

# Crop Report

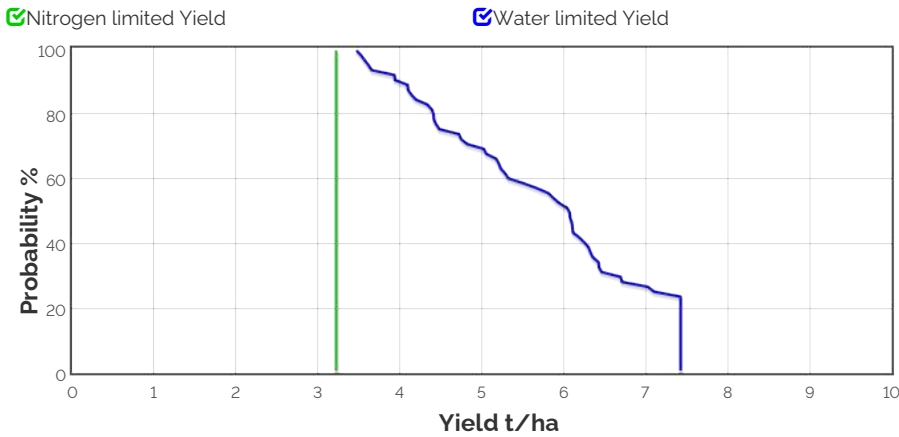
12-Aug-2022

Resilient EP Soil  
Moisture Probe Network:  
Cootra

Crop: Barley  
Cultivar: Spartacus  
Sowing details: 150 plants/m<sup>2</sup> on 2-May  
Expected maturity date: 1-Oct

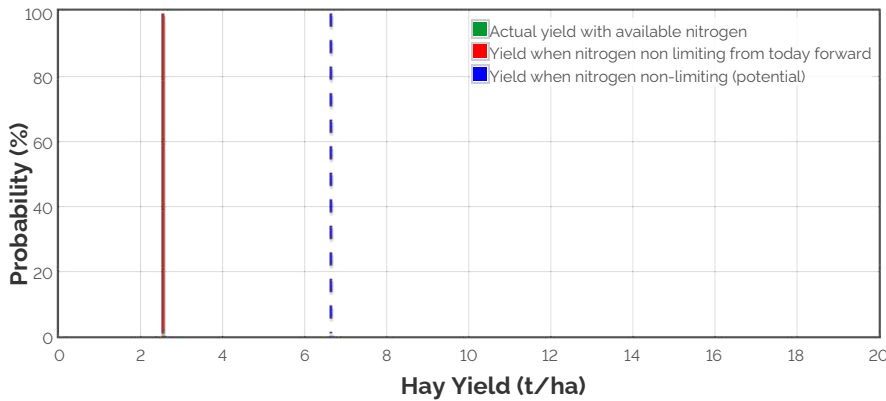
**Paddock Details**  
Initial conditions date: 26-May  
Soil: ResEP- Cootra Sand over clay  
1100 mm max rooting depth  
Stubble: 2500 kg/ha of Wheat  
No till

## Grain Yield Outcome



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.

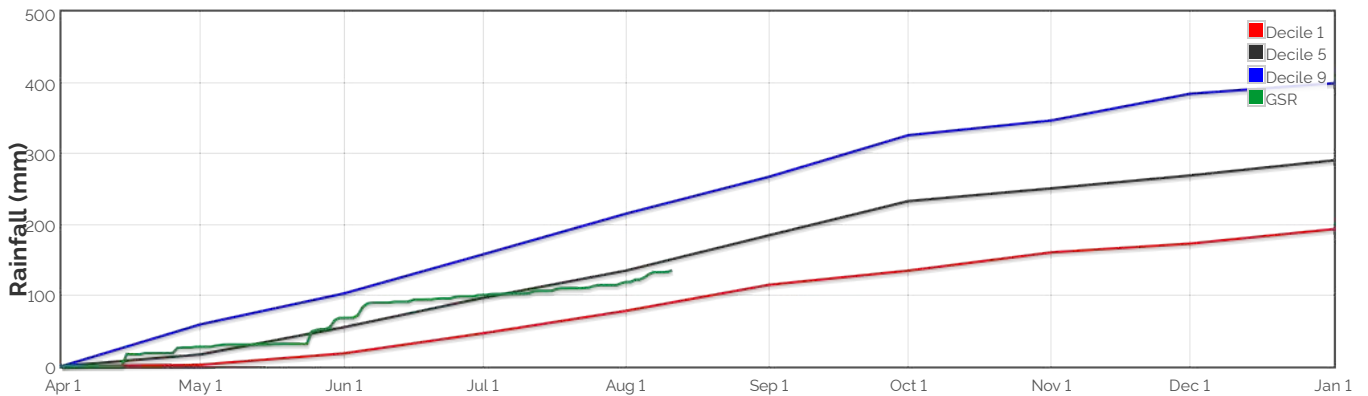
## Hay Yield Outcome



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: 3121.9kg/ha

## The Season So Far - Growing Season Rainfall Deciles



# Simulated and Predicted Crop Growth Stage



## Predicted

Earliest	11-May	20-May	26-May	1-Jun	8-Jun	15-Jun
Median	11-May	20-May	26-May	1-Jun	8-Jun	15-Jun
Latest	11-May	20-May	26-May	1-Jun	8-Jun	15-Jun



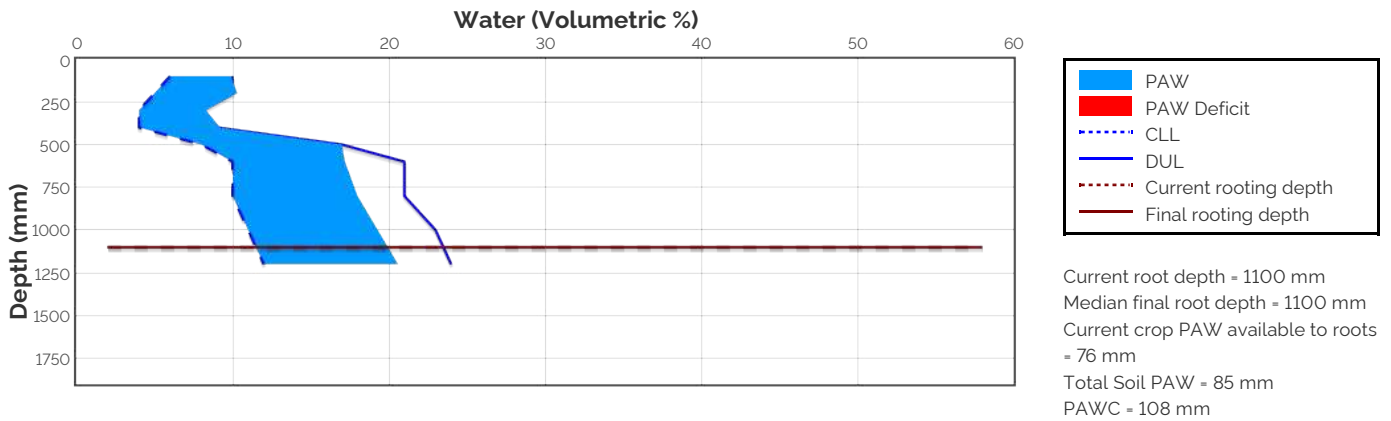
## Predicted

Earliest	16-Jul	19-Jul	25-Jul	29-Jul	31-Jul	4-Aug	8-Aug	13-Aug	29-Aug
Median	16-Jul	19-Jul	25-Jul	29-Jul	31-Jul	4-Aug	8-Aug	13-Aug	3-Sep
Latest	16-Jul	19-Jul	25-Jul	29-Jul	31-Jul	4-Aug	8-Aug	13-Aug	6-Sep

# 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		37%	0	mild 32 to 34°C	1%	0	0
moderate 0 to -2°C during flowering & early grain fill		1%	0	moderate 34 to 36°C	0%	0	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C	0%	0	0

## Current Distribution of PAW



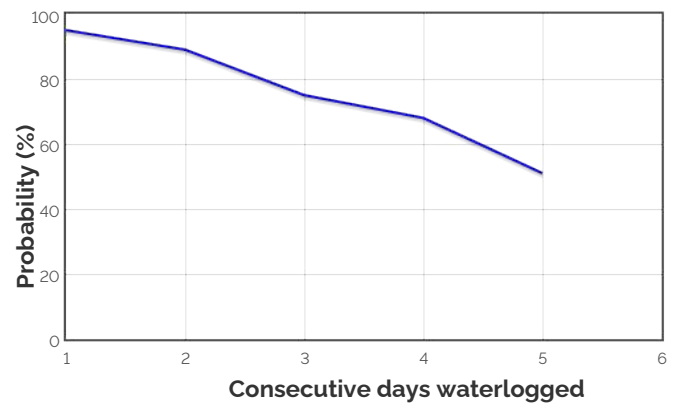
## Water Budget

Initial PAW status @ 26-May  
 Rainfall since 26-May  
 Irrigations  
 Evaporation since 26-May  
 Transpiration since 26-May  
 Deep drainage since 26-May  
 Run-off since 26-May

110 mm  
 84.3 mm  
 52 mm  
 35 mm  
 27 mm  
 0 mm  
**85 mm**

**Current PAW status:**

## Probability of Future Waterlogging Events



## Nitrogen Budget

Initial N status @ 26-May  
 N mineralisation since 26-May  
 N tie up since 26-May  
 N applications

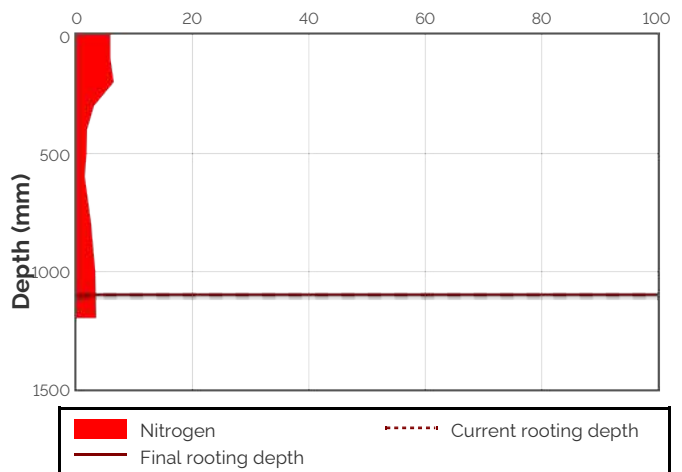
31 kg/ha  
 1 kg/ha  
 10 kg/ha  
 2-May : 27.6 kg/ha  
 6-Jul : 46 kg/ha  
 55 kg/ha  
 0 kg/ha  
 2 kg/ha  
**30 kg/ha**

Total N in plant  
 De-nitrification since 26-May  
 Leaching since 26-May

**Current N status:**

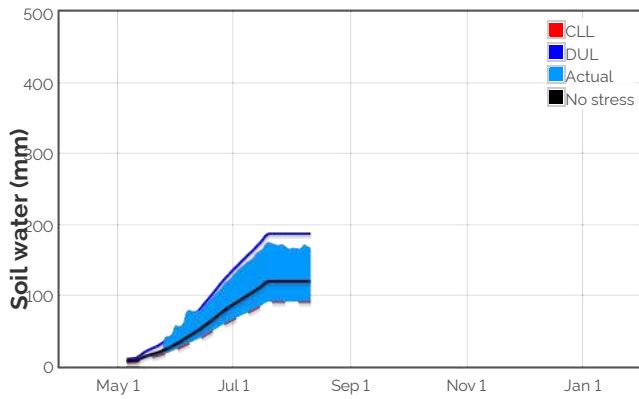
Median N mineralisation to maturity = 0.44 kg/ha  
 Median N tie up to maturity = 3.3715 kg/ha

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

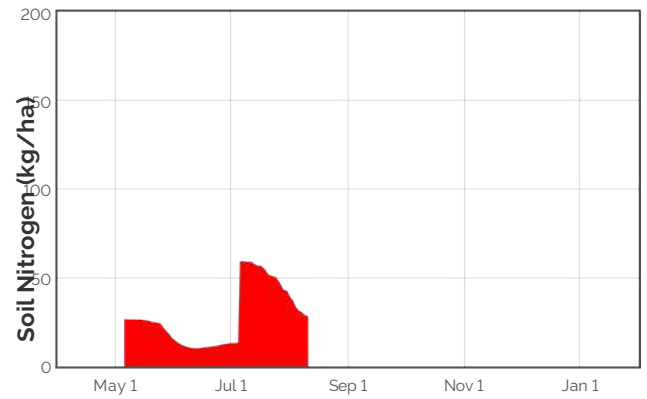


Current Crop Available N = 28 kg/ha  
 Total Soil N = 30 kg/ha

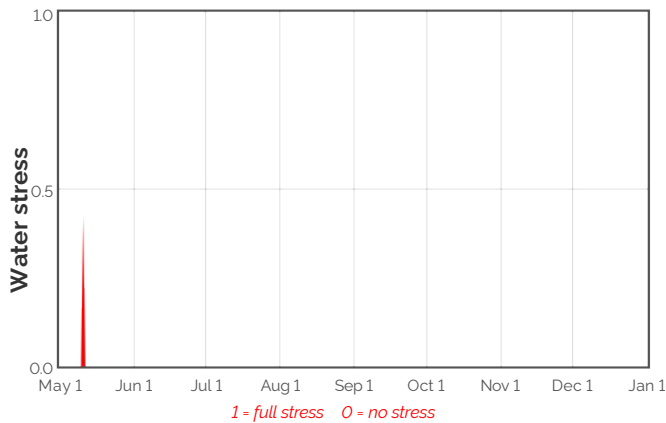
## Availability of Water to Growing Roots



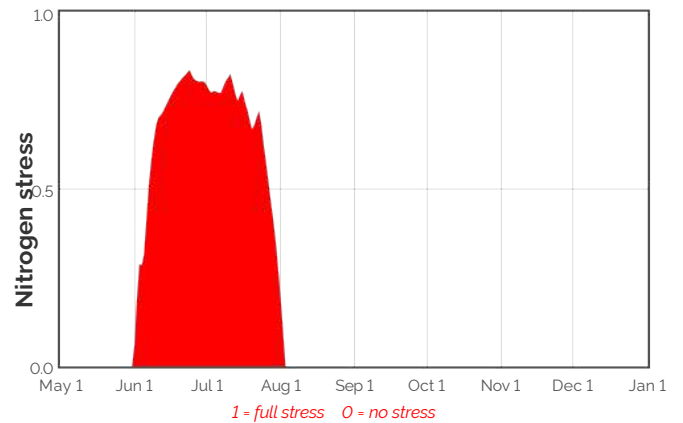
## Availability of Soil Nitrogen to Growing Roots



## Water Stress



## Nitrogen Stress



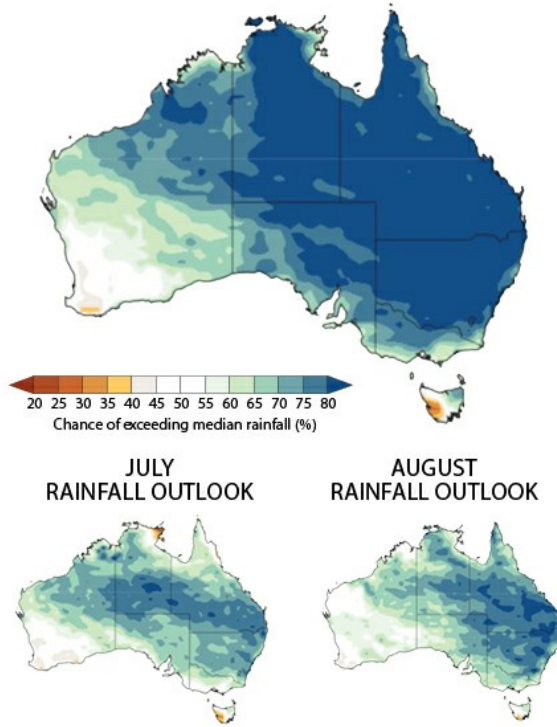
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

## 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)
13-Aug	65.8	0.6	1.0	0.5	44.7	73.5	25.8	0.0	0.3
14-Aug	66.4	0.5	1.0	0.6	43.2	72.0	25.0	0.0	0.2
15-Aug	67.0	0.5	1.0	0.6	41.6	70.4	24.2	0.0	0.2
16-Aug	67.6	0.6	1.0	0.6	40.2	69.0	23.4	0.0	0.2
17-Aug	68.1	0.6	1.0	0.5	38.7	67.5	22.7	0.0	0.2
18-Aug	68.7	0.6	1.2	0.5	36.7	65.5	22.0	0.0	0.2
19-Aug	69.3	0.6	1.2	0.4	35.0	63.8	21.4	0.0	0.2
20-Aug	69.9	0.6	1.2	0.4	32.8	61.6	20.8	0.0	0.2
21-Aug	70.4	0.6	1.2	0.4	31.2	60.0	20.3	0.0	0.2
22-Aug	71.0	0.6	1.0	0.3	28.8	57.6	19.8	0.0	0.2

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



PAST ACCURACY FOR JULY TO SEPTEMBER

