



Crop Report

23-Jun-2022

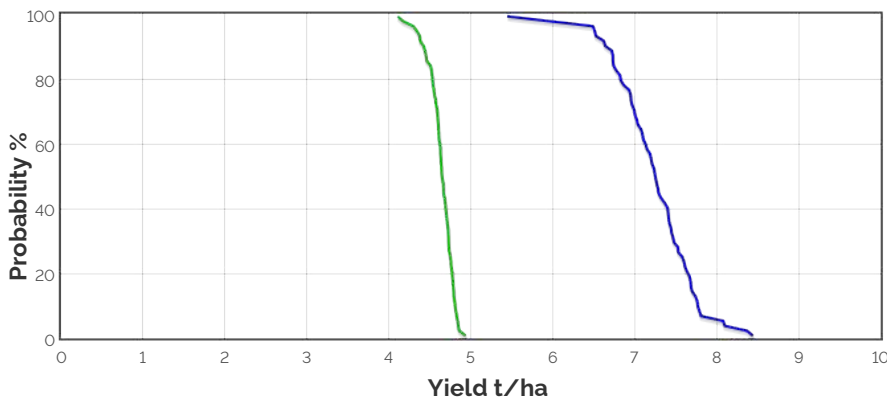
Resilient EP Soil
Moisture Probe Network:
Cockaleeche

Crop: Wheat
Cultivar: Sunco
Sowing details: 200 plants/m² on 10-May
Expected maturity date: 3-Nov

Paddock Details
Initial conditions date: 10-May
Soil: ResEP_clay_Cockaleeche
1400 mm max rooting depth
Stubble: 2000 kg/ha of Wheat
No till

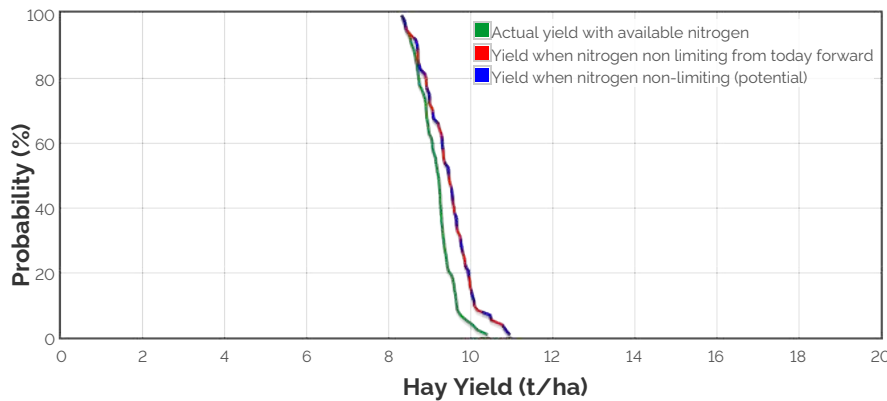
Grain Yield Outcome

- 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.

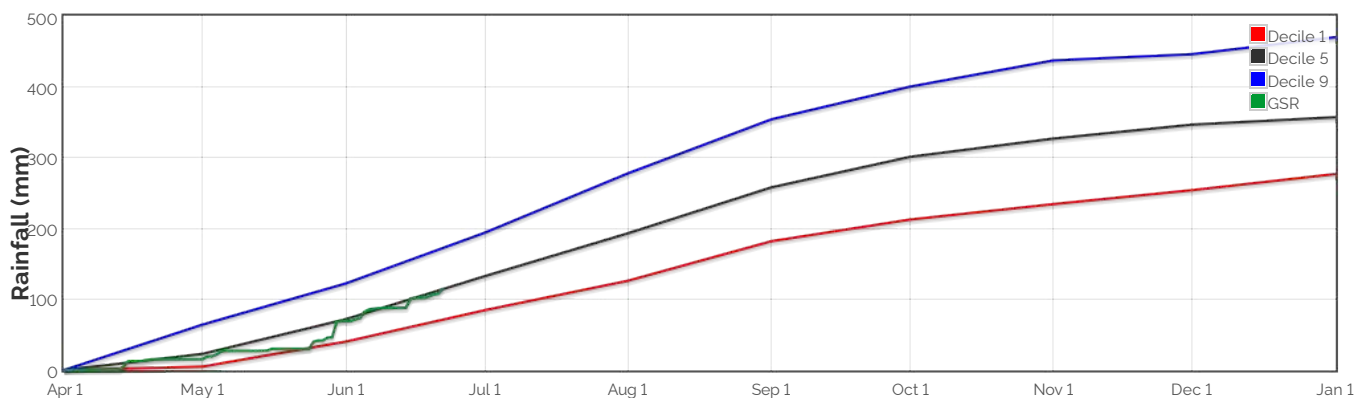
Hay Yield Outcome



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: 706.8kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	20-May	30-May	7-Jun	15-Jun	23-Jun	29-Jun
Median	20-May	30-May	7-Jun	15-Jun	23-Jun	1-Jul
Latest	20-May	30-May	7-Jun	15-Jun	23-Jun	3-Jul



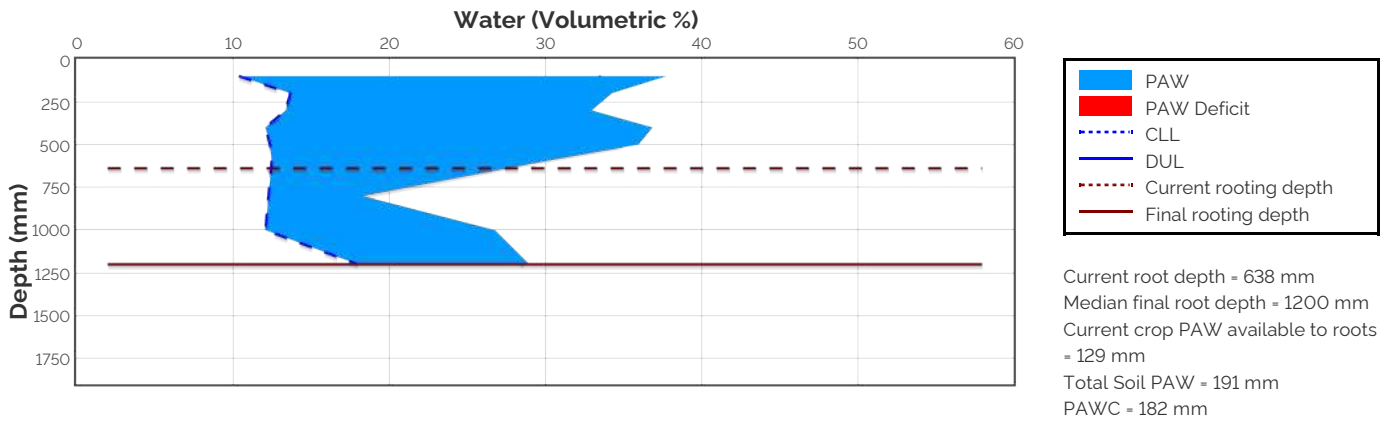
Predicted

Earliest	25-Jul	29-Jul	2-Aug	13-Aug	18-Aug	25-Aug	3-Sep	12-Sep	1-Oct
Median	28-Jul	1-Aug	6-Aug	17-Aug	22-Aug	30-Aug	9-Sep	19-Sep	7-Oct
Latest	2-Aug	6-Aug	11-Aug	23-Aug	29-Aug	7-Sep	17-Sep	27-Sep	16-Oct

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		9%	0	mild 32 to 34°C		21%	0
moderate 0 to -2°C during flowering & early grain fill		4%	0	moderate 34 to 36°C		12%	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C		4%	0

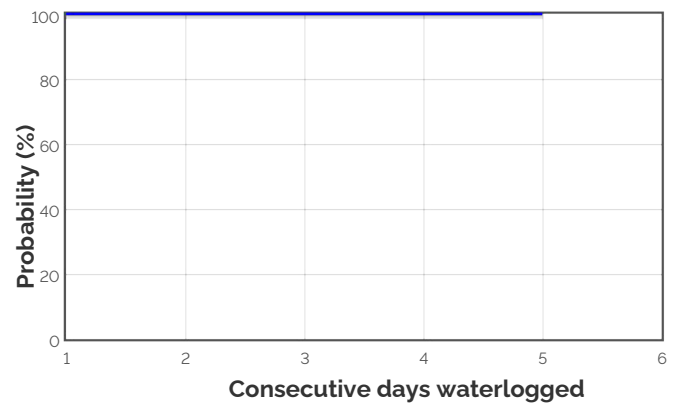
Current Distribution of PAW



Water Budget

Initial PAW status @ 10-May	249 mm
Rainfall since 10-May	88.3 mm
Irrigations	
Evaporation since 10-May	42 mm
Transpiration since 10-May	6 mm
Deep drainage since 10-May	2 mm
Run-off since 10-May	1 mm
Current PAW status:	191 mm

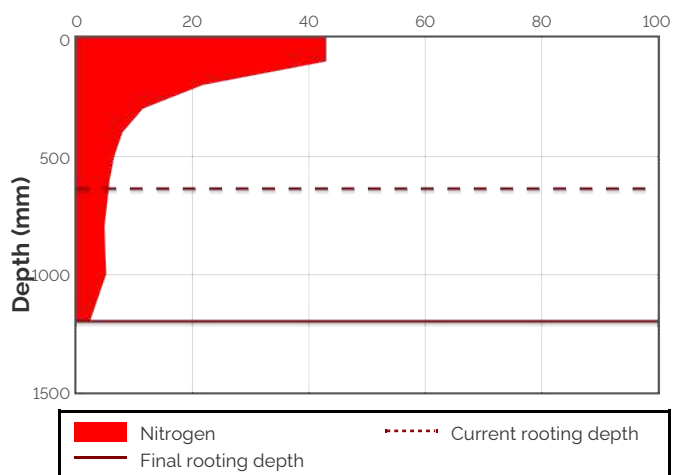
Probability of Future Waterlogging Events



Nitrogen Budget

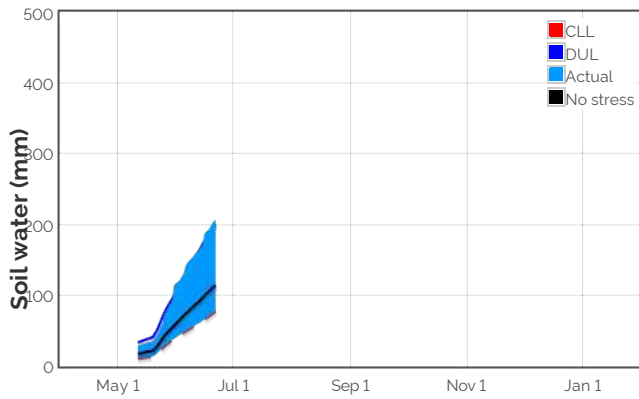
Initial N status @ 10-May	79 kg/ha
N mineralisation since 10-May	2 kg/ha
N tie up since 10-May	3 kg/ha
N applications	
10-May : 9.7 kg/ha	
1-Jun : 37.7 kg/ha	
17-Jun : 36.3 kg/ha	
Total N in plant	39 kg/ha
De-nitrification since 10-May	1 kg/ha
Leaching since 10-May	0 kg/ha
Current N status:	113 kg/ha

Current distribution of soil nitrogen (kg/ha)

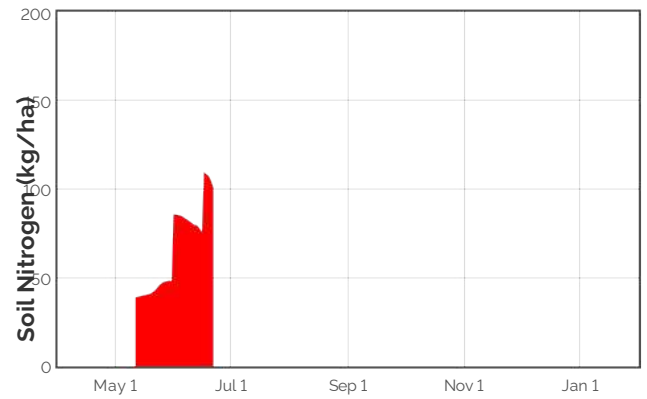


Median N mineralisation to maturity = 5.027 kg/ha
 Median N tie up to maturity = 0.547 kg/ha

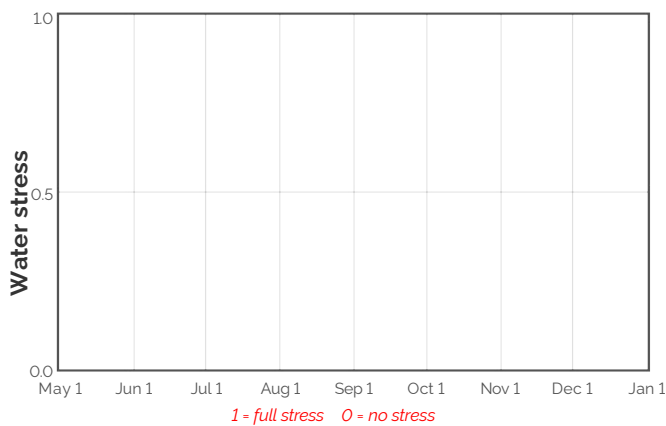
Availability of Water to Growing Roots



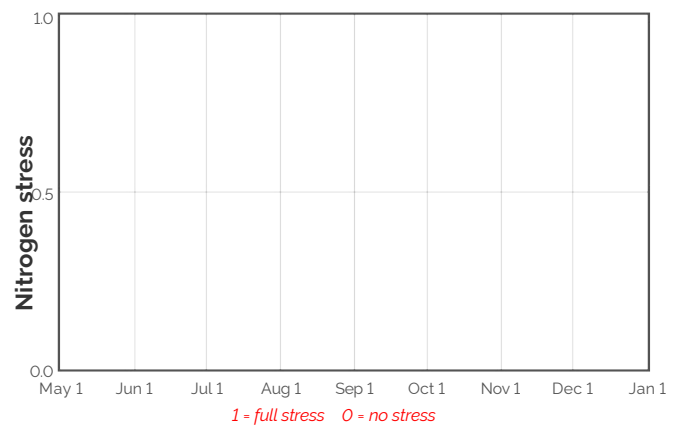
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



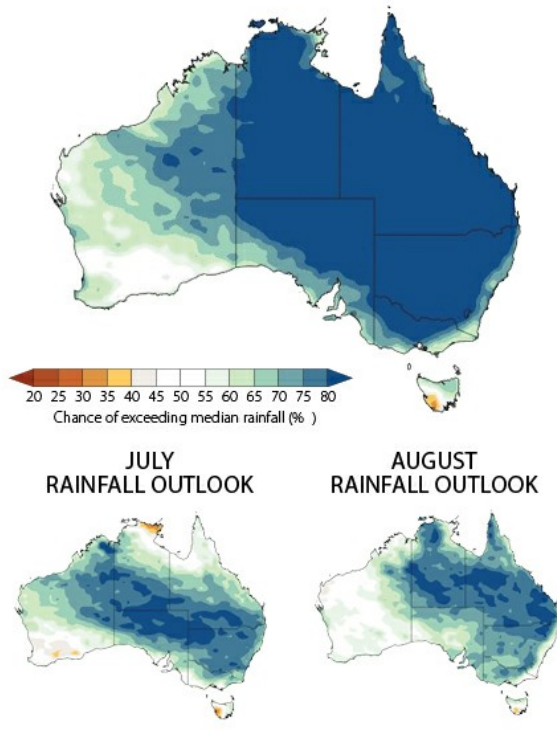
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

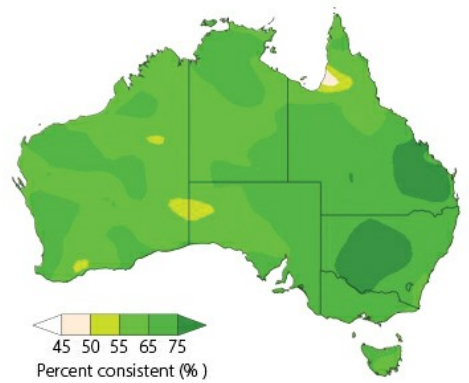
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
24-Jun	15.3	0.5	0.4	2.2	97.3	134.8	93.0	0.0	0.0
25-Jun	15.4	0.6	0.4	2.5	96.4	134.2	90.8	0.0	0.0
26-Jun	15.6	0.6	0.4	2.7	95.6	133.4	88.5	0.0	0.0
27-Jun	15.7	0.6	0.6	2.8	94.5	132.7	86.0	0.0	0.0
28-Jun	15.8	0.6	0.6	2.9	93.4	131.7	83.3	0.0	0.0
29-Jun	15.9	0.6	0.5	2.9	92.2	130.9	80.6	0.0	0.0
30-Jun	16.0	0.6	0.6	3.0	91.3	130.1	77.9	0.0	0.0
1-Jul	16.0	0.5	0.6	3.0	90.4	129.4	75.2	0.0	0.0
2-Jul	16.0	0.5	0.6	3.0	89.6	129.0	72.5	0.0	0.0
3-Jul	16.0	0.5	0.6	3.0	89.0	128.4	70.0	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 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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