

Crop Report

31-Aug-2022

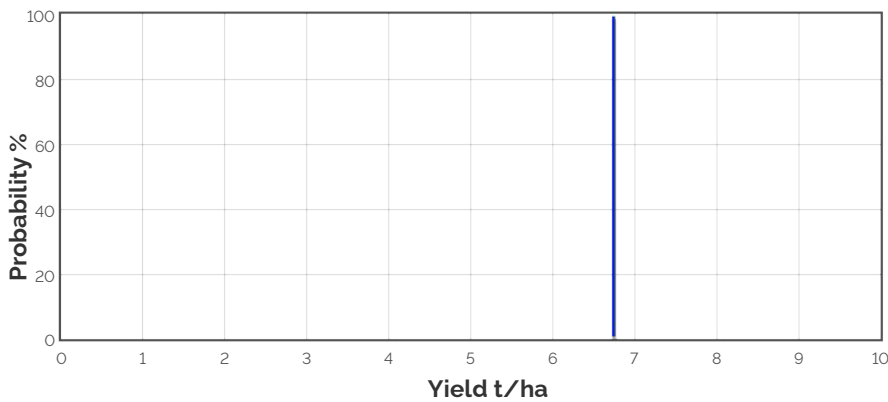
Resilient EP Soil
Moisture Probe Network:
Pt Kenny

Crop: Wheat
Cultivar: Scepter
Sowing details: 160 plants/m² on 28-Apr
Expected maturity date: 10-Oct

Paddock Details
Initial conditions date: 15-Mar
Soil: Grey calcareous sandy clay loam (Port
Kenny No322)
600 mm max rooting depth
Stubble: 100 kg/ha of Medic
No till

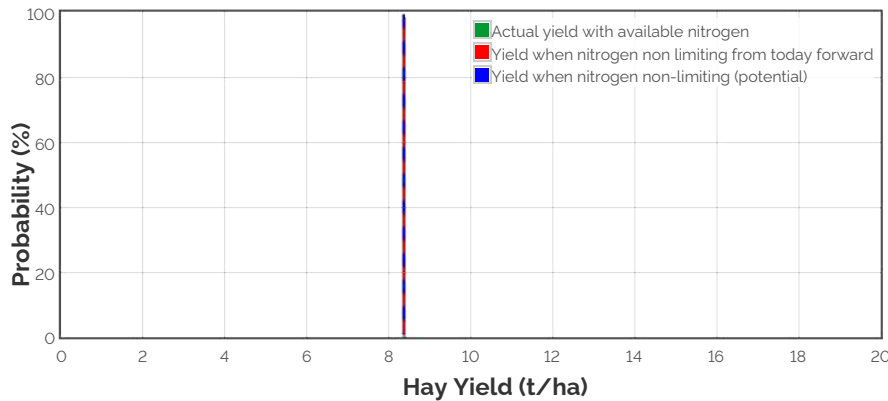
Grain Yield Outcome

- 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.

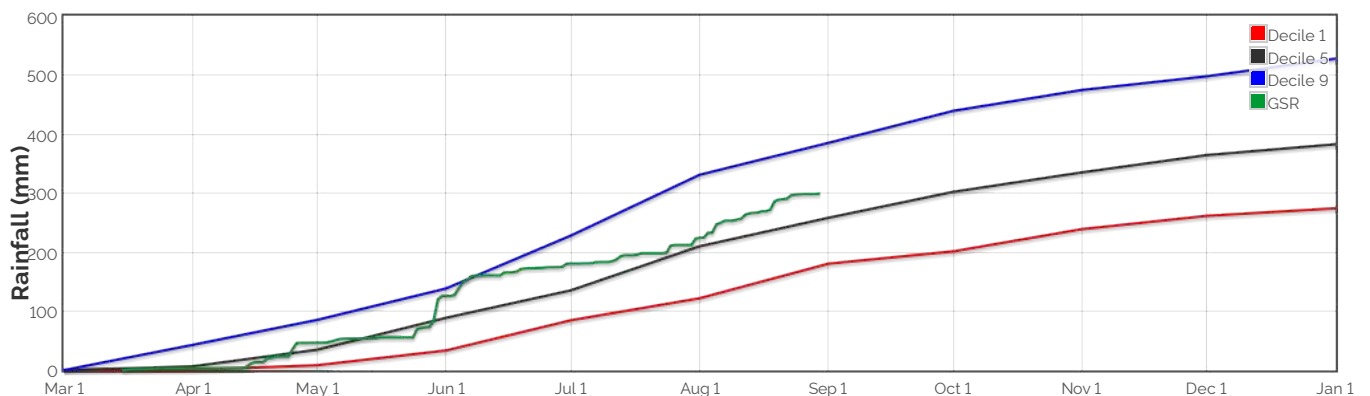
Hay Yield Outcome



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: 11481.3kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	7-May	17-May	24-May	31-May	7-Jun	15-Jun
Median	7-May	17-May	24-May	31-May	7-Jun	15-Jun
Latest	7-May	17-May	24-May	31-May	7-Jun	15-Jun



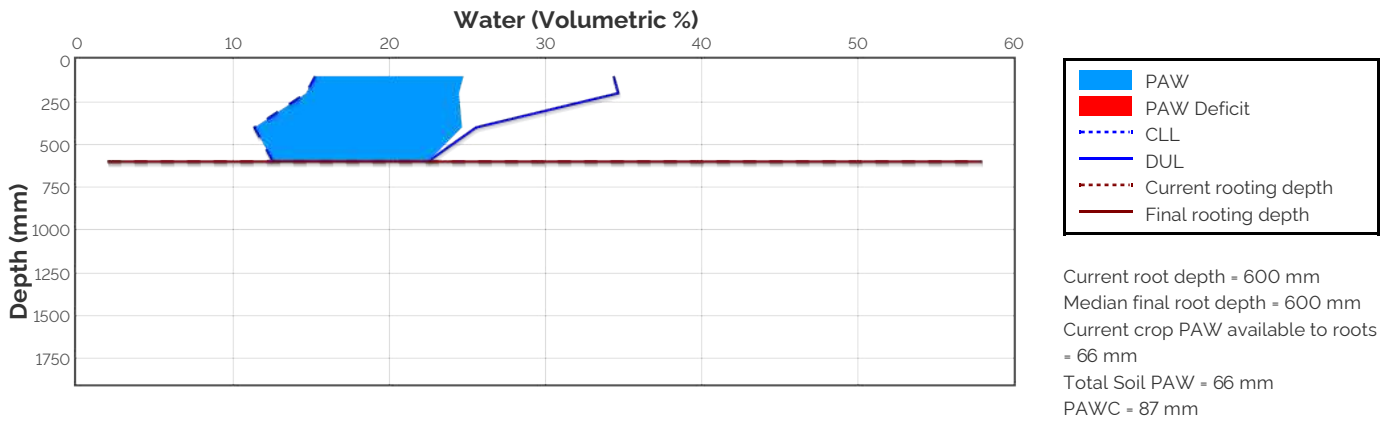
Predicted

Earliest	27-Jun	1-Jul	6-Jul	18-Jul	23-Jul	31-Jul	11-Aug	22-Aug	8-Sep
Median	27-Jun	1-Jul	6-Jul	18-Jul	23-Jul	31-Jul	11-Aug	22-Aug	11-Sep
Latest	27-Jun	1-Jul	6-Jul	18-Jul	23-Jul	31-Jul	11-Aug	22-Aug	15-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		10%	O	mild 32 to 34°C	4%	O	
moderate 0 to -2°C during flowering & early grain fill		0%	O	moderate 34 to 36°C	0%	O	
severe Less than -2°C during flowering & grain fill		0%	O	severe Above 36°C	0%	O	

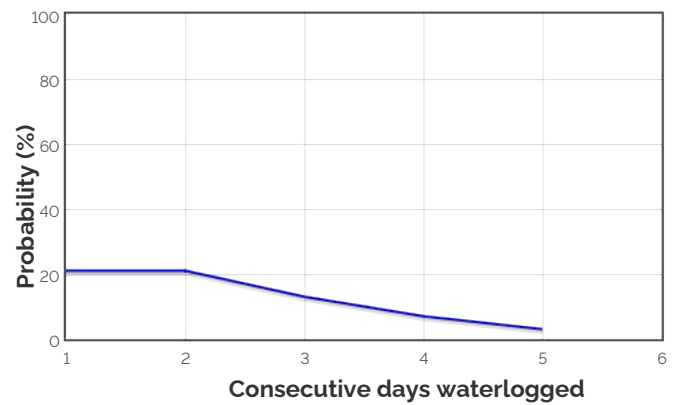
Current Distribution of PAW



Water Budget

Initial PAW status @ 15-Mar	49 mm
Rainfall since 15-Mar	299.3 mm
Irrigations	
Evaporation since 15-Mar	116 mm
Transpiration since 15-Mar	121 mm
Deep drainage since 15-Mar	40 mm
Run-off since 15-Mar	5 mm
Current PAW status:	66 mm

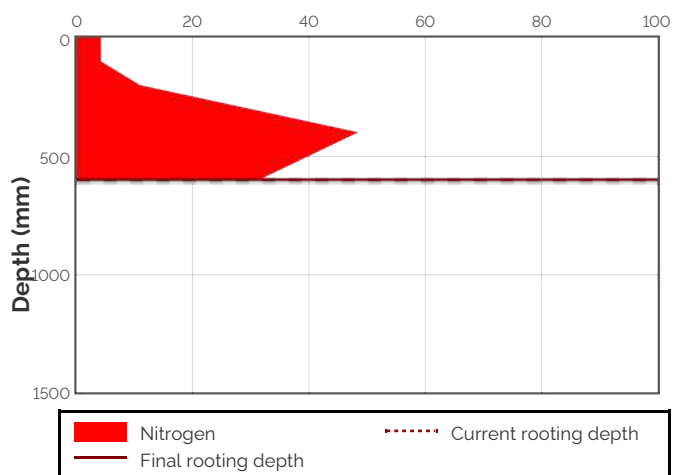
Probability of Future Waterlogging Events



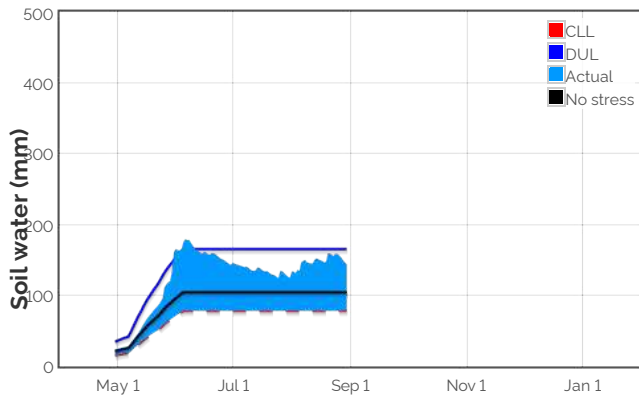
Nitrogen Budget

Initial N status @ 15-Mar	269 kg/ha
N mineralisation since 15-Mar	16 kg/ha
N tie up since 15-Mar	2 kg/ha
N applications	
28-Apr : 8 kg/ha	
14-Jun : 27.6 kg/ha	
8-Jul : 23 kg/ha	
Total N in plant	198 kg/ha
De-nitrification since 15-Mar	3 kg/ha
Leaching since 15-Mar	42 kg/ha
Current N status:	97 kg/ha
Median N mineralisation to maturity	= 0.8615 kg/ha
Median N tie up to maturity	= 0 kg/ha

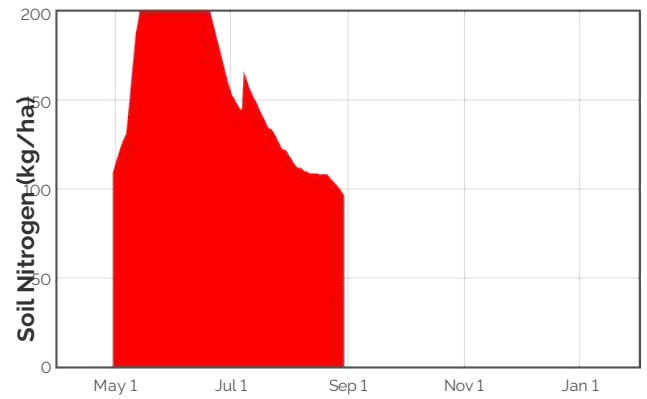
Current distribution of soil nitrogen (kg/ha)



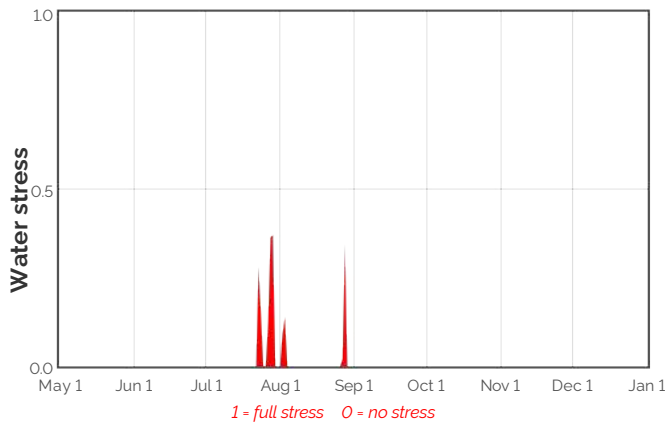
Availability of Water to Growing Roots



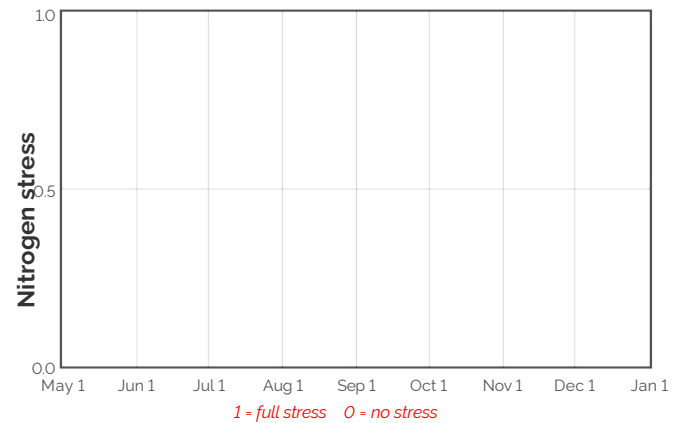
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



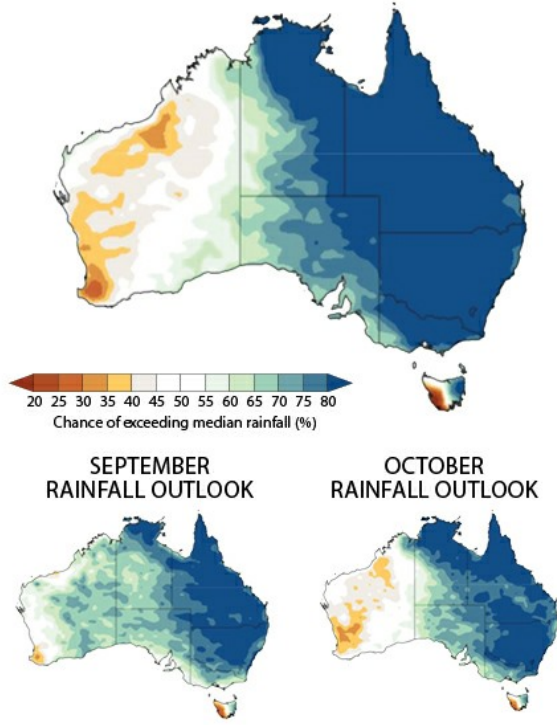
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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)
1-Sep	71.5	0.6	2.1	3.2	34.7	60.8	88.4	0.0	0.0
2-Sep	71.9	0.6	1.9	3.3	32.7	58.9	85.2	0.0	0.0
3-Sep	72.3	0.6	1.9	3.4	30.4	56.6	81.7	0.0	0.0
4-Sep	72.7	0.7	2.0	3.2	28.1	54.3	78.3	0.0	0.0
5-Sep	73.0	0.6	1.7	3.3	25.8	52.0	75.0	0.0	0.0
6-Sep	73.4	0.6	1.7	3.5	23.8	50.0	71.7	0.0	0.0
7-Sep	73.8	0.6	1.7	3.2	21.6	47.8	68.2	0.0	0.0
8-Sep	74.3	0.5	1.6	3.3	19.6	45.8	64.6	0.0	0.0
9-Sep	74.7	0.4	1.6	3.4	17.6	43.8	61.5	0.0	0.0
10-Sep	75.1	0.3	1.6	3.2	15.8	42.0	58.0	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



PAST ACCURACY FOR SEPTEMBER TO NOVEMBER

