

Crop Report

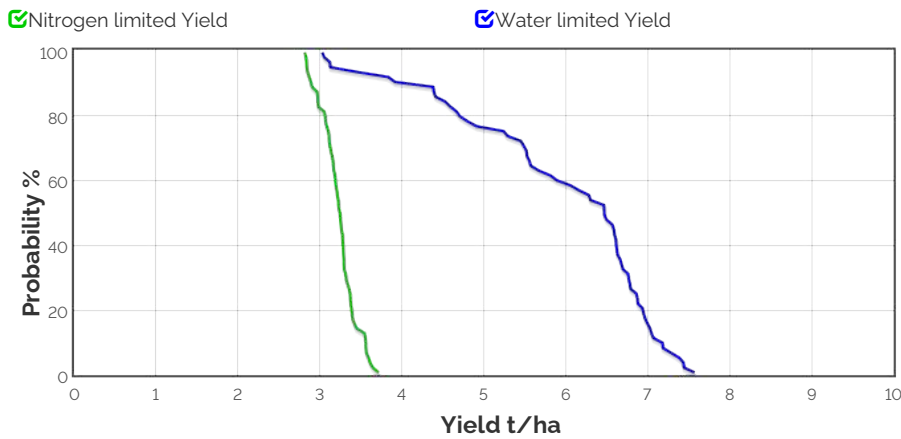
21-Jul-2022

Resilient EP Soil
Moisture Probe Network:
Cootra

Crop: Barley
Cultivar: Spartacus
Sowing details: 150 plants/m² on 2-May
Expected maturity date: 1-Oct

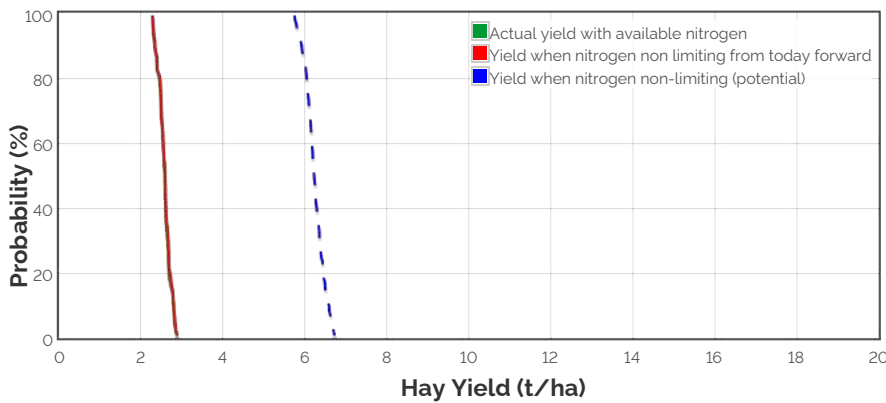
Paddock Details
Initial conditions date: 26-May
Soil: ResEP- Cootra Sand over clay
1100 mm max rooting depth
Stubble: 2500 kg/ha of Wheat
No till

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.

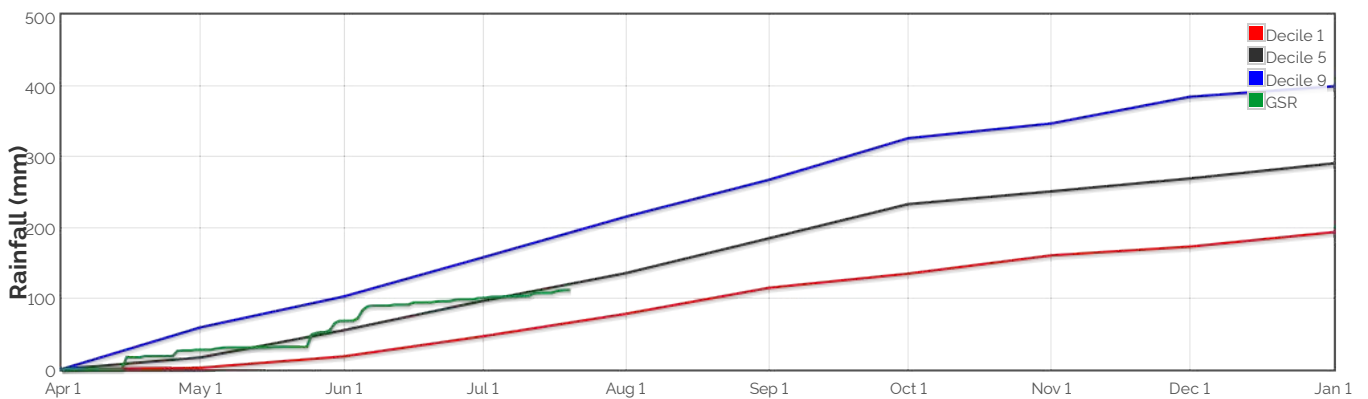
Hay Yield Outcome



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: 1354kg/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



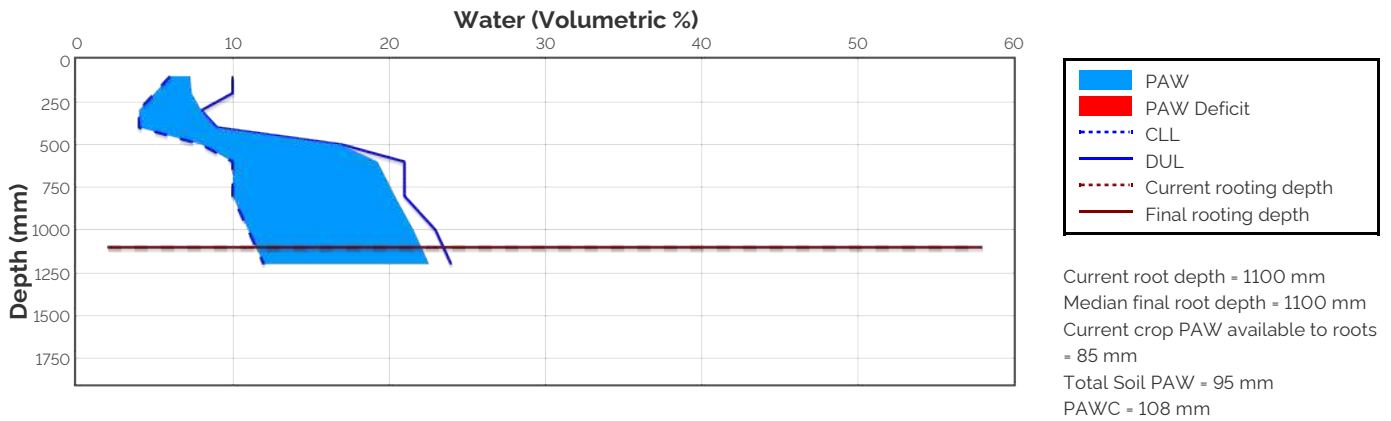
Predicted

Earliest	16-Jul	19-Jul	24-Jul	27-Jul	29-Jul	31-Jul	4-Aug	10-Aug	28-Aug
Median	16-Jul	19-Jul	25-Jul	29-Jul	31-Jul	4-Aug	9-Aug	13-Aug	3-Sep
Latest	16-Jul	19-Jul	25-Jul	31-Jul	3-Aug	6-Aug	12-Aug	18-Aug	9-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		39%	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

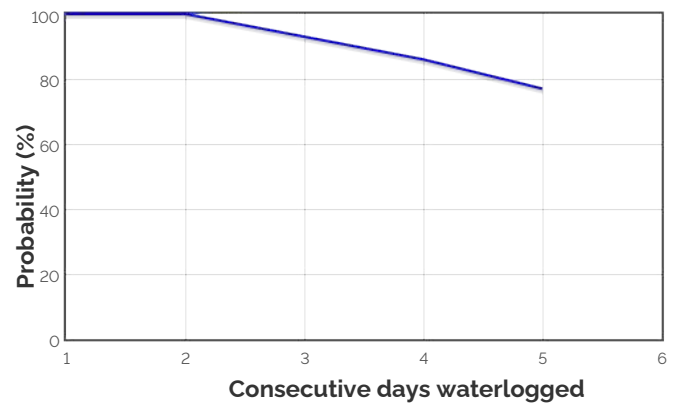
110 mm
 60.5 mm

 41 mm
 13 mm
 27 mm
 0 mm

95 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
 7 kg/ha

 2-May : 27.6 kg/ha
 6-Jul : 46 kg/ha
 37 kg/ha
 0 kg/ha
 2 kg/ha

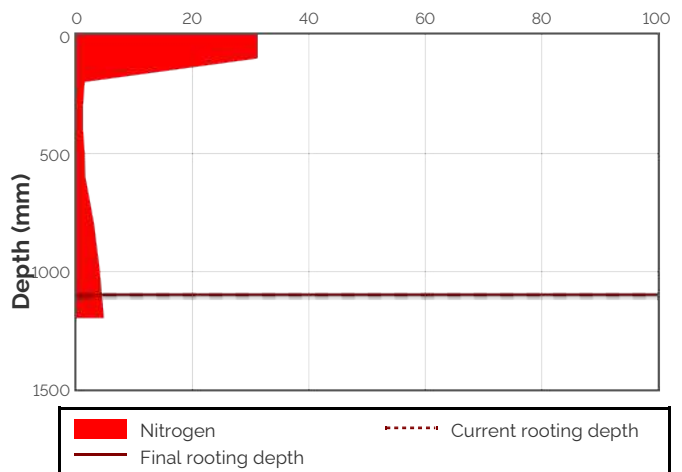
52 kg/ha

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

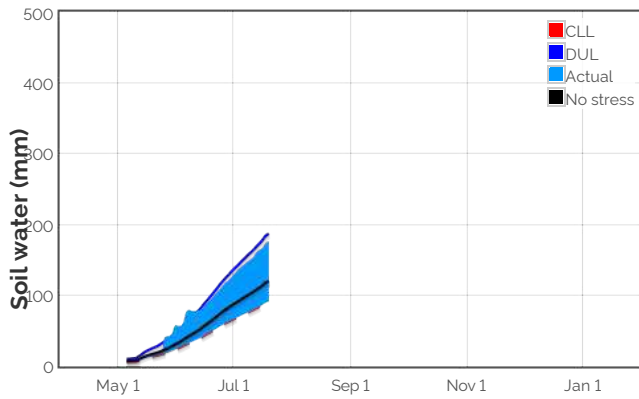
Current N status:

Median N mineralisation to maturity = 0.68 kg/ha
 Median N tie up to maturity = 5.589 kg/ha

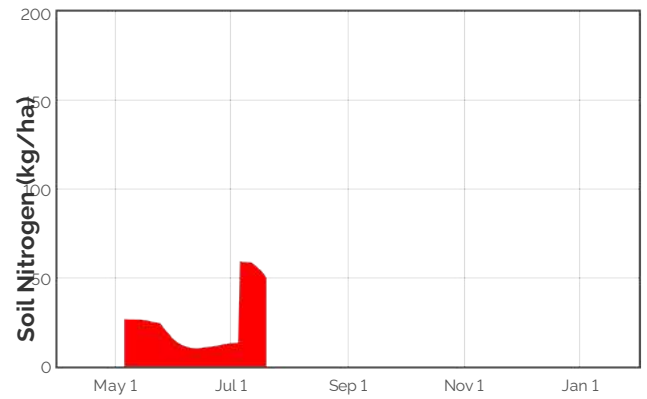
Current distribution of soil nitrogen (kg/ha)



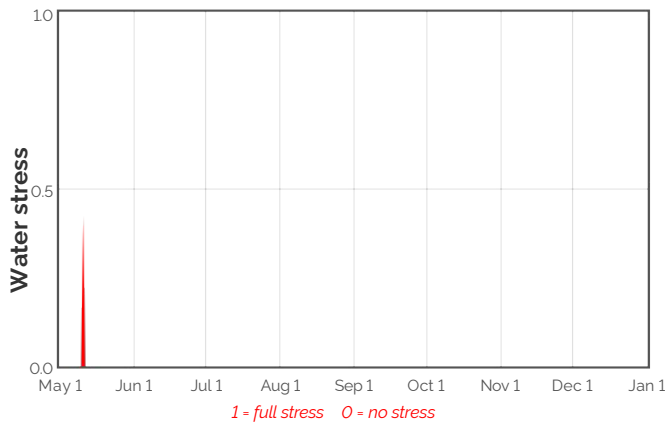
Availability of Water to Growing Roots



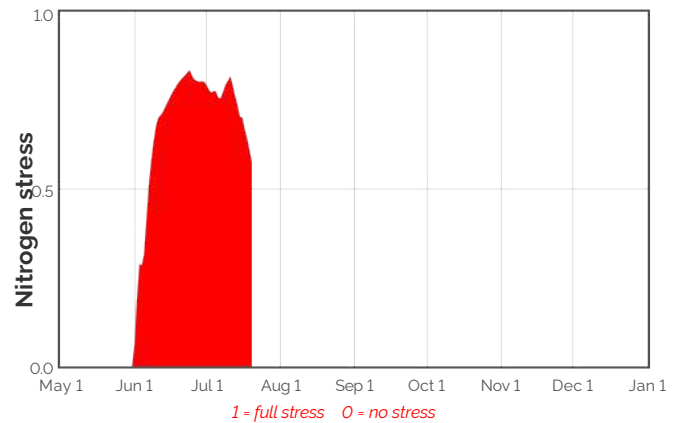
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



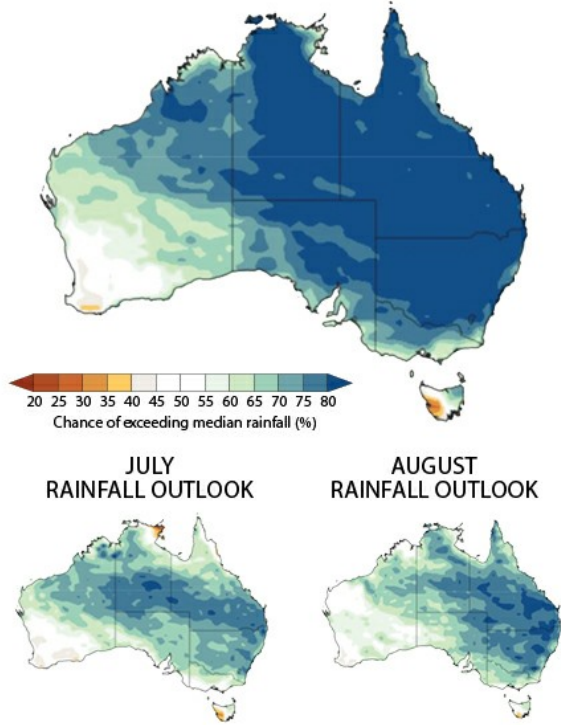
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

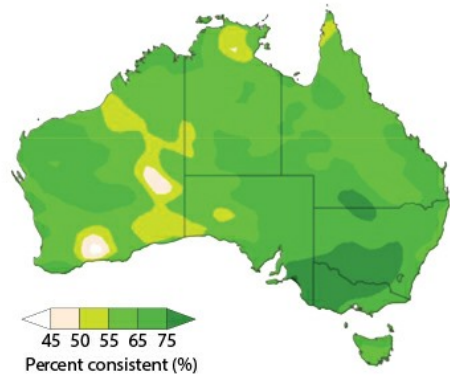
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
22-Jul	32.0	0.4	0.7	1.3	53.0	81.8	43.8	0.0	0.1
23-Jul	32.0	0.3	0.6	0.8	52.2	81.0	43.2	0.0	0.1
24-Jul	33.6	0.3	0.7	0.3	51.2	80.0	42.8	0.0	0.1
25-Jul	34.5	0.3	0.6	0.3	50.2	79.0	42.3	0.0	0.1
26-Jul	35.5	0.3	0.6	0.3	49.2	78.0	42.0	0.0	0.1
27-Jul	36.5	0.3	1.0	0.3	48.2	77.0	41.8	0.0	0.1
28-Jul	37.5	0.3	0.8	0.3	47.2	76.0	41.4	0.0	0.1
29-Jul	38.4	0.3	0.9	0.3	46.3	75.2	41.1	0.0	0.1
30-Jul	39.3	0.3	1.0	0.3	45.2	74.0	40.8	0.0	0.1
31-Jul	40.4	0.2	1.0	0.2	43.9	72.7	40.6	0.0	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.

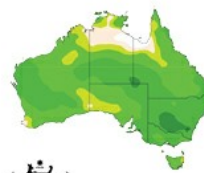
3 MONTH RAINFALL OUTLOOK FOR JULY TO SEPTEMBER



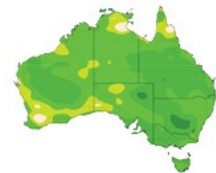
PAST ACCURACY FOR JULY TO SEPTEMBER



PAST ACCURACY FOR JULY



PAST ACCURACY FOR AUGUST



Australian Government
Bureau of Meteorology

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