

Crop Report

21-Aug-2017

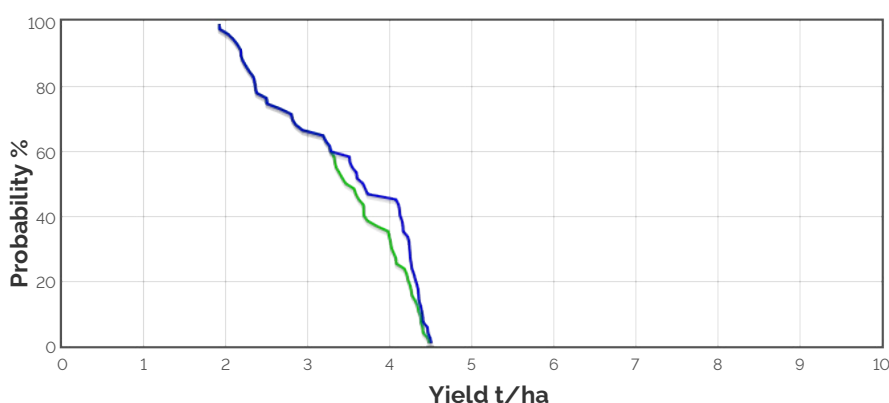
UpperNorthFS: Crouch

Crop: Wheat
Cultivar: Sceptre
Sowing details: 120 plants/m² 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

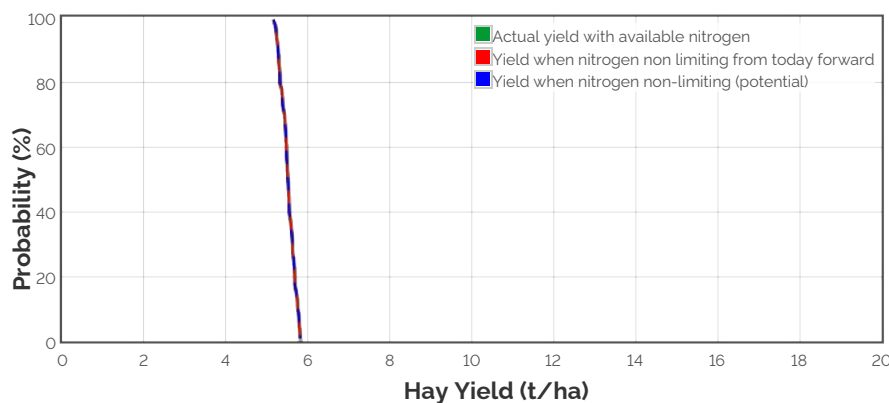
Grain Yield Outcome

- ☒ Nitrogen limited Yield
☐ Nitrogen limited Yield with Frost and heat Effects
☒ Water limited Yield
☐ 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.

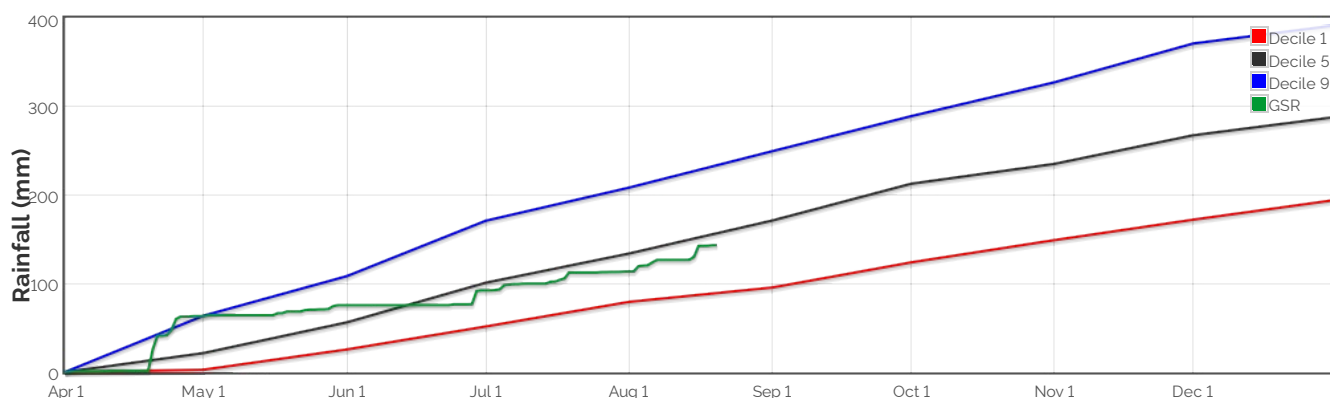
Hay Yield Outcome



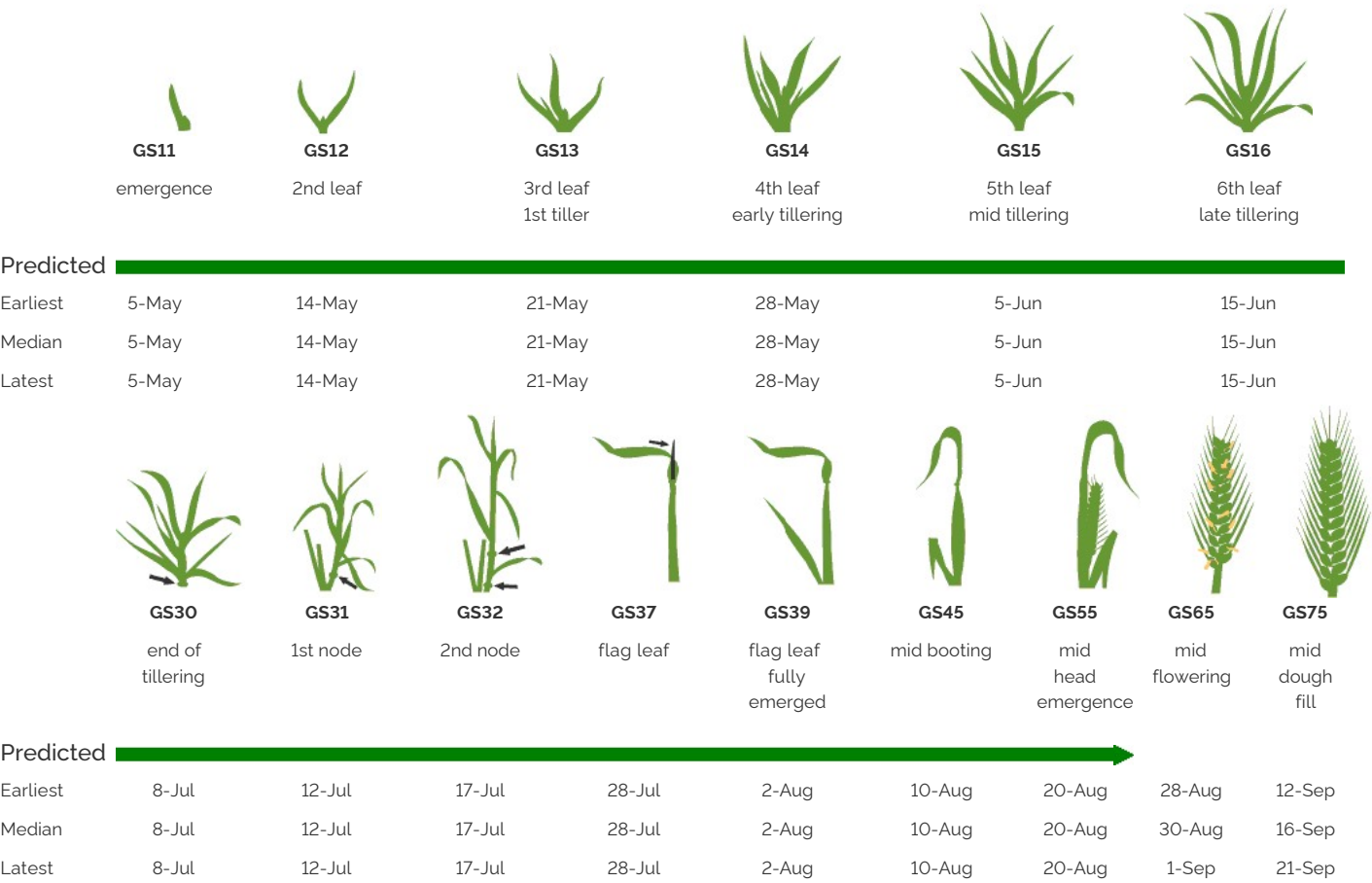
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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



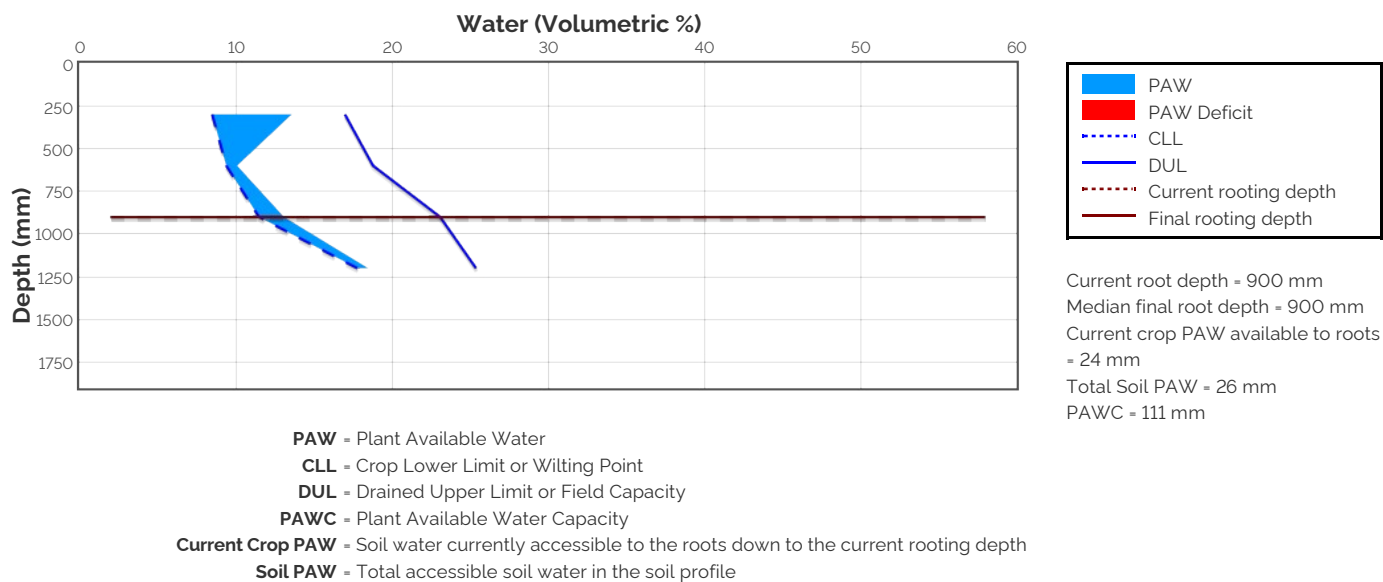
Simulated and Predicted Crop Growth Stage



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

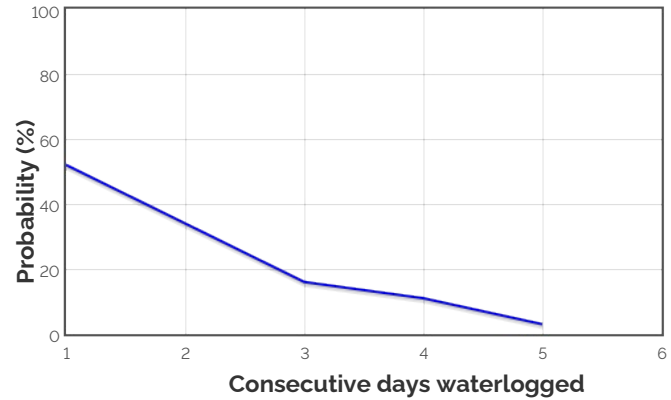
Current Distribution of PAW



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

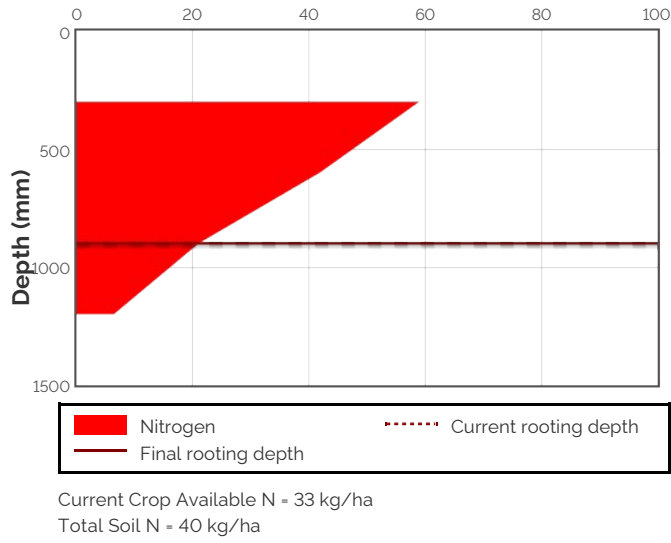
Probability of Future Waterlogging Events



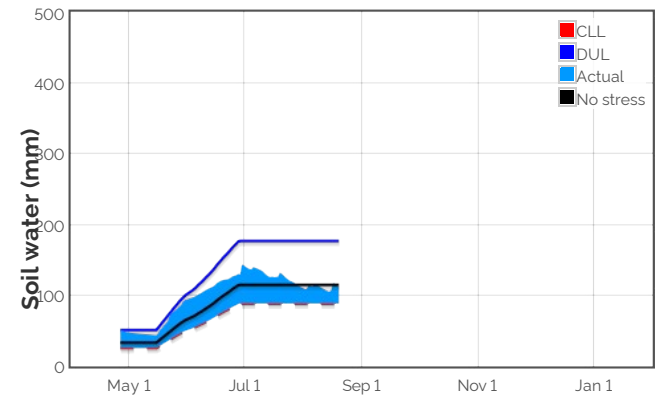
Nitrogen Budget

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	

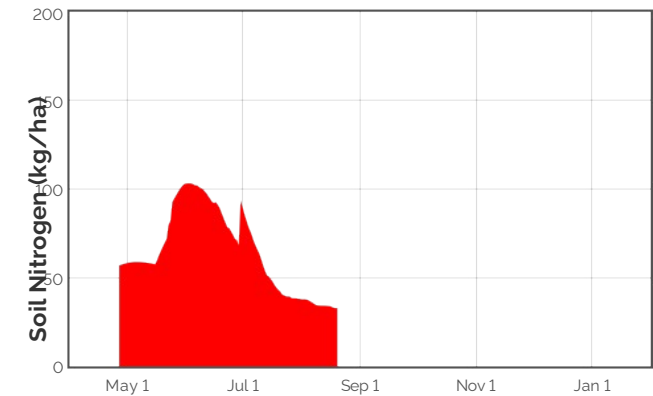
Current distribution of soil nitrogen (kg/ha)



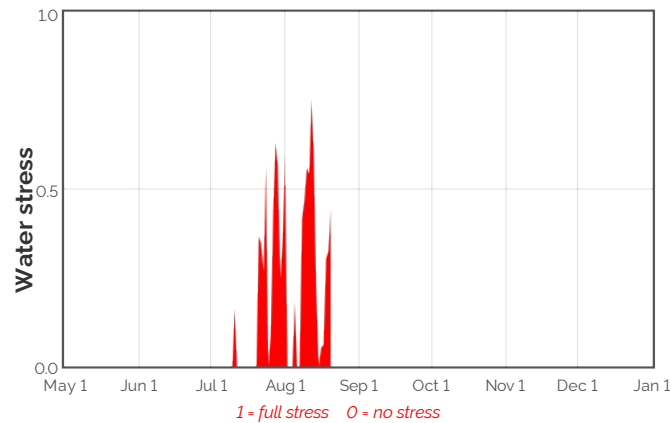
Availability of Water to Growing Roots



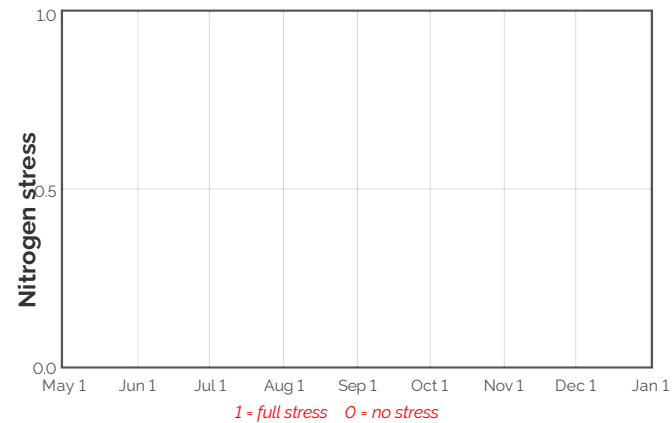
Availability of Soil Nitrogen to Growing Roots



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

