

Crop Report

26-Jul-2023

Andrew H Ware: Port
Kenny

Crop: Barley

Cultivar: Spartacus

Sowing details: 150 plants/m² on 8-May

Expected maturity date: 29-Sep

Paddock Details

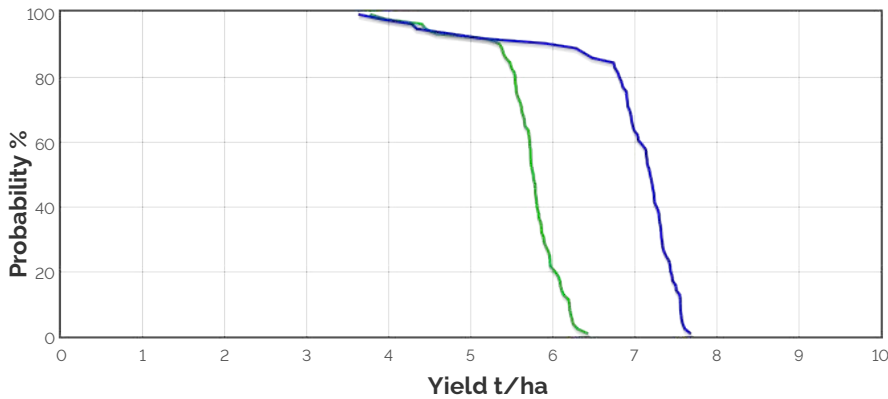
Initial conditions date: 20-Apr

Soil: Grey calcareous sandy clay loam (Port
Kenny No322)
600 mm max rooting depth
Stubble: 2000 kg/ha of Wheat
No till

Grain Yield Outcome

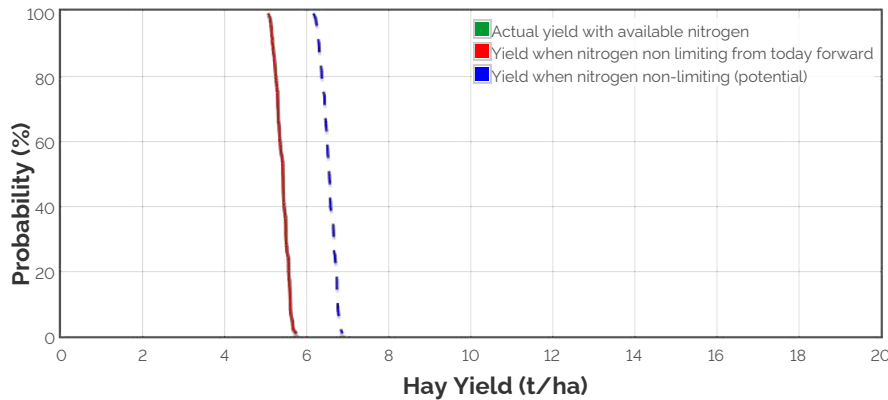
Nitrogen limited Yield

Water limited Yield



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.

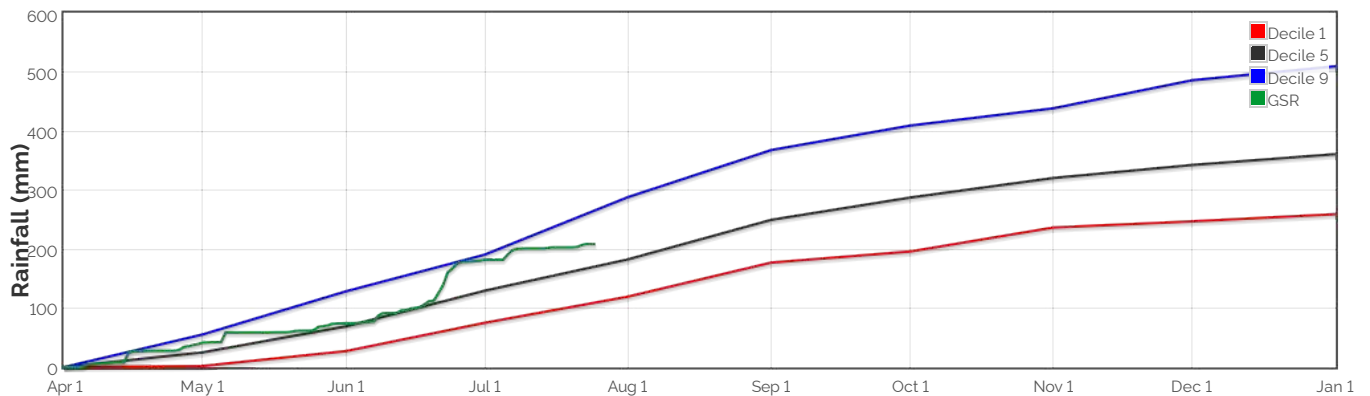
Hay Yield Outcome



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: 4505kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	17-May	24-May	29-May	3-Jun	7-Jun	13-Jun
Median	17-May	24-May	29-May	3-Jun	7-Jun	13-Jun
Latest	17-May	24-May	29-May	3-Jun	7-Jun	13-Jun



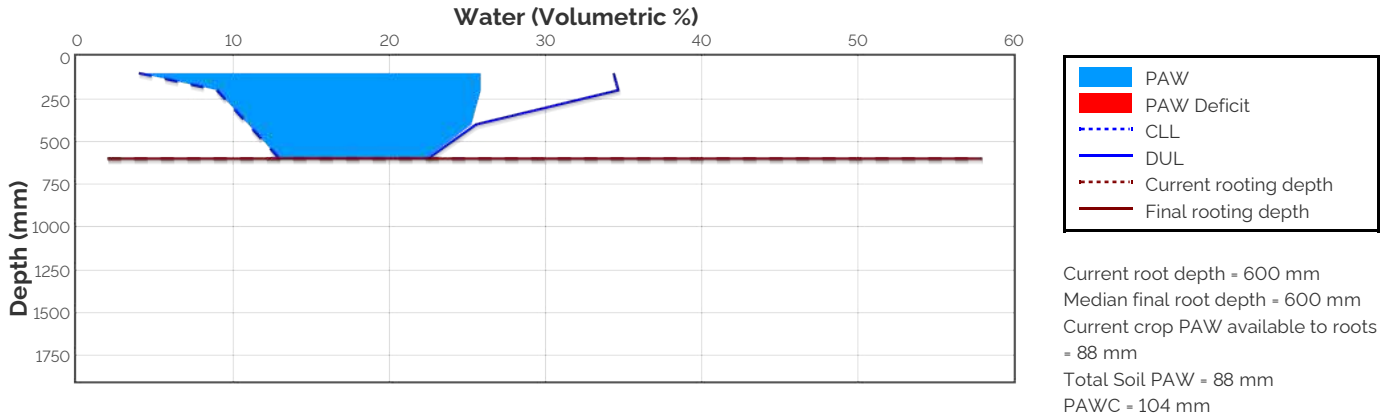
Predicted

Earliest	15-Jul	19-Jul	24-Jul	28-Jul	29-Jul	31-Jul	4-Aug	9-Aug	27-Aug
Median	15-Jul	19-Jul	24-Jul	28-Jul	30-Jul	3-Aug	7-Aug	12-Aug	1-Sep
Latest	15-Jul	19-Jul	24-Jul	29-Jul	31-Jul	4-Aug	9-Aug	15-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		14%	○	mild 32 to 34°C	1%	○	
moderate 0 to -2°C during flowering & early grain fill		0%	○	moderate 34 to 36°C	0%	○	
severe Less than -2°C during flowering & grain fill		0%	○	severe Above 36°C	0%	○	

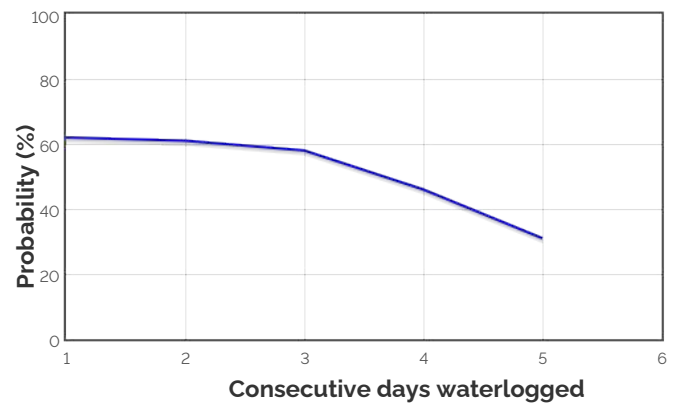
Current Distribution of PAW



Water Budget

Initial PAW status @ 20-Apr	30 mm
Rainfall since 20-Apr	1811 mm
Irrigations	
Evaporation since 20-Apr	73 mm
Transpiration since 20-Apr	46 mm
Deep drainage since 20-Apr	20 mm
Run-off since 20-Apr	0 mm
Current PAW status:	88 mm

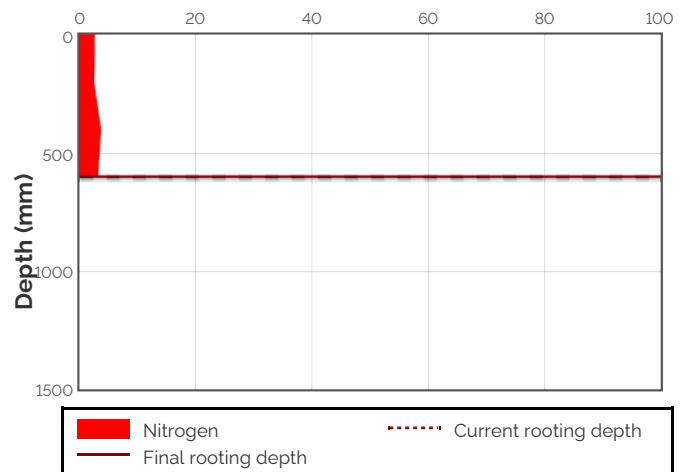
Probability of Future Waterlogging Events



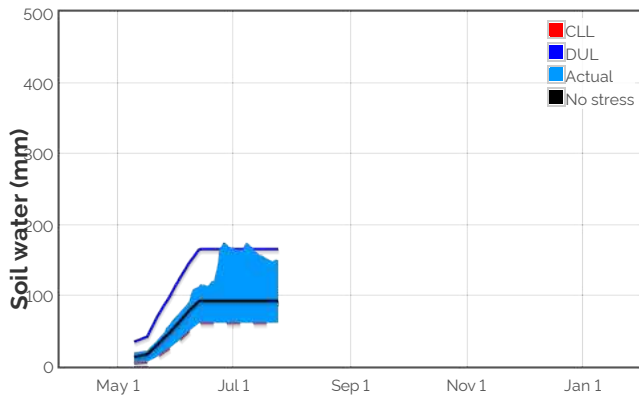
Nitrogen Budget

Initial N status @ 20-Apr	56 kg/ha
N mineralisation since 20-Apr	1 kg/ha
N tie up since 20-Apr	9 kg/ha
N applications	
1-May : 30 kg/ha	
6-Jun : 33 kg/ha	
4-Jul : 38.6 kg/ha	
Total N in plant	119 kg/ha
De-nitrification since 20-Apr	0 kg/ha
Leaching since 20-Apr	3 kg/ha
Current N status:	13 kg/ha
Median N mineralisation to maturity	= 0.25 kg/ha
Median N tie up to maturity	= 0.49 kg/ha

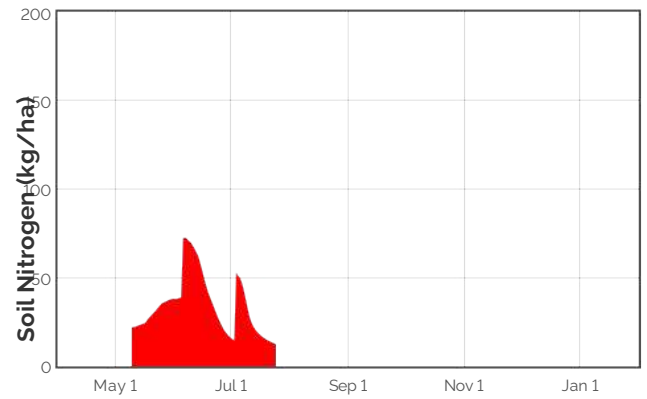
Current distribution of soil nitrogen (kg/ha)



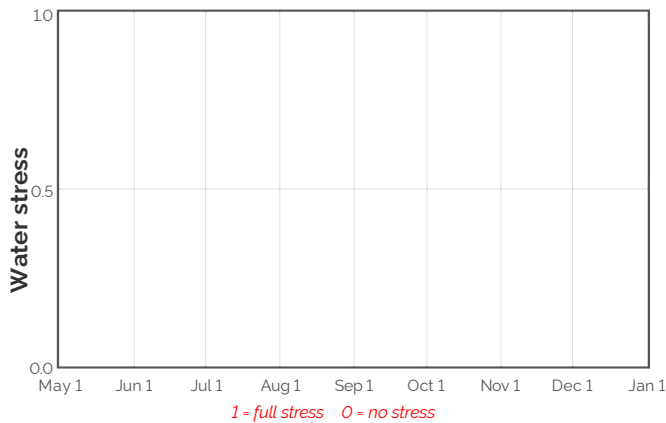
Availability of Water to Growing Roots



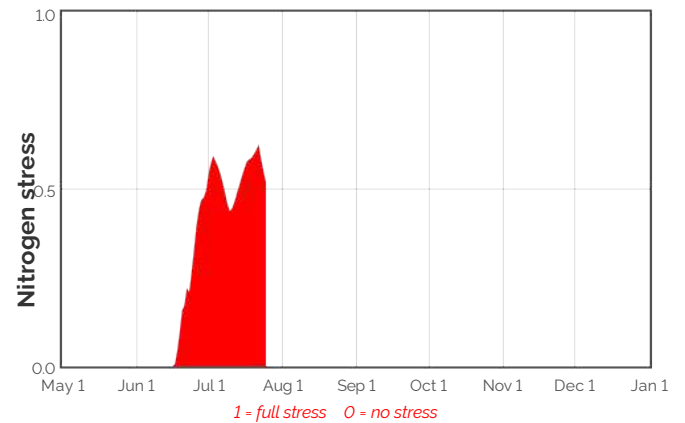
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



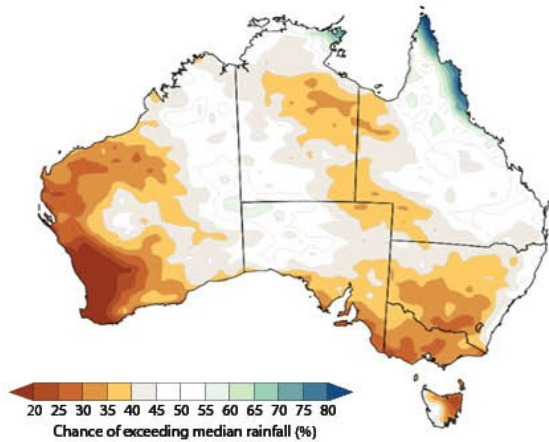
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

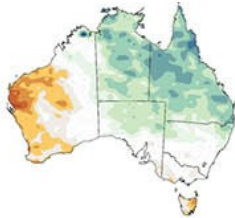
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
27-Jul	37.2	0.3	1.1	0.3	53.3	84.6	11.3	0.0	0.0
28-Jul	38.3	0.4	1.0	0.3	51.5	82.8	11.0	0.0	0.0
29-Jul	39.3	0.4	1.2	0.3	50.4	81.6	10.7	0.0	0.0
30-Jul	40.7	0.4	1.3	0.3	48.4	79.7	10.4	0.0	0.0
31-Jul	42.8	0.4	1.3	0.2	46.9	78.2	10.1	0.0	0.0
1-Aug	44.9	0.4	1.3	0.2	45.2	76.5	9.9	0.0	0.0
2-Aug	47.2	0.4	1.5	0.2	43.1	74.4	9.7	0.0	0.0
3-Aug	49.3	0.4	1.3	0.2	41.5	72.8	9.5	0.0	0.0
4-Aug	51.4	0.4	1.4	0.2	40.3	71.6	9.3	0.0	0.0
5-Aug	53.6	0.4	1.1	0.2	38.4	69.7	9.1	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.

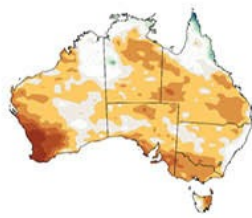
3 MONTH RAINFALL OUTLOOK FOR JULY TO SEPTEMBER



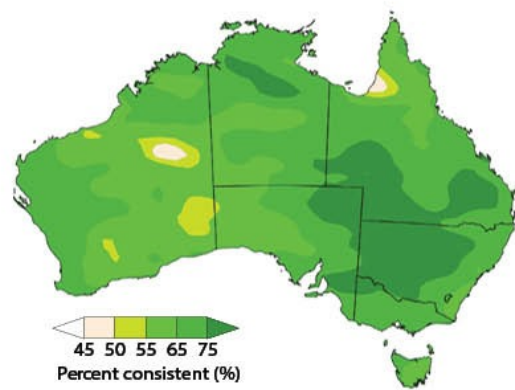
JULY RAINFALL OUTLOOK



AUGUST RAINFALL OUTLOOK



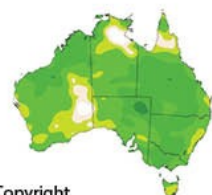
PAST ACCURACY FOR JULY TO SEPTEMBER



PAST ACCURACY FOR JULY



PAST ACCURACY FOR AUGUST



Australian Government
Bureau of Meteorology

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