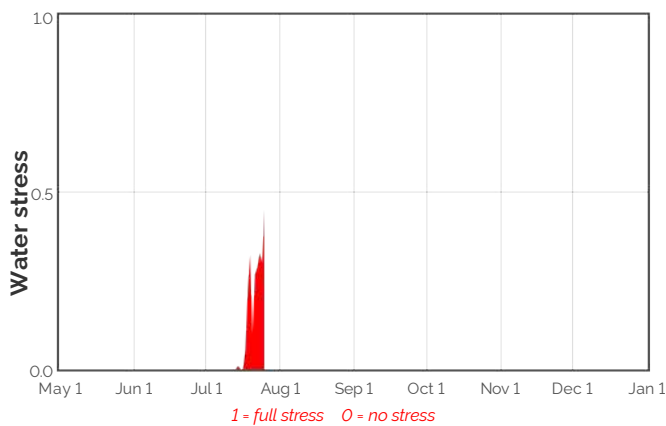
## Availability of Water to Growing Roots



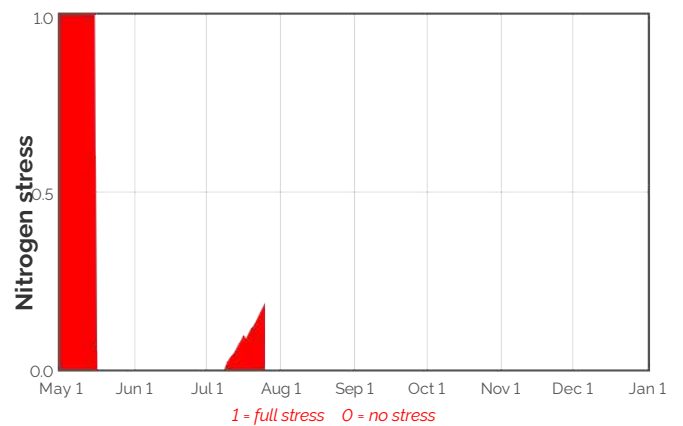
## Availability of Soil Nitrogen to Growing Roots



## Water Stress



## Nitrogen Stress



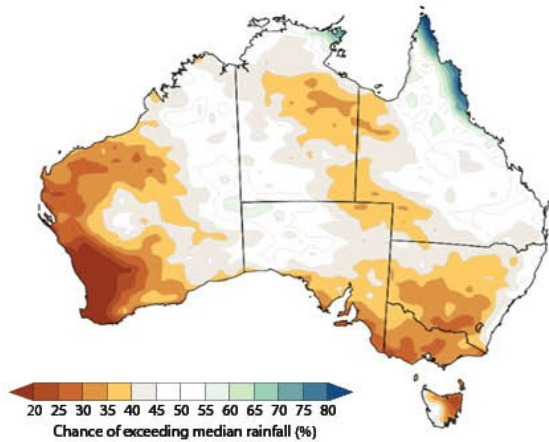
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

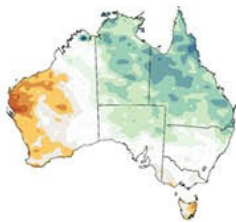
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
27-Jul	31.1	0.3	1.4	-0.4	-8.2	26.9	26.7	0.2	0.0
28-Jul	31.2	0.3	1.5	-0.4	-9.5	25.6	26.3	0.2	0.0
29-Jul	31.2	0.3	1.4	-0.4	-10.8	24.3	25.9	0.2	0.0
30-Jul	31.3	0.3	1.6	-0.3	-12.0	23.1	25.6	0.2	0.0
31-Jul	31.3	0.3	1.6	-0.3	-13.1	22.0	25.3	0.2	0.0
1-Aug	31.4	0.3	1.5	-0.3	-14.2	20.9	25.0	0.2	0.0
2-Aug	32.3	0.3	1.6	-0.3	-15.3	19.8	24.7	0.2	0.0
3-Aug	32.4	0.2	1.6	-0.3	-16.2	18.9	24.5	0.2	0.0
4-Aug	32.5	0.2	1.6	-0.2	-17.2	17.9	24.3	0.2	0.0
5-Aug	32.6	0.2	1.6	-0.2	-18.0	17.1	24.1	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.

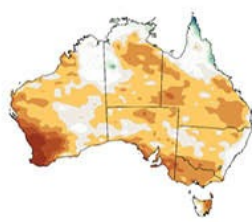
3 MONTH RAINFALL OUTLOOK FOR JULY TO SEPTEMBER



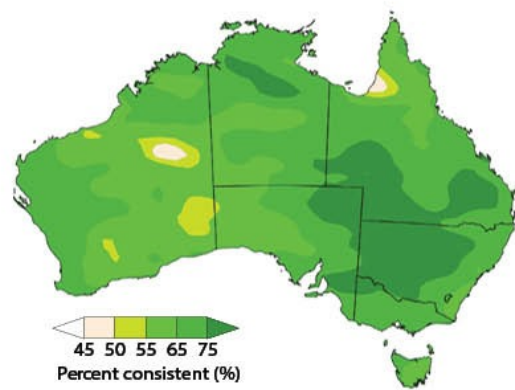
JULY RAINFALL OUTLOOK



AUGUST RAINFALL OUTLOOK



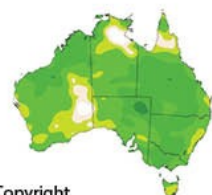
PAST ACCURACY FOR JULY TO SEPTEMBER



PAST ACCURACY FOR JULY



PAST ACCURACY FOR AUGUST



Australian Government  
Bureau of Meteorology

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