

Crop Report

21-Aug-2017

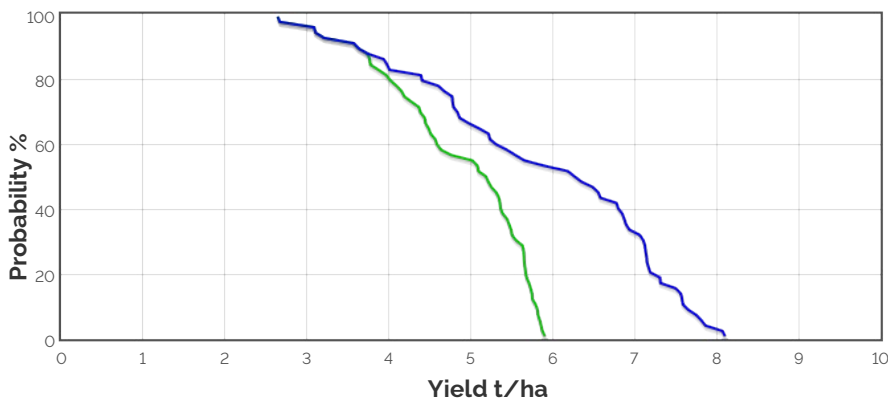
UpperNorthFS: Kitto

Crop: Wheat
Cultivar: Sceptre
 Sowing details: 116 plants/m² on 9-May
 Expected maturity date: 12-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

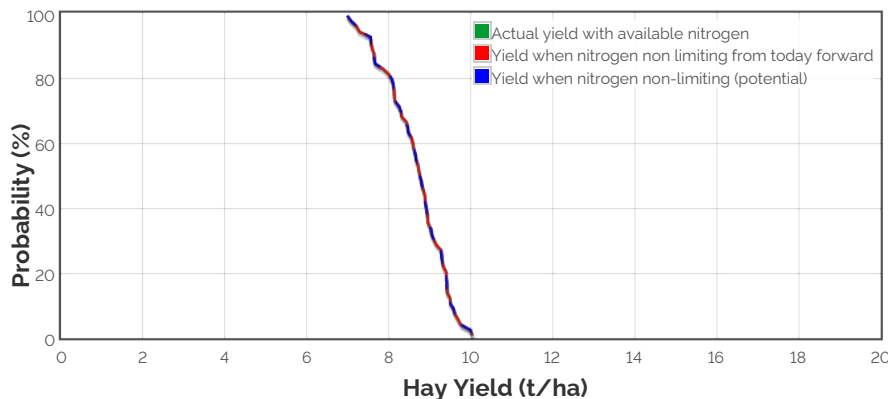
Grain Yield Outcome

- 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.

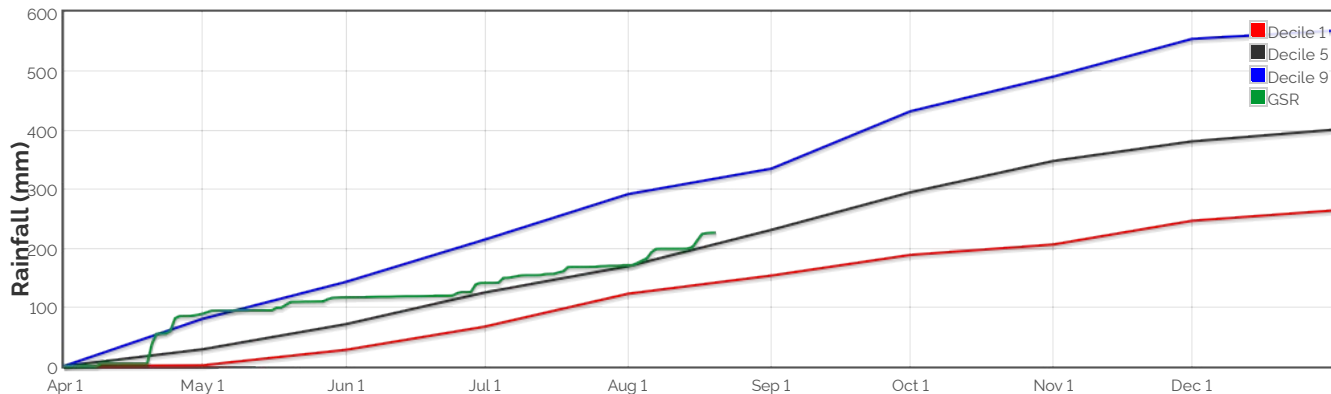
Hay Yield Outcome



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: 4332.7kg/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



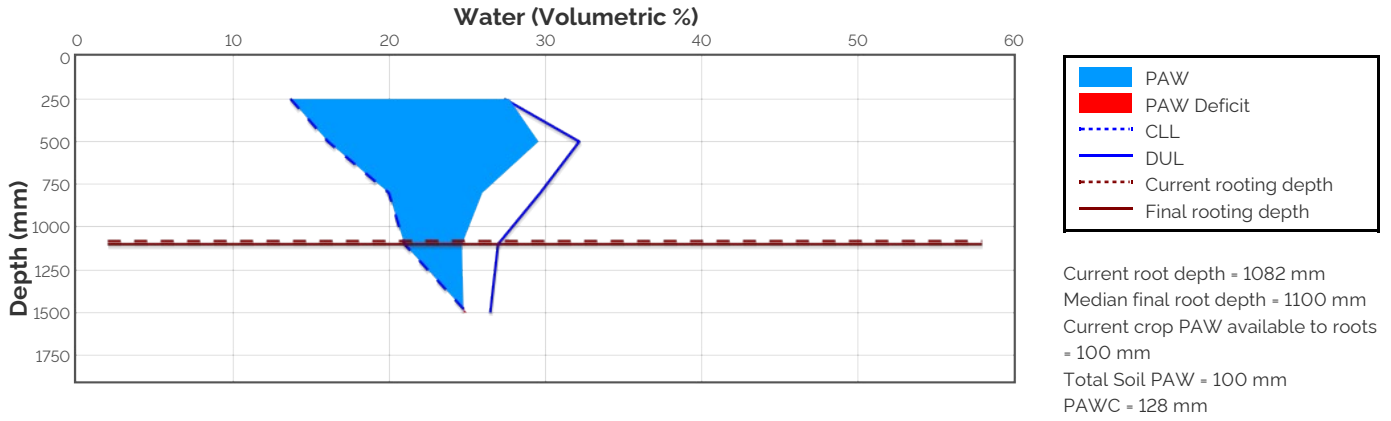
Predicted

Earliest	6-Aug	10-Aug	15-Aug	25-Aug	28-Aug	4-Sep	14-Sep	25-Sep	10-Oct
Median	6-Aug	10-Aug	15-Aug	27-Aug	1-Sep	10-Sep	21-Sep	30-Sep	18-Oct
Latest	6-Aug	10-Aug	15-Aug	28-Aug	3-Sep	13-Sep	26-Sep	7-Oct	27-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		57%	0	mild 32 to 34°C		39%	0
moderate 0 to -2°C during flowering & early grain fill		9%	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



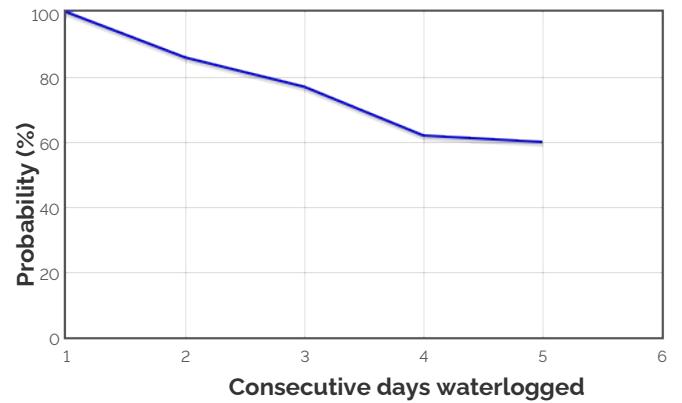
Water Budget

Initial PAW status @ 24-May
 Rainfall since 24-May
 Irrigations
 Evaporation since 24-May
 Transpiration since 24-May
 Deep drainage since 24-May
 Run-off since 24-May

89 mm
 116.7 mm
 49 mm
 56 mm
 0 mm
 0 mm
100 mm

Current PAW status:

Probability of Future Waterlogging Events



Nitrogen Budget

Initial N status @ 24-May
 N mineralisation since 24-May
 N tie up since 24-May
 N applications

162 kg/ha
 1 kg/ha
 8 kg/ha

Total N in plant
 De-nitrification since 24-May
 Leaching since 24-May

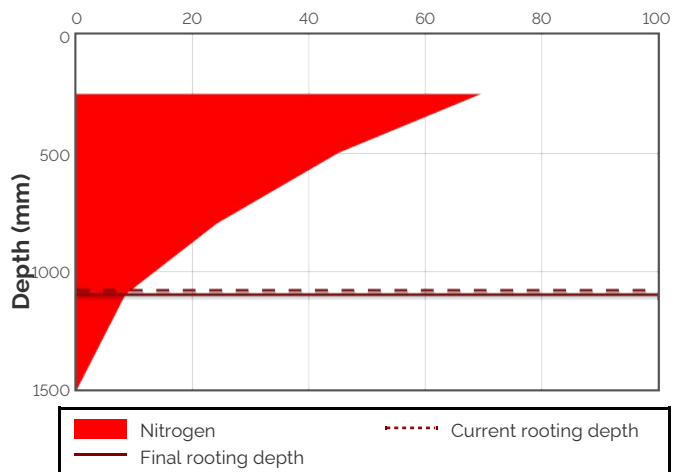
25-May : 37.8 kg/ha
 147 kg/ha
 0 kg/ha
 0 kg/ha

Current N status:

45 kg/ha

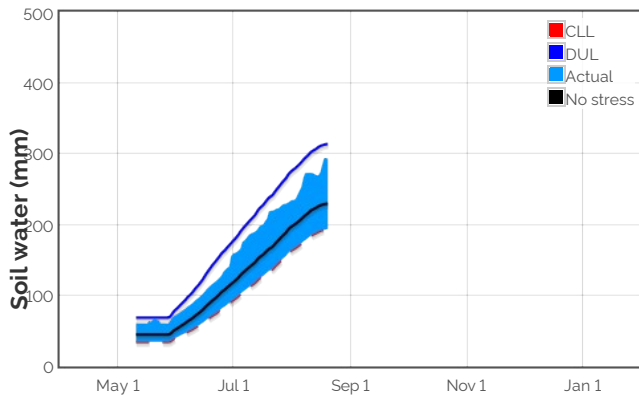
Median N mineralisation to maturity = 0.922 kg/ha
 Median N tie up to maturity = 1.374 kg/ha

Current distribution of soil nitrogen (kg/ha)

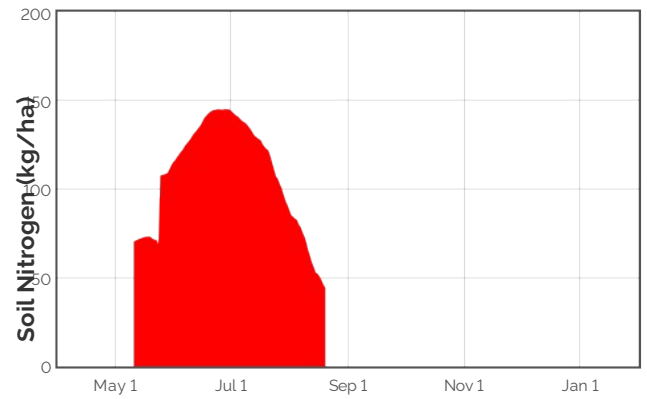


Current Crop Available N = 44 kg/ha
 Total Soil N = 45 kg/ha

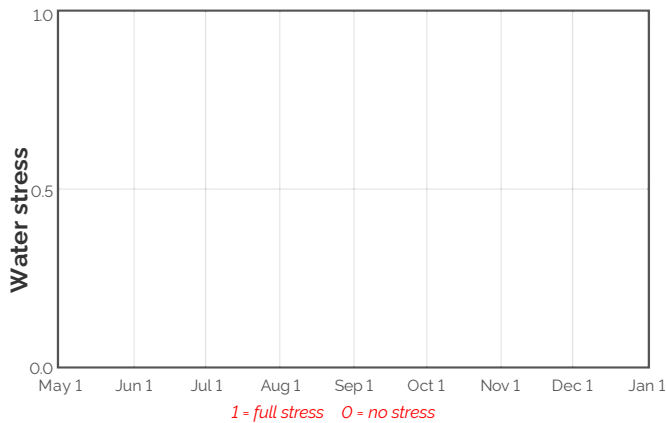
Availability of Water to Growing Roots



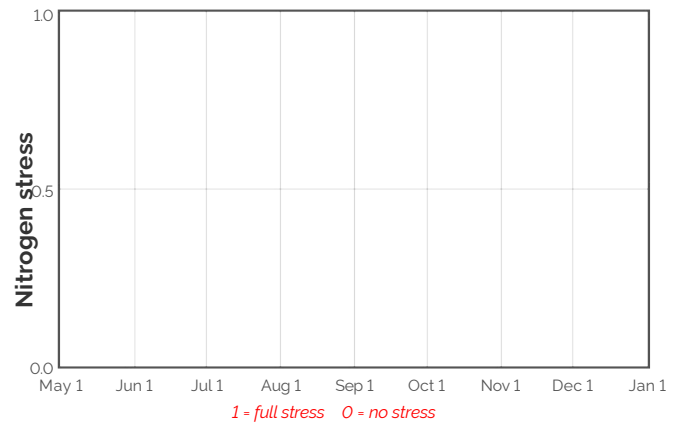
Availability of Soil Nitrogen to Growing Roots



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.

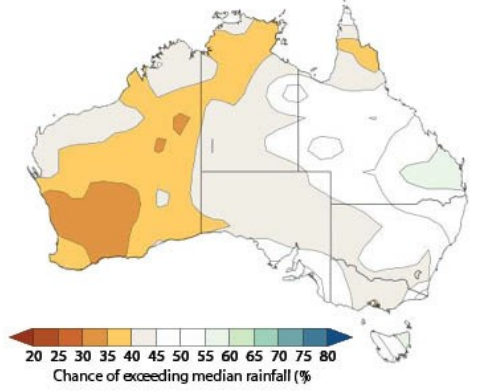
Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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)
21-Aug	35.5	0.5	1.8	19	59.0	95.2	40.2	0.0	0.1
22-Aug	35.9	0.5	1.5	16	57.1	93.3	38.6	0.0	0.0
23-Aug	36.2	0.4	1.5	15	54.5	90.8	37.1	0.0	0.0
24-Aug	36.6	0.5	1.5	13	52.9	89.2	35.9	0.0	0.0
25-Aug	37.0	0.5	1.8	12	51.0	87.3	34.7	0.0	0.0
26-Aug	37.4	0.5	1.9	11	48.8	85.1	33.7	0.0	0.0
27-Aug	37.7	0.5	2.0	10	45.7	82.0	32.7	0.0	0.0
28-Aug	38.1	0.5	2.1	9	43.4	79.7	31.8	0.0	0.0
29-Aug	38.5	0.5	1.9	8	41.2	77.5	31.0	0.0	0.0
30-Aug	38.8	0.5	1.9	8	39.2	75.6	30.2	0.0	0.0

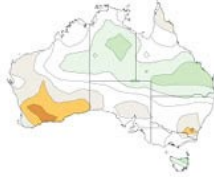
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

Bureau of Meteorology Seasonal and Monthly Outlooks

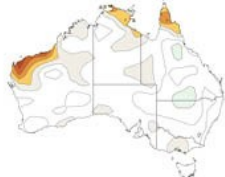
3 MONTH CLIMATE OUTLOOK FROM SEPTEMBER TO NOVEMBER



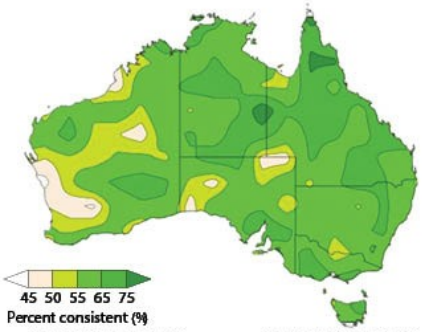
SEPTEMBER CLIMATE OUTLOOK



OCTOBER CLIMATE OUTLOOK



PAST ACCURACY FROM SEPTEMBER TO NOVEMBER



PAST ACCURACY FOR SEPTEMBER



PAST ACCURACY FOR OCTOBER



 Australian Government
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