



Crop Report

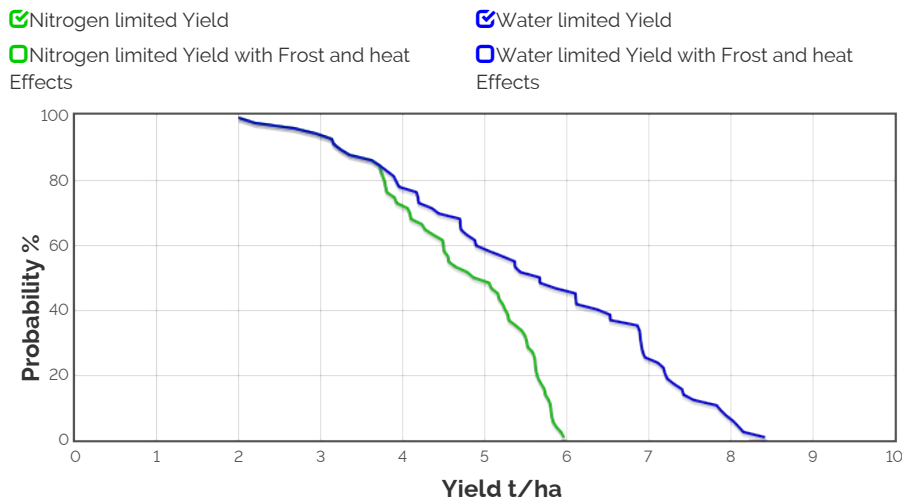
11-Aug-2017

UpperNorthFS: Kitto

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

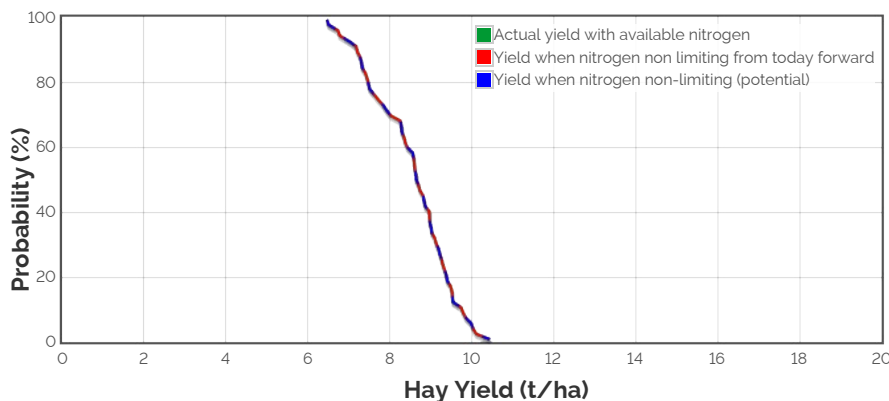
Paddock Details
Initial conditions date: 24-May
Soil: Light Clay Loam over Medium Clay (Morchart Plain No603-YP)
1800 mm max rooting depth
Stubble: 1500 kg/ha of Vetch
No till

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.

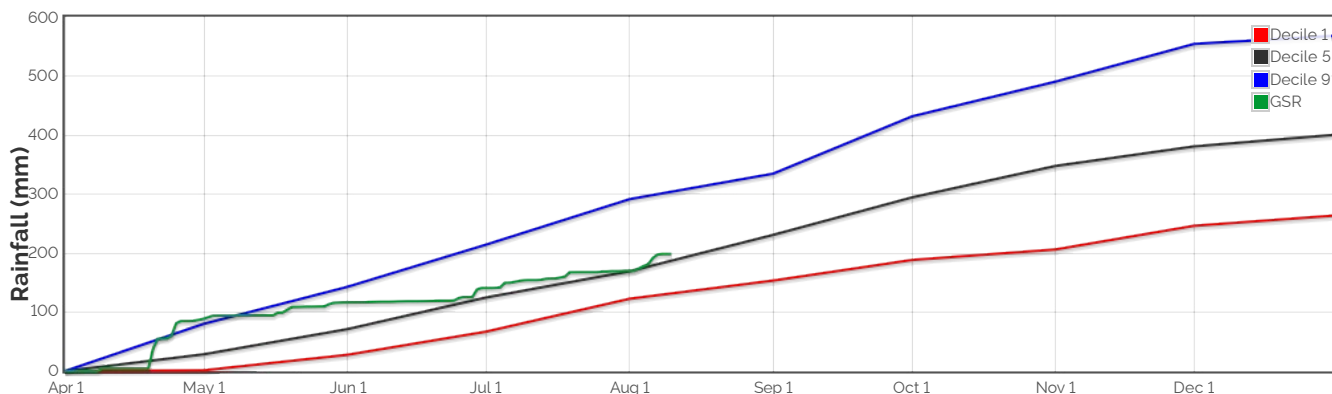
Hay Yield Outcome



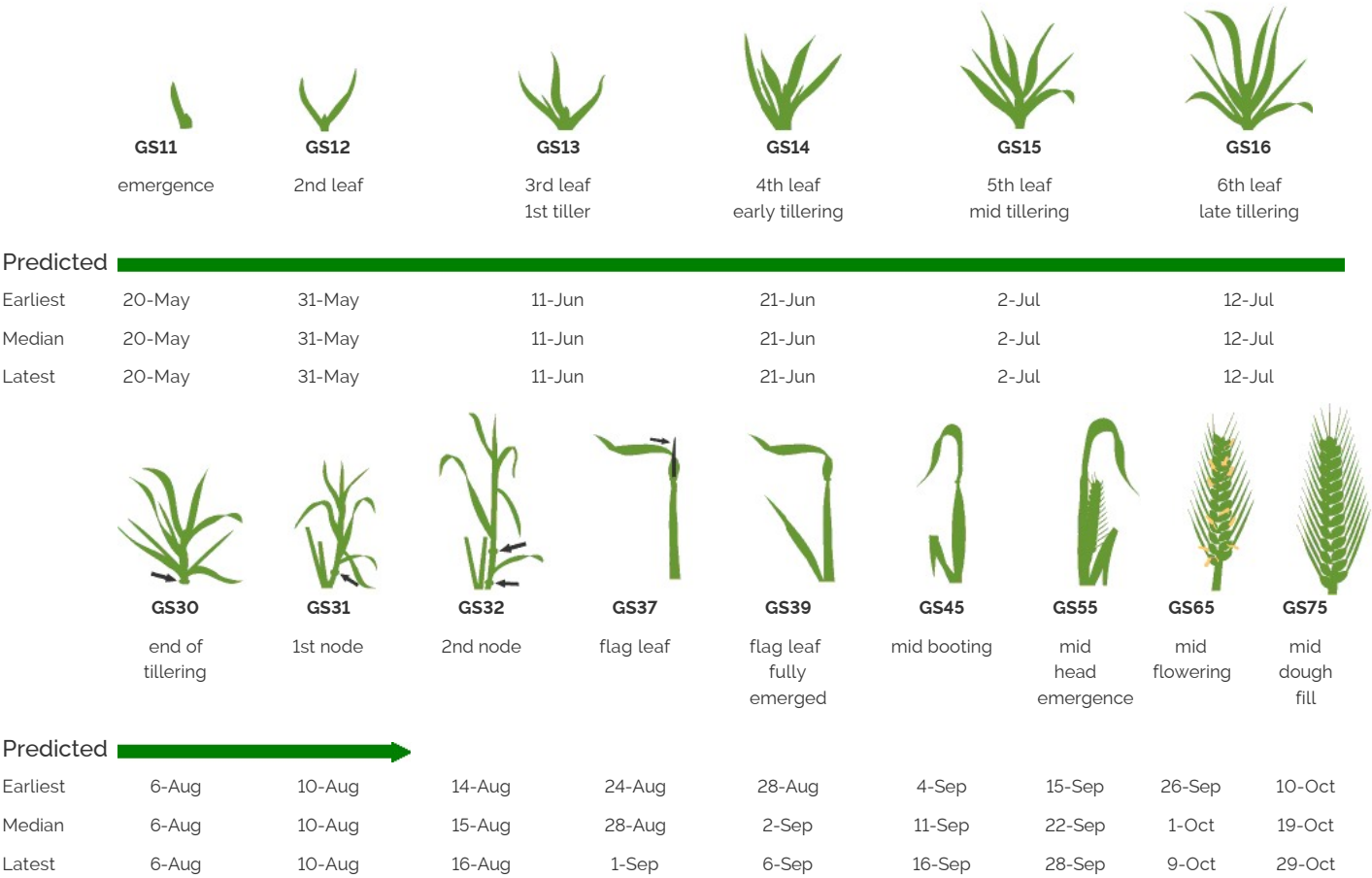
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 3032.1kg/ha

The Season So Far - Growing Season Rainfall Deciles



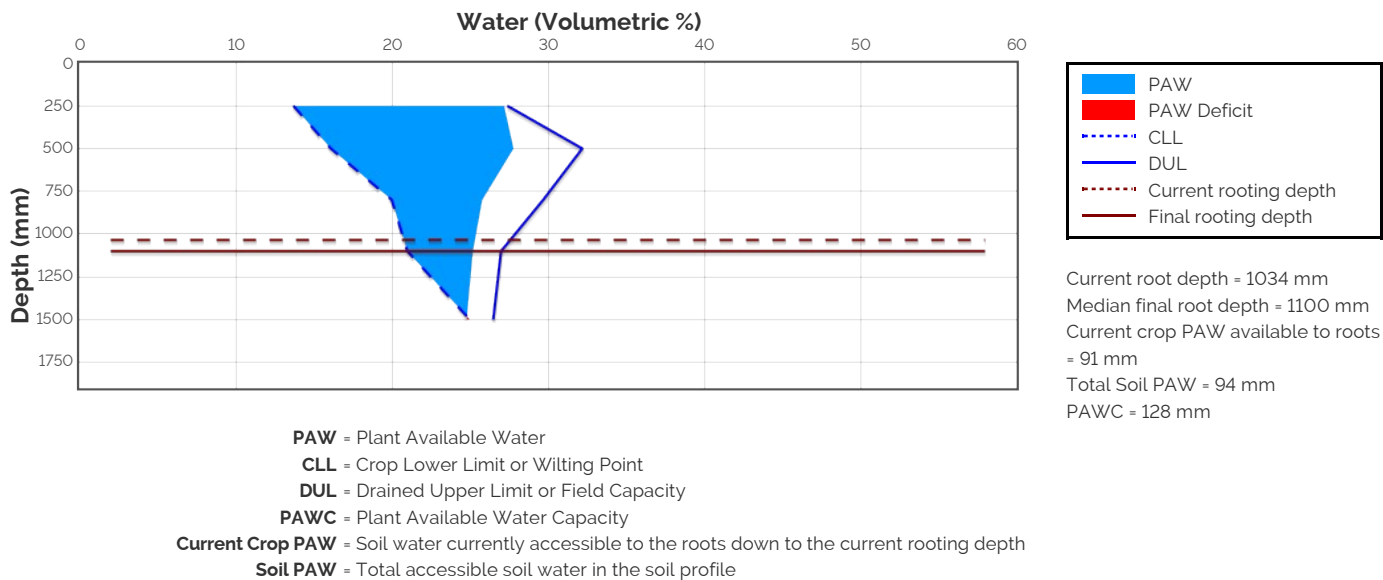
Simulated and Predicted Crop Growth Stage



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> 50%	0		mild 32 to 34°C	<div></div> 37%	0	
moderate 0 to -2°C during flowering & early grain fill	<div></div> 9%	0		moderate 34 to 36°C	<div></div> 18%	0	
severe Less than -2°C during flowering & grain fill		0%		severe Above 36°C	<div></div> 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

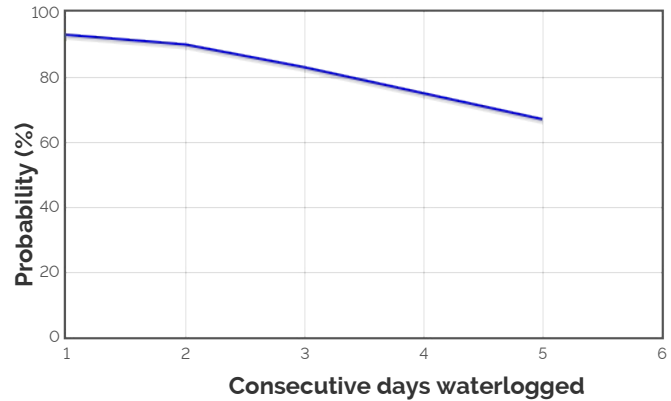
Current PAW status:

89 mm
89.2 mm

44 mm
39 mm
0 mm
0 mm

94 mm

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

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

Current N status:

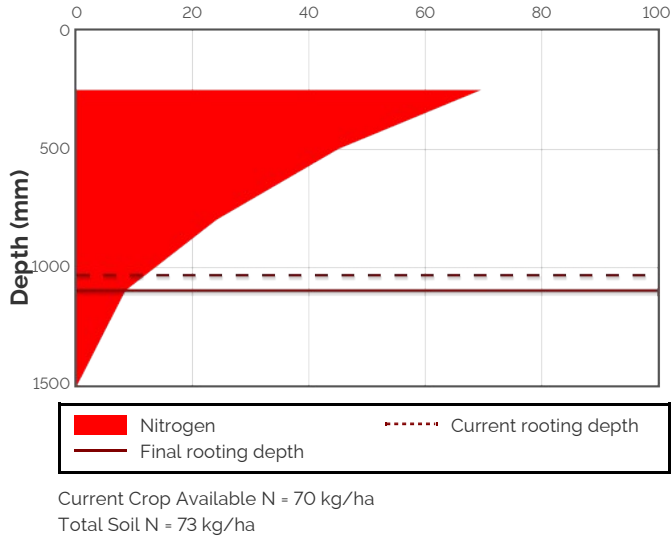
Median N mineralisation to maturity = 0.829 kg/ha
Median N tie up to maturity = 2.493 kg/ha

162 kg/ha
1 kg/ha
7 kg/ha

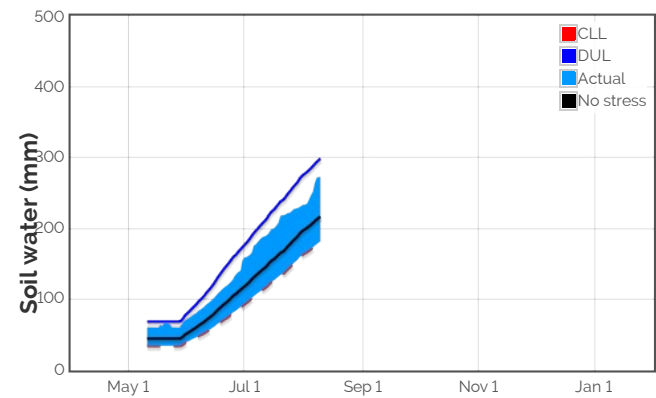
25-May : 37.8 kg/ha
121 kg/ha
0 kg/ha
0 kg/ha

73 kg/ha

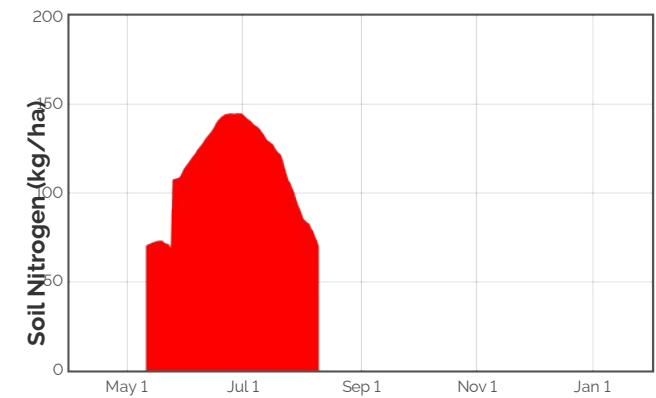
Current distribution of soil nitrogen (kg/ha)



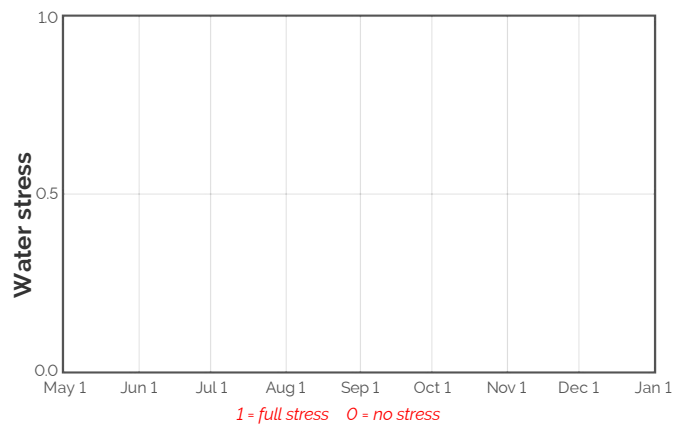
Availability of Water to Growing Roots



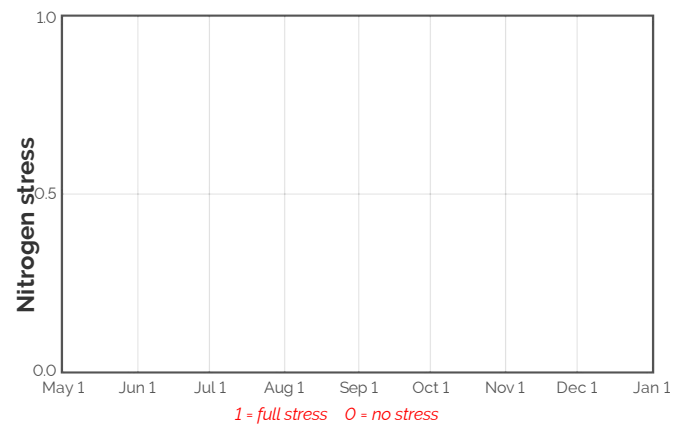
Availability of Soil Nitrogen to Growing Roots



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)
11-Aug	31.6	0.5	1.1	3.0	53.7	89.1	64.1	0.0	0.0
12-Aug	31.9	0.4	1.0	3.0	52.3	87.8	61.2	0.0	0.0
13-Aug	32.0	0.4	1.1	2.6	50.9	86.5	59.0	0.0	0.1
14-Aug	32.5	0.4	1.2	3.1	49.1	84.8	56.2	0.0	0.1
15-Aug	32.8	0.4	1.1	2.6	47.5	83.3	53.7	0.0	0.0
16-Aug	33.2	0.5	1.1	2.3	45.5	81.3	51.2	0.0	0.0
17-Aug	33.5	0.4	1.2	2.2	43.4	79.3	49.1	0.0	0.0
18-Aug	33.9	0.5	1.5	2.1	41.4	77.3	47.0	0.0	0.0
19-Aug	34.2	0.5	1.6	1.8	39.5	75.5	45.2	0.0	0.0
20-Aug	34.6	0.5	1.5	1.6	36.9	73.0	43.5	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

