

Crop Report

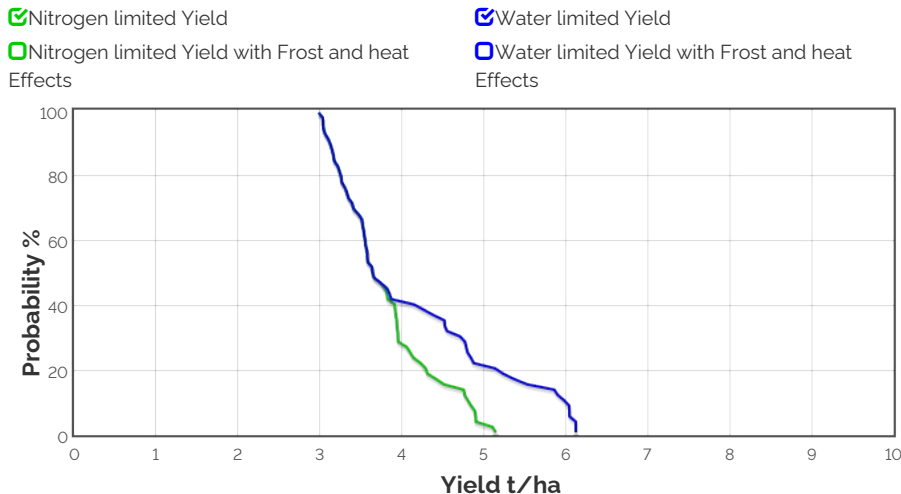
5-Oct-2017

UpperNorthFS: Kitto

Crop: Wheat
 Cultivar: Sceptre
 Sowing details: 116 plants/m² on 9-May
 Expected maturity date: 13-Nov

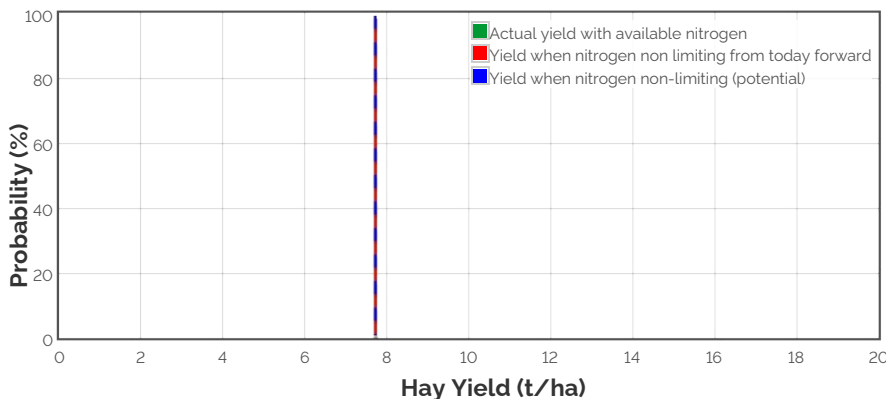
Paddock Details
 Initial conditions date: 24-May
 Soil: Light Clay Loam over Medium Clay (Morchard Plain No603-YP)
 1800 mm max rooting depth
 Stubble: 1500 kg/ha of Vetch
 No till

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.

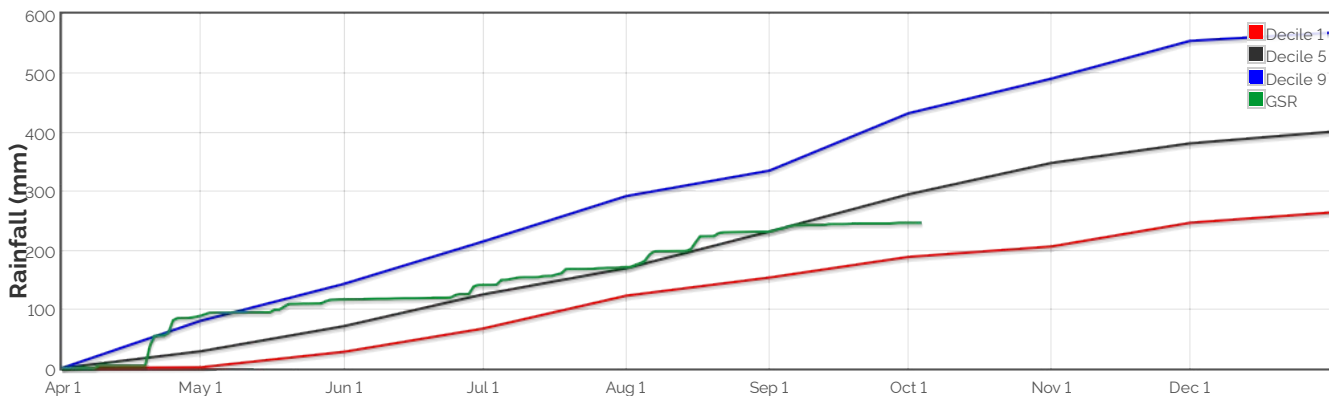
Hay Yield Outcome



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: 9381.3kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	20-May	31-May	11-Jun	21-Jun	2-Jul	12-Jul
Median	20-May	31-May	11-Jun	21-Jun	2-Jul	12-Jul
Latest	20-May	31-May	11-Jun	21-Jun	2-Jul	12-Jul



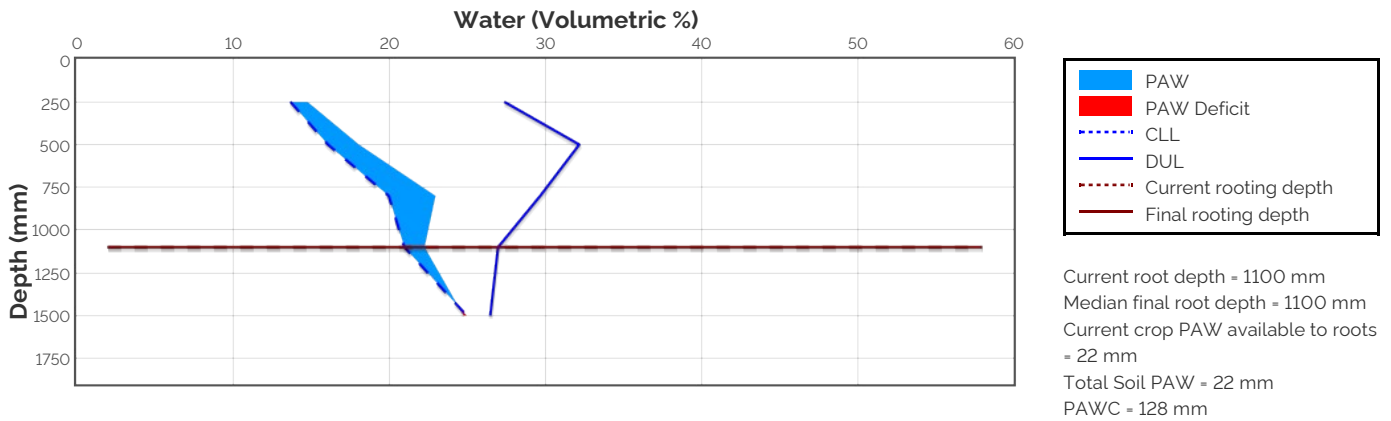
Predicted

Earliest	6-Aug	10-Aug	15-Aug	28-Aug	3-Sep	12-Sep	22-Sep	1-Oct	15-Oct
Median	6-Aug	10-Aug	15-Aug	28-Aug	3-Sep	12-Sep	22-Sep	1-Oct	19-Oct
Latest	6-Aug	10-Aug	15-Aug	28-Aug	3-Sep	12-Sep	22-Sep	1-Oct	23-Oct

Probability and Incidence of Frost and Heat Shock

Frost damage during flowering				Heat damage during grain fill			
Severity	Probability	This Season		Severity	Probability	This Season	
mild 2 to 0°C during flowering	60%	1		mild 32 to 34°C	37%	0	
moderate 0 to -2°C during flowering & early grain fill	11%	0		moderate 34 to 36°C	16%	0	
severe Less than -2°C during flowering & grain fill	0%	0		severe Above 36°C	13%	0	

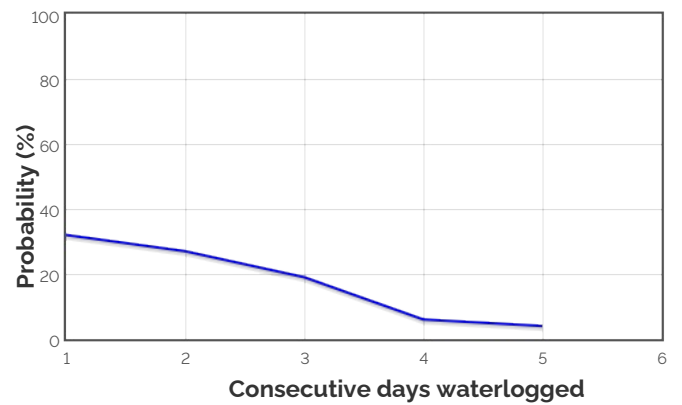
Current Distribution of PAW



Water Budget

Initial PAW status @ 24-May	89 mm
Rainfall since 24-May	137.1 mm
Irrigations	
Evaporation since 24-May	70 mm
Transpiration since 24-May	133 mm
Deep drainage since 24-May	0 mm
Run-off since 24-May	0 mm
Current PAW status:	22 mm

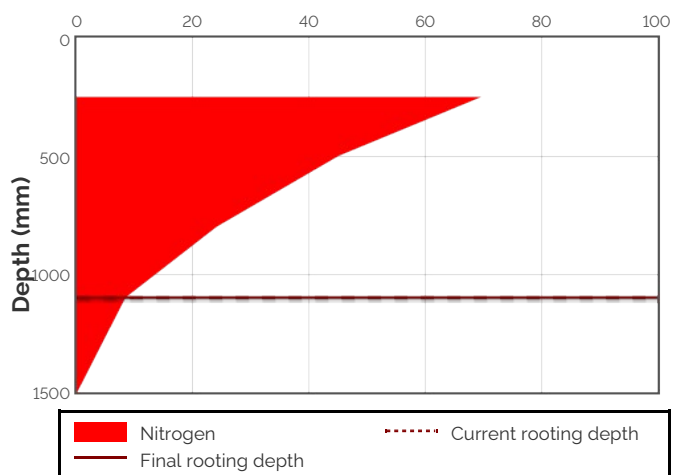
Probability of Future Waterlogging Events



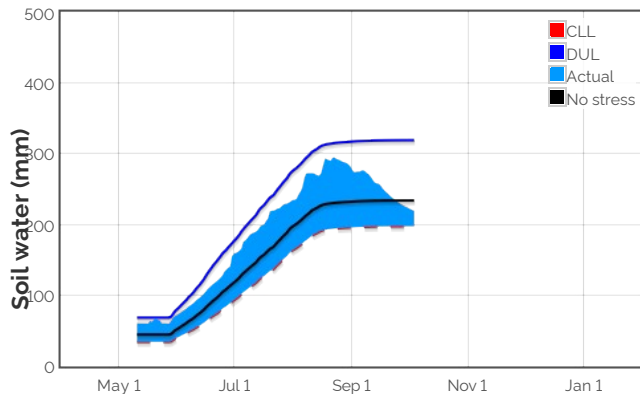
Nitrogen Budget

Initial N status @ 24-May	162 kg/ha
N mineralisation since 24-May	1 kg/ha
N tie up since 24-May	10 kg/ha
N applications	
25-May : 37.8 kg/ha	
Total N in plant	169 kg/ha
De-nitrification since 24-May	0 kg/ha
Leaching since 24-May	0 kg/ha
Current N status:	20 kg/ha
Median N mineralisation to maturity = 0.176 kg/ha	
Median N tie up to maturity = 0.335 kg/ha	

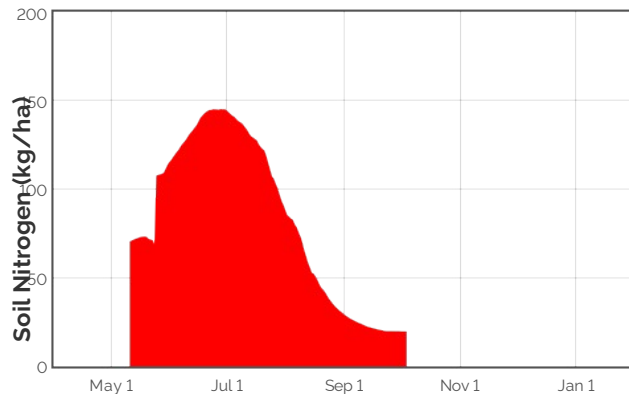
Current distribution of soil nitrogen (kg/ha)



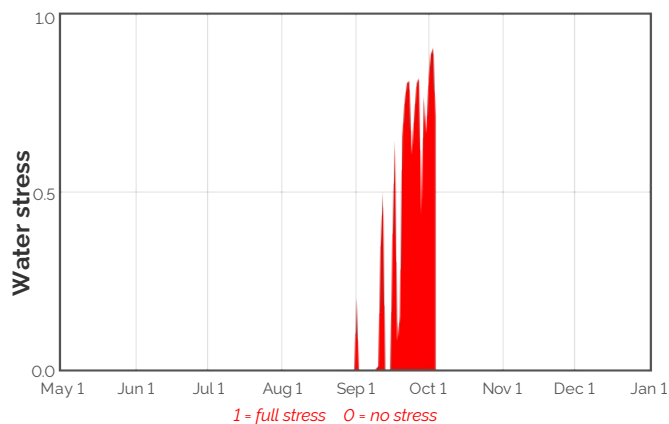
Availability of Water to Growing Roots



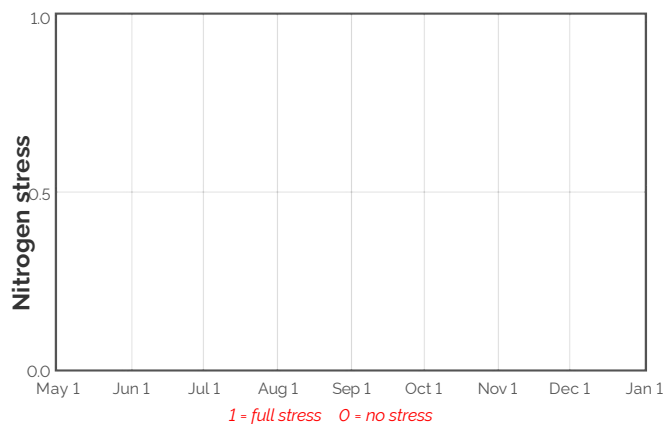
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



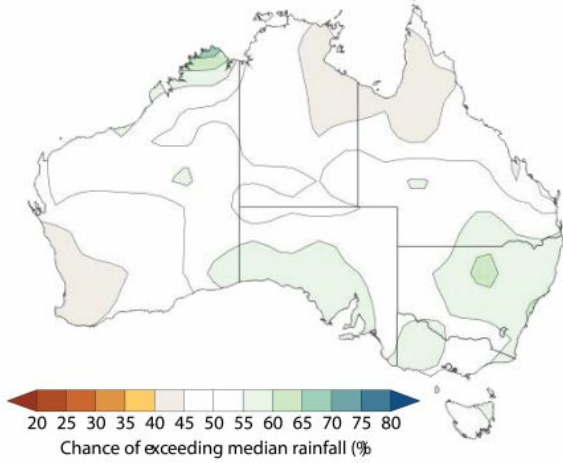
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

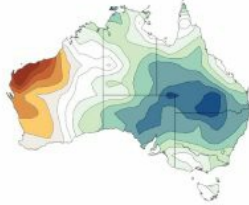
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
4-Oct	68.9	0.3	0.8	0.1	-16.9	19.6	19.4	0.0	0.0
5-Oct	69.6	0.2	0.8	0.1	-17.9	18.6	19.3	0.0	0.0
6-Oct	70.4	0.2	0.7	0.1	-18.8	17.7	19.2	0.0	0.0
7-Oct	71.0	0.2	0.7	0.1	-19.7	16.8	19.1	0.0	0.0
8-Oct	71.4	0.2	0.6	0.1	-20.5	16.0	19.0	0.0	0.0
9-Oct	71.9	0.2	0.6	0.1	-21.3	15.2	19.0	0.0	0.0
10-Oct	72.3	0.2	0.5	0.1	-22.0	14.4	18.9	0.0	0.0
11-Oct	72.8	0.2	0.5	0.1	-22.7	13.7	18.8	0.0	0.0
12-Oct	73.2	0.2	0.5	0.1	-23.4	13.1	18.7	0.0	0.0
13-Oct	73.6	0.2	0.5	0.1	-24.0	12.4	18.7	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.

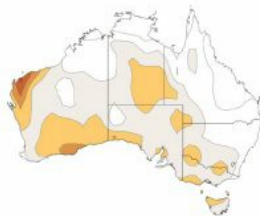
3 MONTH CLIMATE OUTLOOK FROM OCTOBER TO DECEMBER



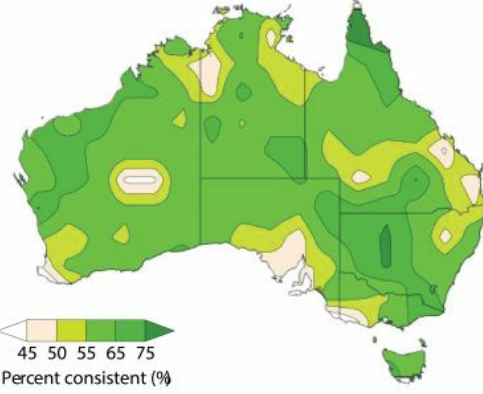
OCTOBER CLIMATE OUTLOOK



NOVEMBER CLIMATE OUTLOOK



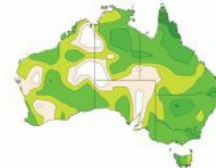
PAST ACCURACY FROM OCTOBER TO DECEMBER



PAST ACCURACY FOR OCTOBER



PAST ACCURACY FOR NOVEMBER



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