

# Crop Report

21-Aug-2017

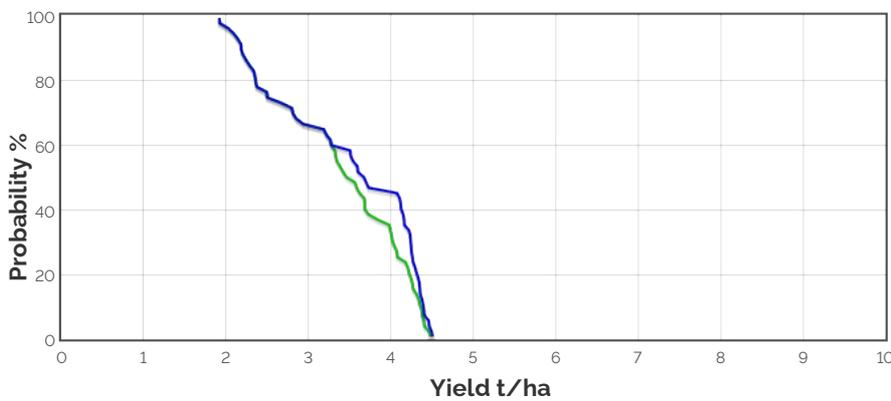
UpperNorthFS: Crouch

**Crop: Wheat**  
**Cultivar: Sceptre**  
 Sowing details: 120 plants/m<sup>2</sup> on 25-Apr  
 Expected maturity date: 12-Oct

**Paddock Details**  
 Initial conditions date: 23-May  
 Soil: Loamy Sand over Sandy Clay Loam and Fine Sandy Clay (Port Germein No601-YP)  
 900 mm max rooting depth  
 Stubble: 700 kg/ha of Oats  
 No till

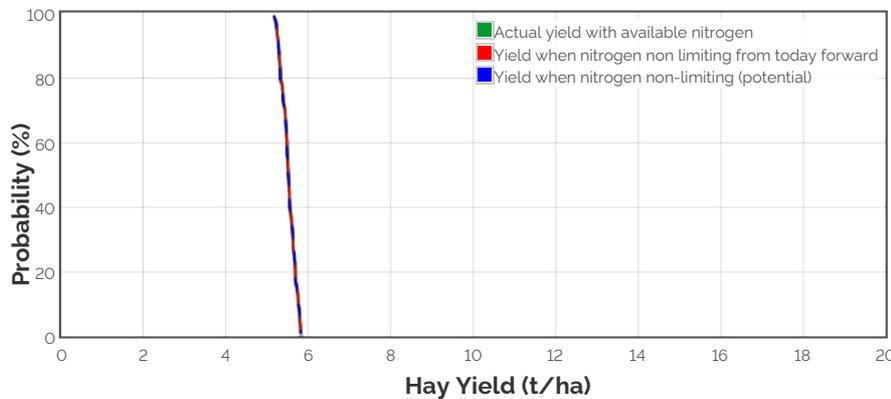
## Grain Yield Outcome

- 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.

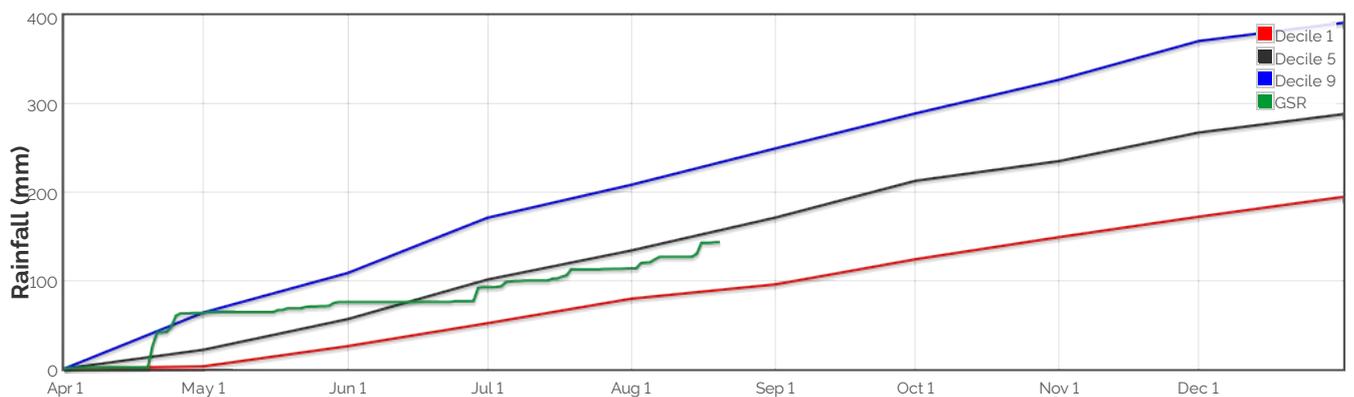
## Hay Yield Outcome



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: 5988.8kg/ha

## The Season So Far - Growing Season Rainfall Deciles



## Simulated and Predicted Crop Growth Stage



### Predicted

Earliest	5-May	14-May	21-May	28-May	5-Jun	15-Jun
Median	5-May	14-May	21-May	28-May	5-Jun	15-Jun
Latest	5-May	14-May	21-May	28-May	5-Jun	15-Jun



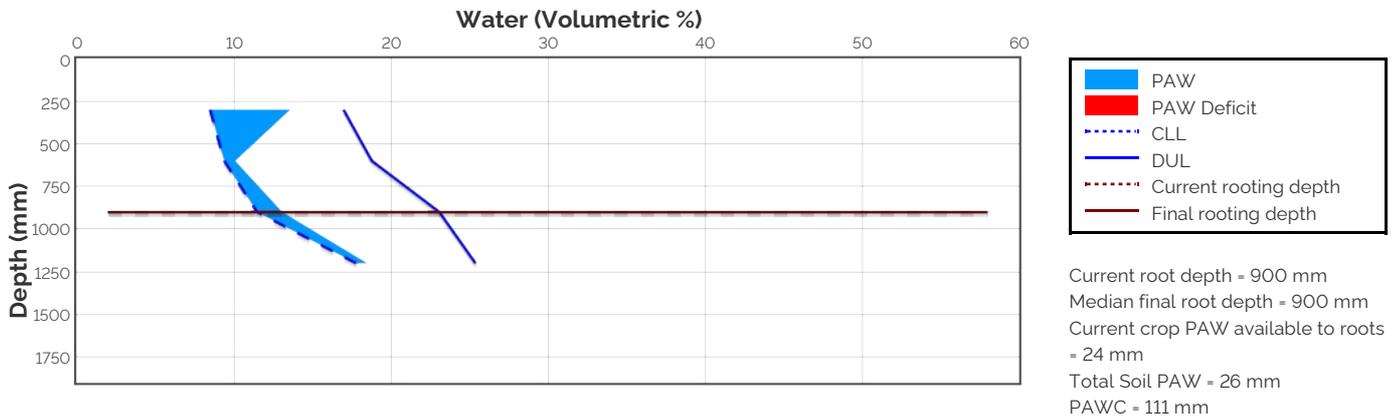
### Predicted

Earliest	8-Jul	12-Jul	17-Jul	28-Jul	2-Aug	10-Aug	20-Aug	28-Aug	12-Sep
Median	8-Jul	12-Jul	17-Jul	28-Jul	2-Aug	10-Aug	20-Aug	30-Aug	16-Sep
Latest	8-Jul	12-Jul	17-Jul	28-Jul	2-Aug	10-Aug	20-Aug	1-Sep	21-Sep

## 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	11%	0		mild 32 to 34°C	9%	0	
moderate 0 to -2°C during flowering & early grain fill	1%	0		moderate 34 to 36°C	1%	0	
severe Less than -2°C during flowering & grain fill	0%	0		severe Above 36°C	0%	0	

## Current Distribution of PAW



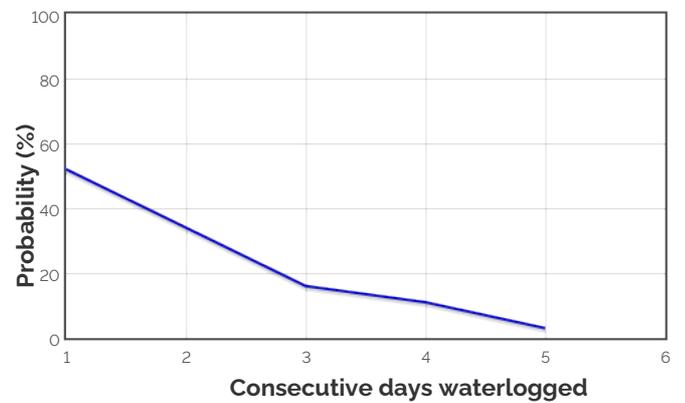
## Water Budget

Initial PAW status @ 23-May	82 mm
Rainfall since 23-May	73.2 mm
Irrigations	
Evaporation since 23-May	37 mm
Transpiration since 23-May	94 mm
Deep drainage since 23-May	0 mm
Run-off since 23-May	0 mm

**Current PAW status:**

**26 mm**

## Probability of Future Waterlogging Events



## Nitrogen Budget

Initial N status @ 23-May	141 kg/ha
N mineralisation since 23-May	0 kg/ha
N tie up since 23-May	6 kg/ha
N applications	

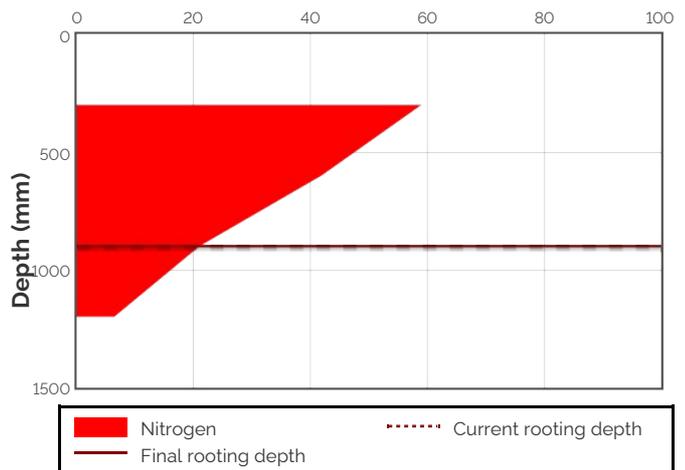
25-May : 8 kg/ha	
30-Jun : 27 kg/ha	
Total N in plant	134 kg/ha
De-nitrification since 23-May	0 kg/ha
Leaching since 23-May	0 kg/ha

**Current N status:**

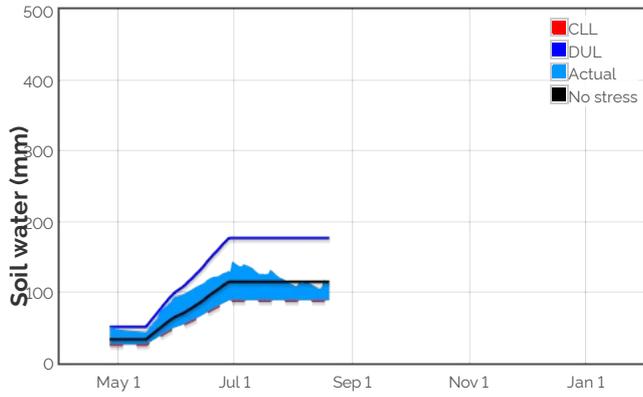
**40 kg/ha**

Median N mineralisation to maturity = 0.005 kg/ha  
 Median N tie up to maturity = 1.34 kg/ha

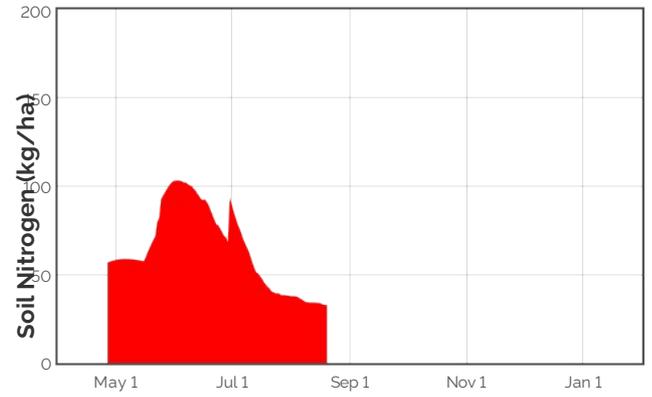
## Current distribution of soil nitrogen (kg/ha)



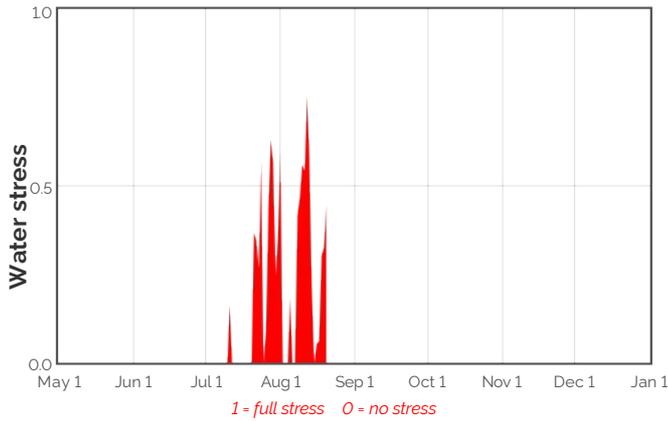
### Availability of Water to Growing Roots



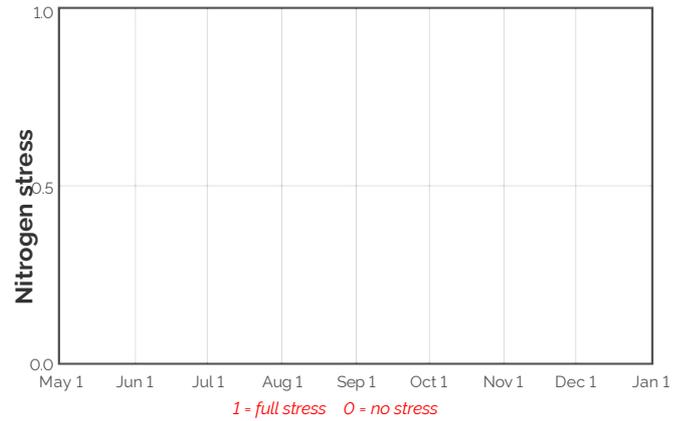
### Availability of Soil Nitrogen to Growing Roots



### 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.

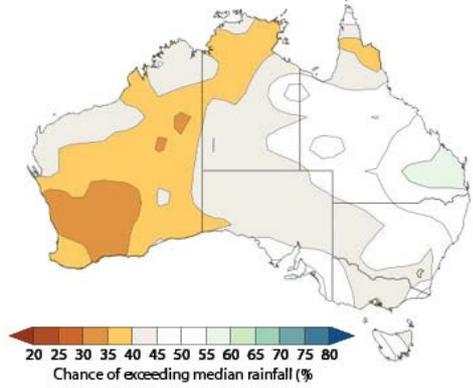
### Median projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser

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)
21-Aug	57.3	0.6	1.2	0.0	-5.9	20.7	32.8	0.0	0.0
22-Aug	58.3	0.6	1.1	0.0	-7.4	19.2	32.7	0.0	0.0
23-Aug	59.3	0.6	1.0	0.0	-8.8	17.8	32.6	0.0	0.0
24-Aug	60.2	0.6	0.9	0.0	-10.1	16.4	32.5	0.0	0.0
25-Aug	61.2	0.7	0.8	0.0	-11.4	15.1	32.5	0.0	0.0
26-Aug	62.5	0.7	0.8	0.0	-12.7	13.9	32.4	0.0	0.0
27-Aug	63.4	0.7	0.7	0.0	-14.0	12.6	32.4	0.0	0.0
28-Aug	64.5	0.5	0.6	0.0	-15.3	11.2	32.4	0.0	0.0
29-Aug	65.0	0.6	0.6	0.0	-16.4	10.1	32.3	0.0	0.0
30-Aug	65.9	0.5	0.5	0.0	-17.4	9.2	32.2	0.0	0.0

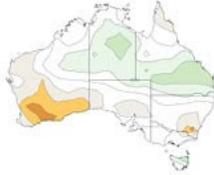
The water available to roots above the stress threshold is the amount of PAW (mm) above one third of the total water holding capacity of this soil. If the water values are below this stress threshold the water available to roots above the stress threshold will be negative.

# Bureau of Meteorology Seasonal and Monthly Outlooks

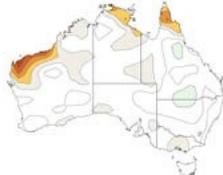
### 3 MONTH CLIMATE OUTLOOK FROM SEPTEMBER TO NOVEMBER



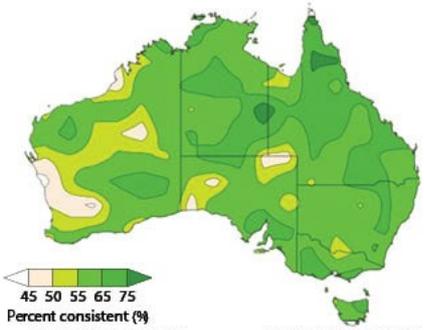
### SEPTEMBER CLIMATE OUTLOOK



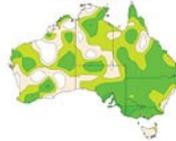
### OCTOBER CLIMATE OUTLOOK



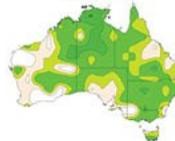
### PAST ACCURACY FROM SEPTEMBER TO NOVEMBER



### PAST ACCURACY FOR SEPTEMBER



### PAST ACCURACY FOR OCTOBER



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