

Crop Report

10-Nov-2017

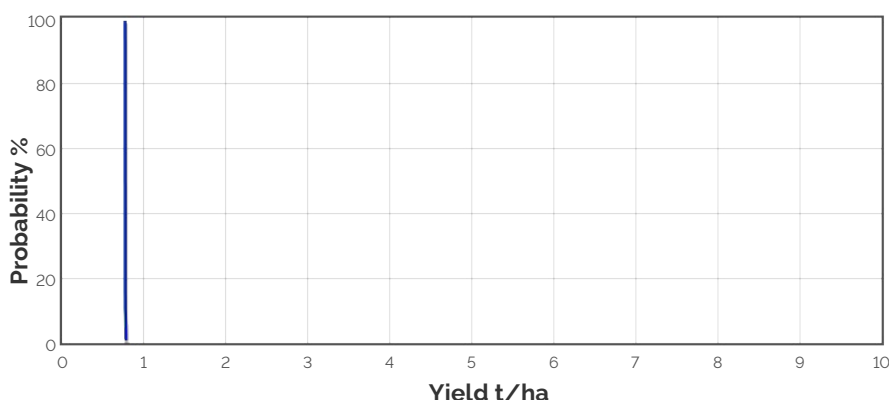
UpperNorthFS: Barrie

Crop: Wheat
Cultivar: Katana
Sowing details: 155 plants/m² on 23-May
Expected maturity date: 18-Nov

Paddock Details
Initial conditions date: 23-May
Soil: Sandy Clay Loam over Light and Medium Clay (Morchard Hill No604-YP)
800 mm max rooting depth
Stubble: 500 kg/ha of Wheat
No till

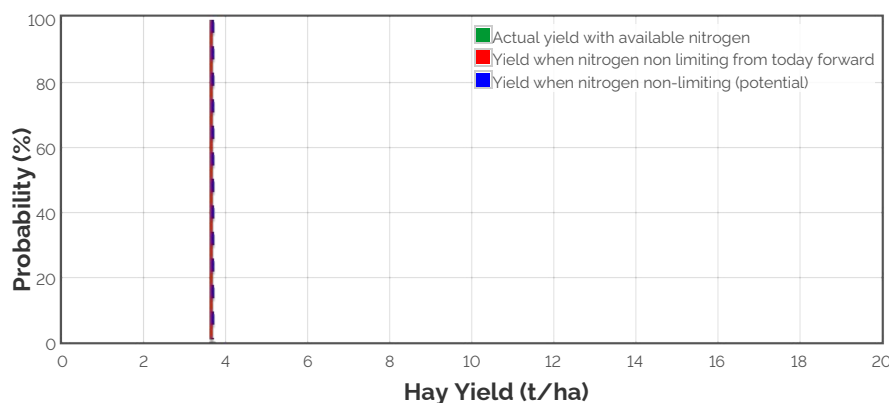
Grain Yield Outcome

- ☒ 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.

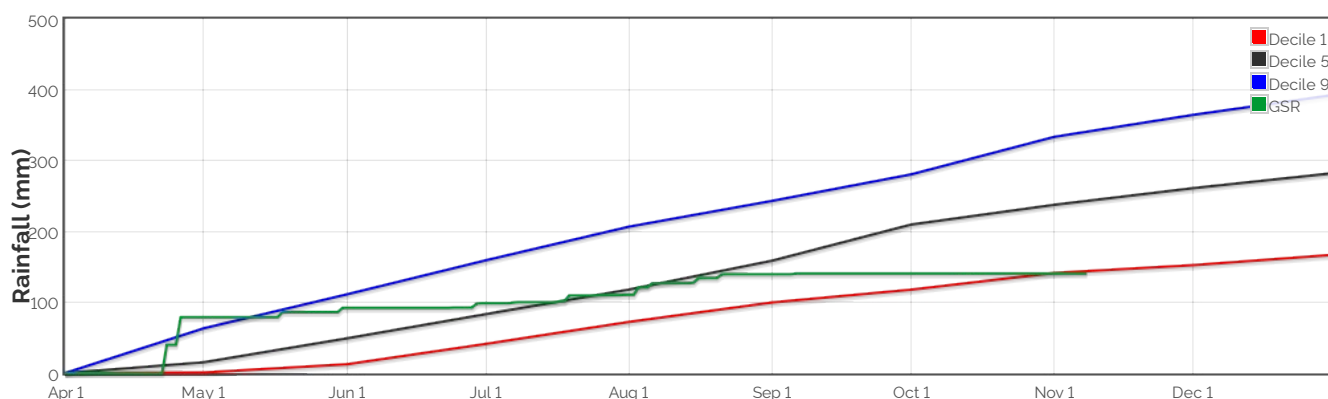
Hay Yield Outcome



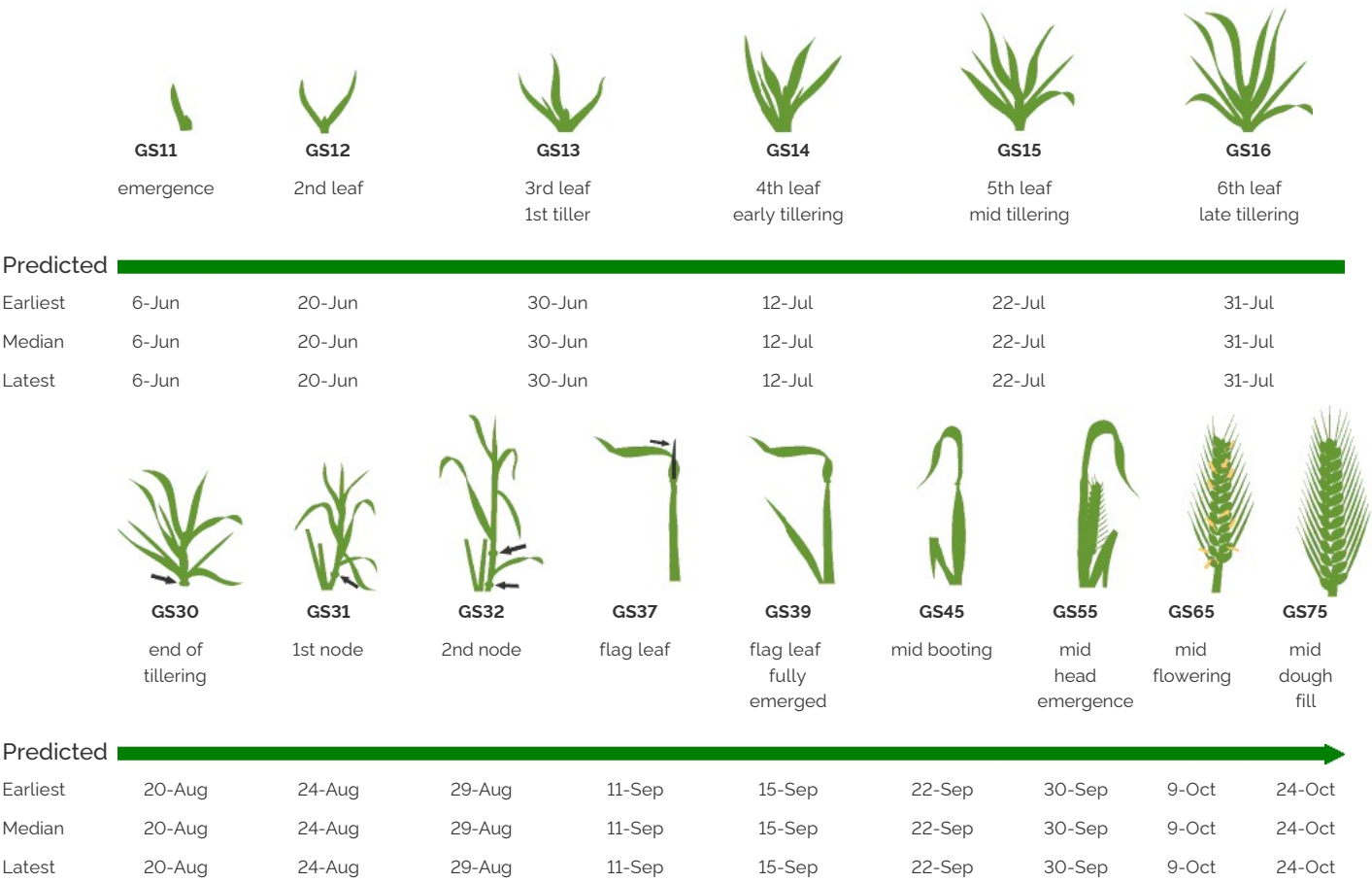
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 4473kg/ha

The Season So Far - Growing Season Rainfall Deciles



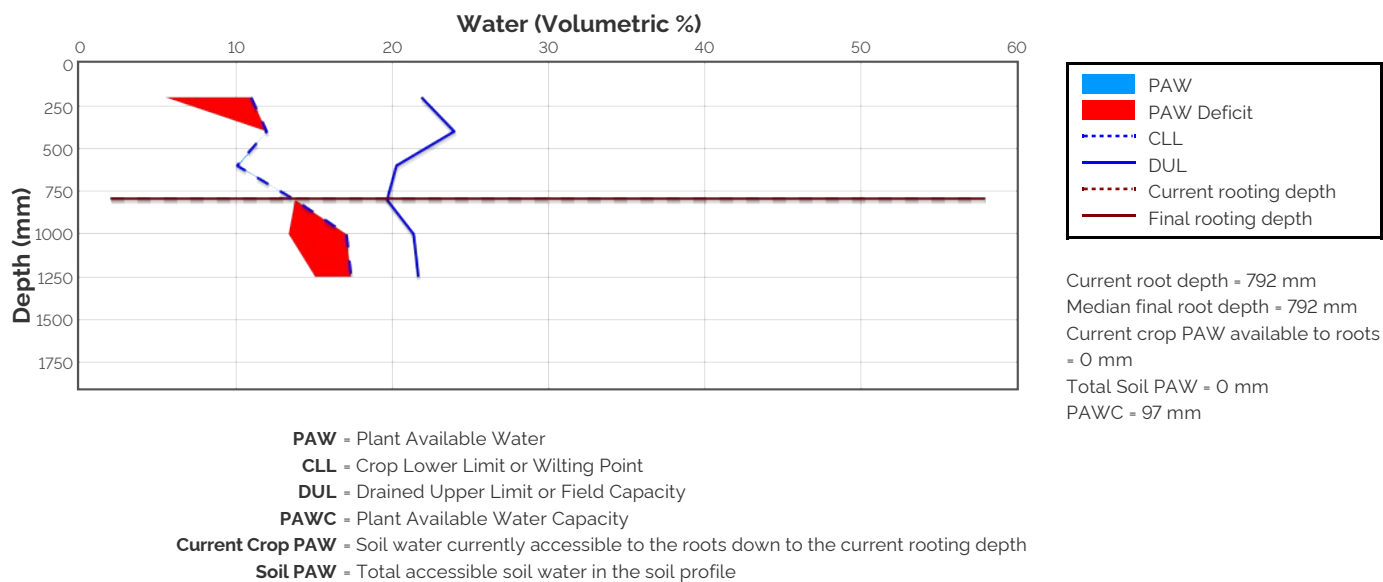
Simulated and Predicted Crop Growth Stage



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></div></div>	24%	0	mild 32 to 34°C	<div><div></div></div>	47%	1
moderate 0 to -2°C during flowering & early grain fill	<div><div></div></div>	1%	0	moderate 34 to 36°C	<div><div></div></div>	26%	0
severe Less than -2°C during flowering & grain fill	<div><div></div></div>	0%	0	severe Above 36°C	<div><div></div></div>	18%	0

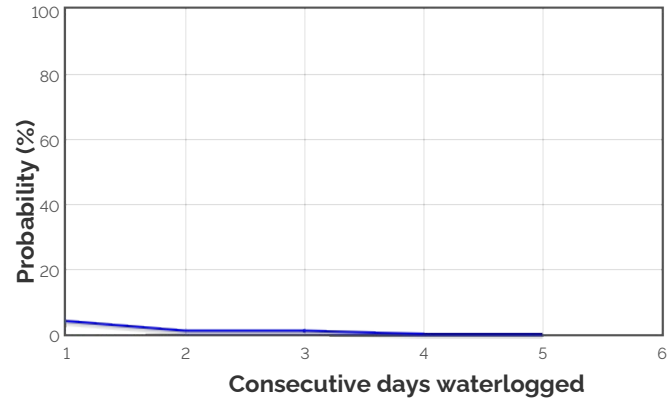
Current Distribution of PAW



Water Budget

Initial PAW status @ 23-May	66 mm
Rainfall since 23-May	54.5 mm
Irrigations	
Evaporation since 23-May	64 mm
Transpiration since 23-May	60 mm
Deep drainage since 23-May	0 mm
Run-off since 23-May	0 mm
Current PAW status:	0 mm

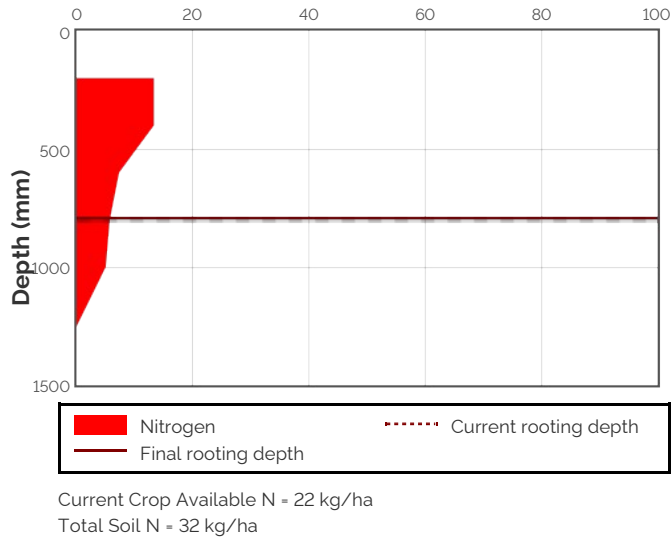
Probability of Future Waterlogging Events



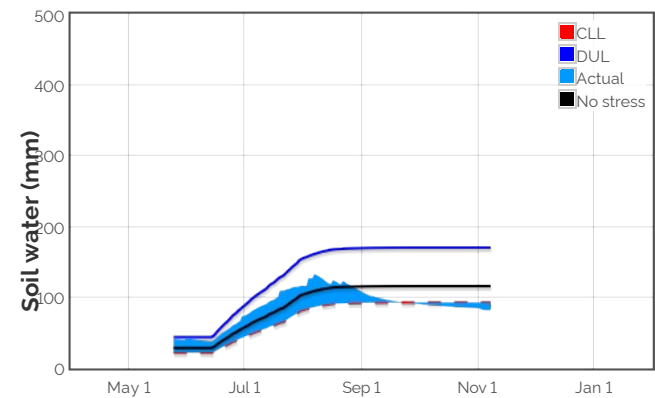
Nitrogen Budget

Initial N status @ 23-May	62 kg/ha
N mineralisation since 23-May	1 kg/ha
N tie up since 23-May	3 kg/ha
N applications	
24-May : 25 kg/ha	
2-Aug : 37 kg/ha	
Total N in plant	88 kg/ha
De-nitrification since 23-May	0 kg/ha
Leaching since 23-May	0 kg/ha
Current N status:	32 kg/ha
Median N mineralisation to maturity	= 0 kg/ha
Median N tie up to maturity	= 0.001 kg/ha

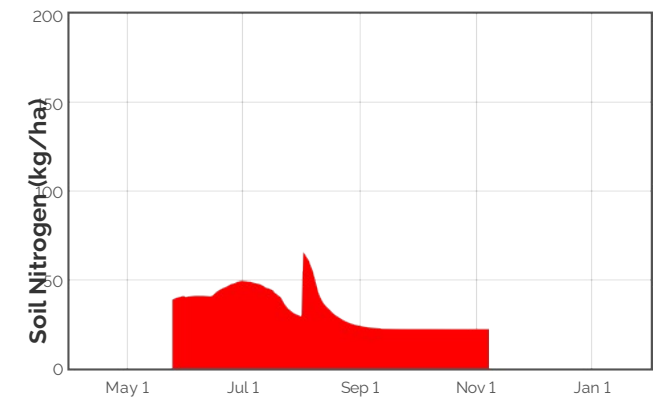
Current distribution of soil nitrogen (kg/ha)



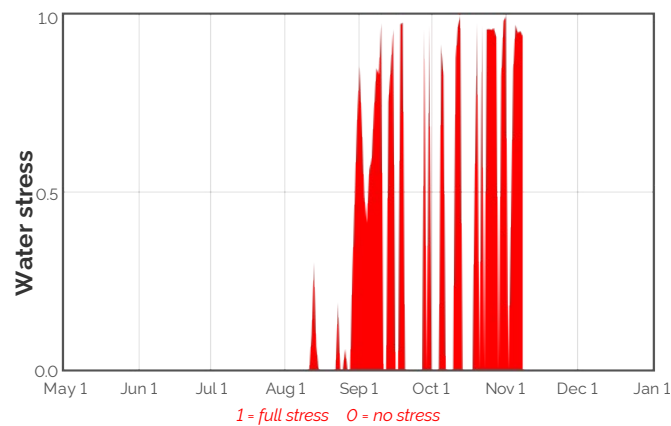
Availability of Water to Growing Roots



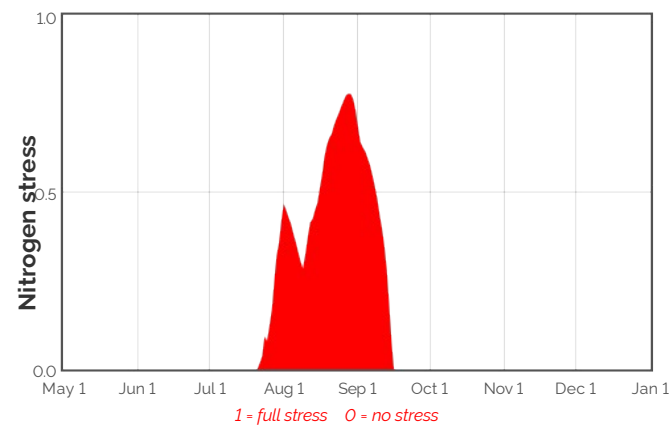
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



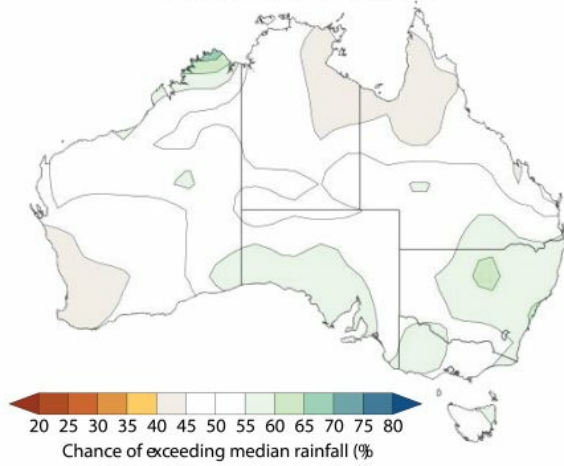
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

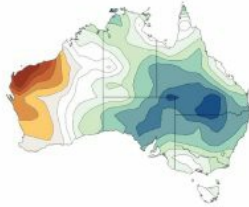
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
9-Nov	83.8	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
10-Nov	84.3	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
11-Nov	84.9	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
12-Nov	85.5	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
13-Nov	86.0	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
14-Nov	86.4	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
15-Nov	87.0	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
16-Nov	88.6	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
17-Nov	90.0	0.0	0.0	0.0	-34.2	0.0	22.1	0.0	0.0
18-Nov	90.0	0.0	0.0	0.0	-34.2	0.0	22.1	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.

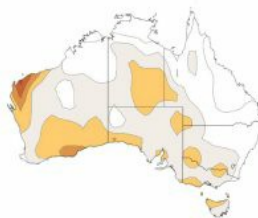
3 MONTH CLIMATE OUTLOOK FROM OCTOBER TO DECEMBER



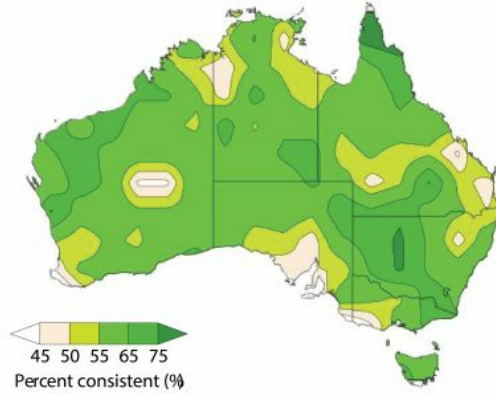
OCTOBER CLIMATE OUTLOOK



NOVEMBER CLIMATE OUTLOOK



PAST ACCURACY FROM OCTOBER TO DECEMBER



PAST ACCURACY FOR OCTOBER



PAST ACCURACY FOR NOVEMBER

