

Crop Report

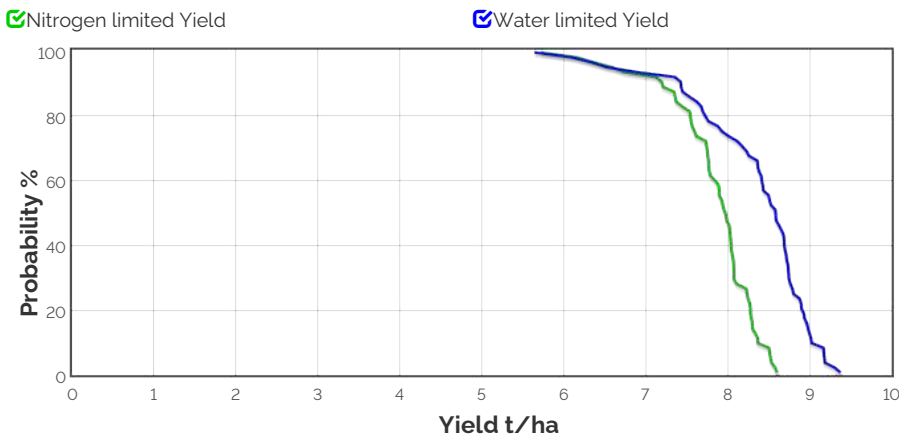
31-Aug-2022

Resilient EP Soil
Moisture Probe Network:
Wangary

Crop: Barley
Cultivar: Spartacus
Sowing details: 175 plants/m² on 9-Jun
Expected maturity date: 30-Oct

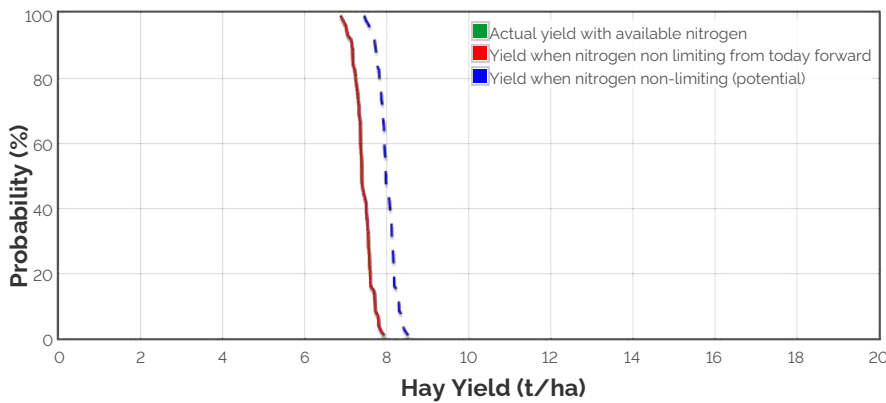
Paddock Details
Initial conditions date: 18-Mar
Soil: ResEP-Mt Dutton Loam
900 mm max rooting depth
Stubble: 4070 kg/ha of Wheat
No till

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.

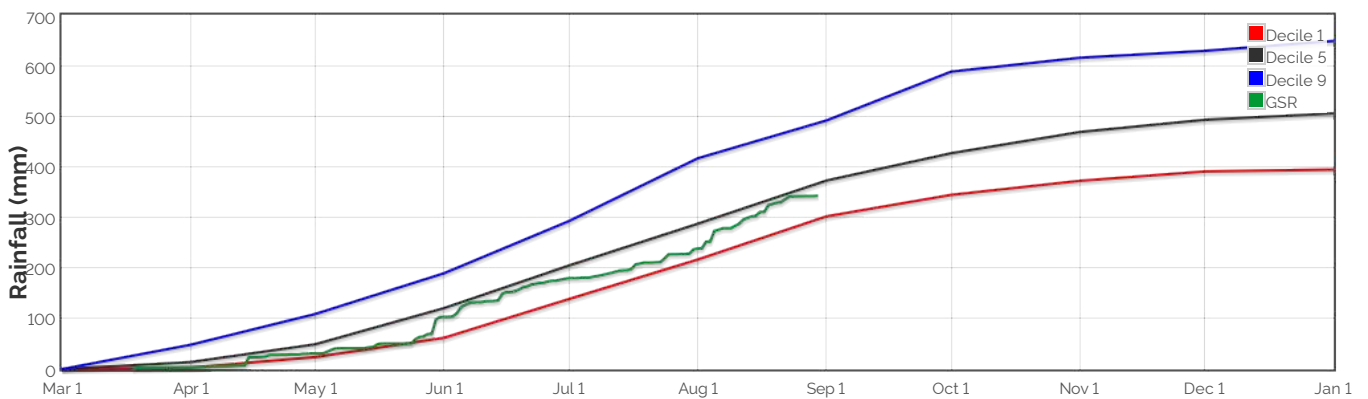
Hay Yield Outcome



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: 6319.7kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

	Earliest	Median	Latest
20-Jun	28-Jun	4-Jul	11-Jul
18-Jul	25-Jul		



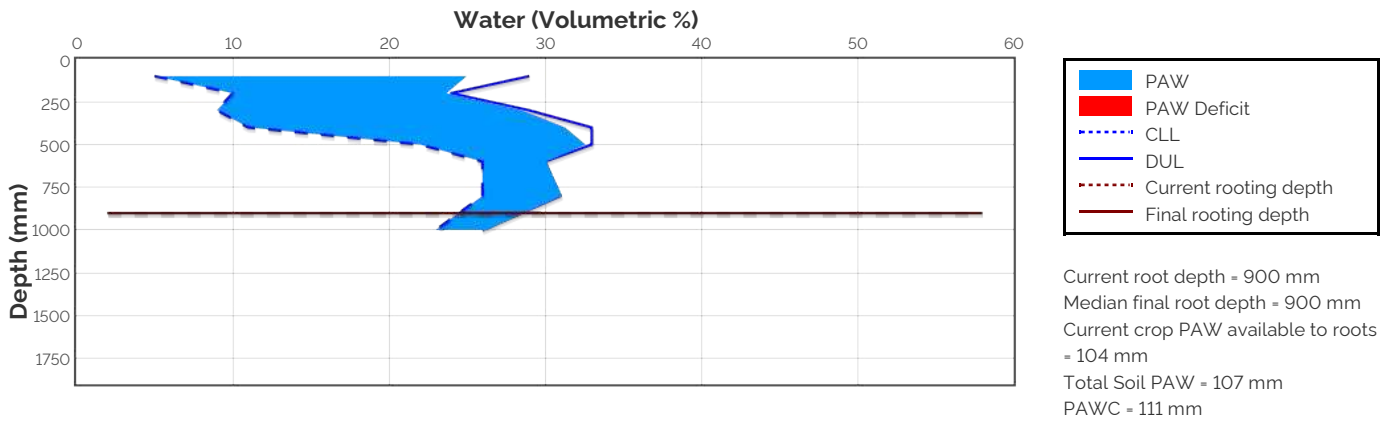
Predicted

	Earliest	Median	Latest
22-Aug	25-Aug	29-Aug	1-Sep
3-Sep	4-Sep	7-Sep	11-Sep
13-Sep	30-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	1%	0		mild 32 to 34°C	12%	0	
moderate 0 to -2°C during flowering & early grain fill	0%	0		moderate 34 to 36°C	3%	0	
severe Less than -2°C during flowering & grain fill	0%	0		severe Above 36°C	0%	0	

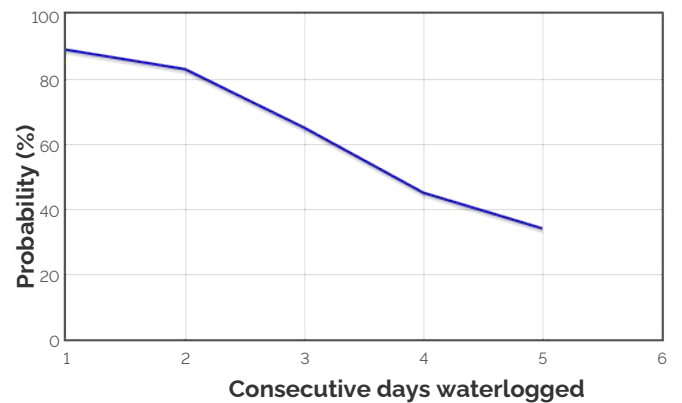
Current Distribution of PAW



Water Budget

Initial PAW status @ 18-Mar	44 mm
Rainfall since 18-Mar	343 mm
Irrigations	
Evaporation since 18-Mar	149 mm
Transpiration since 18-Mar	54 mm
Deep drainage since 18-Mar	76 mm
Run-off since 18-Mar	0 mm
Current PAW status:	107 mm

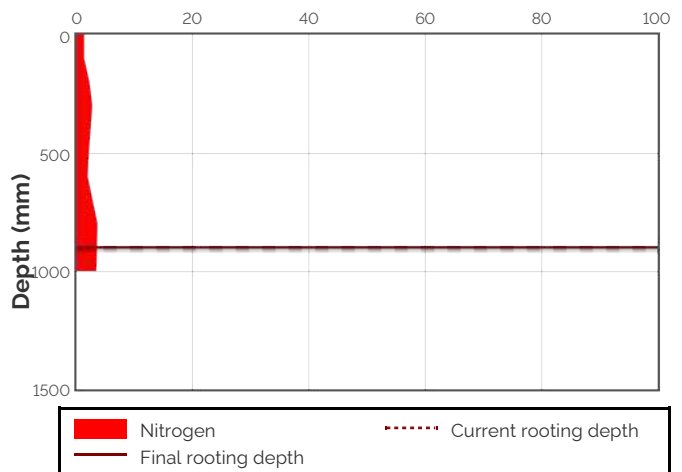
Probability of Future Waterlogging Events



Nitrogen Budget

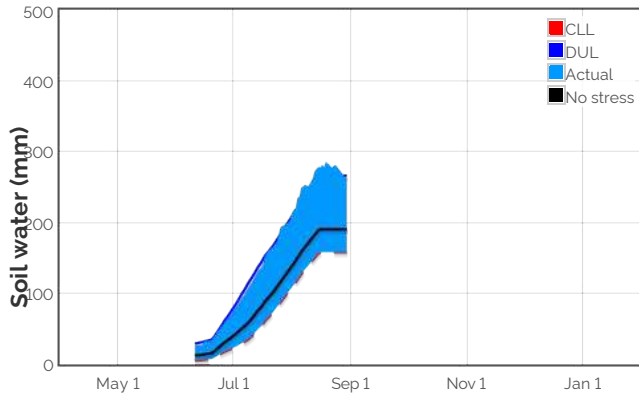
Initial N status @ 18-Mar	151 kg/ha
N mineralisation since 18-Mar	2 kg/ha
N tie up since 18-Mar	38 kg/ha
N applications	
6-Apr : 10.5 kg/ha	
9-Jun : 14.4 kg/ha	
6-Jul : 36.8 kg/ha	
9-Aug : 36.8 kg/ha	
Total N in plant	176 kg/ha
De-nitrification since 18-Mar	6 kg/ha
Leaching since 18-Mar	10 kg/ha
Current N status:	21 kg/ha

Current distribution of soil nitrogen (kg/ha)

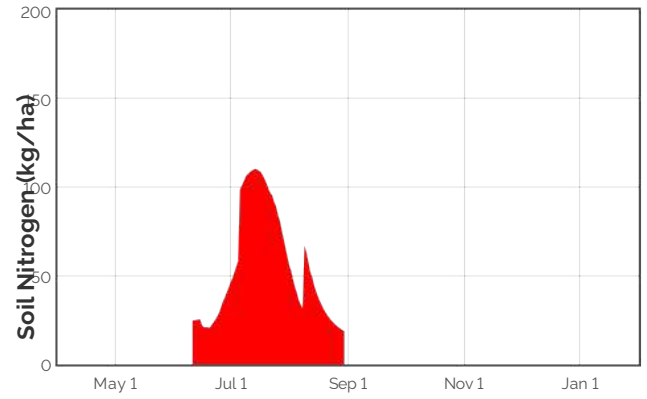


Median N mineralisation to maturity = 1.683 kg/ha
 Median N tie up to maturity = 0.123 kg/ha

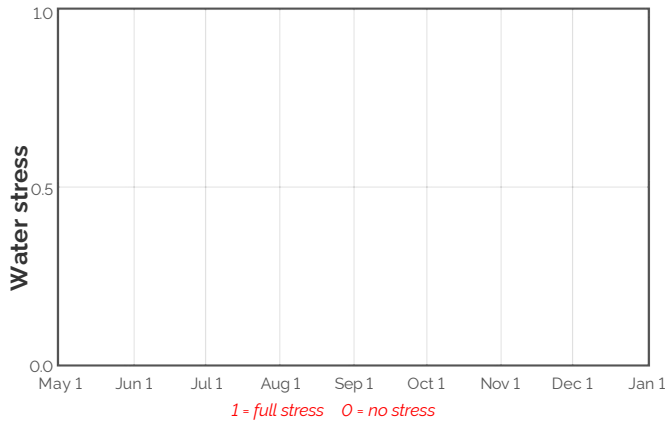
Availability of Water to Growing Roots



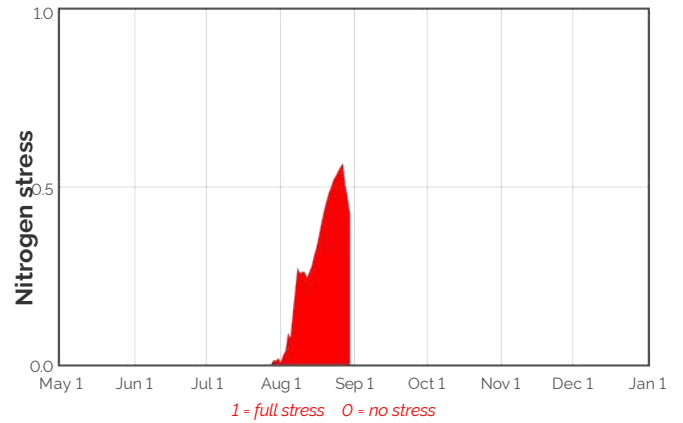
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



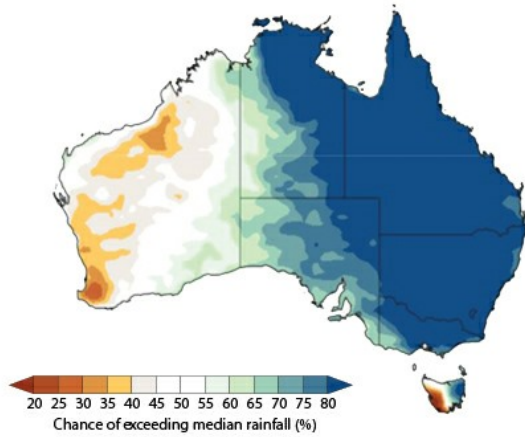
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

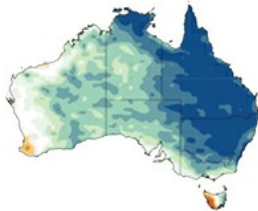
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
1-Sep	37.7	0.4	1.7	0.5	66.2	98.6	17.0	0.0	0.0
2-Sep	38.8	0.4	1.6	0.5	63.9	96.3	16.6	0.0	0.0
3-Sep	39.9	0.5	1.6	0.4	61.8	94.2	16.2	0.0	0.0
4-Sep	42.0	0.4	1.8	0.4	59.8	92.2	15.8	0.0	0.0
5-Sep	44.1	0.4	1.6	0.4	57.4	89.8	15.5	0.0	0.0
6-Sep	46.3	0.4	1.4	0.4	55.3	87.7	15.2	0.0	0.0
7-Sep	48.7	0.5	1.8	0.3	53.0	85.4	14.9	0.0	0.0
8-Sep	51.1	0.5	1.6	0.3	50.8	83.2	14.6	0.0	0.0
9-Sep	53.4	0.5	1.9	0.3	47.6	80.0	14.3	0.0	0.0
10-Sep	55.8	0.5	2.0	0.3	44.4	76.8	14.1	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.

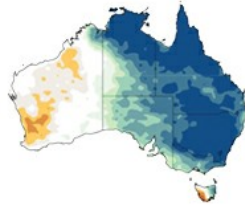
3 MONTH RAINFALL OUTLOOK FOR SEPTEMBER TO NOVEMBER



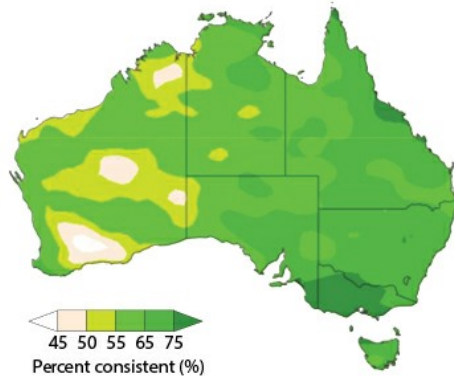
SEPTEMBER RAINFALL OUTLOOK



OCTOBER RAINFALL OUTLOOK



PAST ACCURACY FOR SEPTEMBER TO NOVEMBER



PAST ACCURACY FOR SEPTEMBER



PAST ACCURACY FOR OCTOBER

