

Crop Report

31-Jul-2026

UpperNorthFS:
Ballantyne

Crop: Wheat

Cultivar: Tomahawk

Sowing details: 160 plants/m² on 22-May

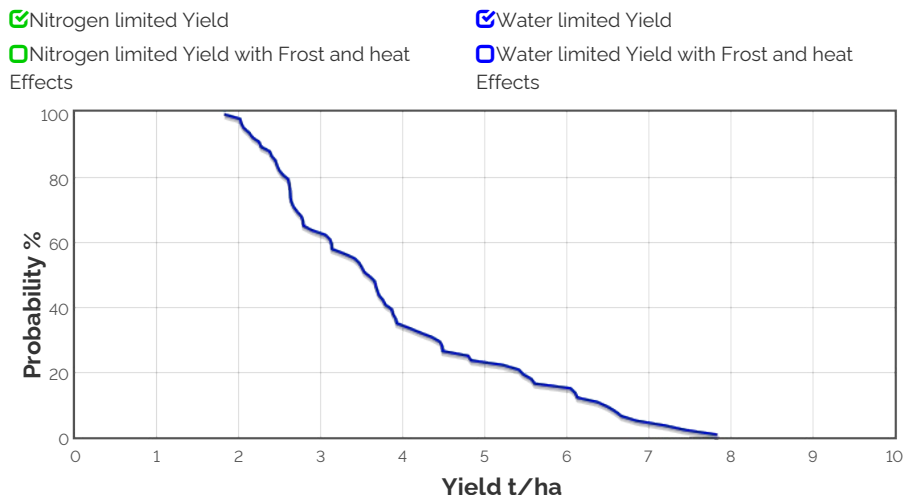
Expected maturity date: 29-Nov

Paddock Details

Initial conditions date: 11-Jun

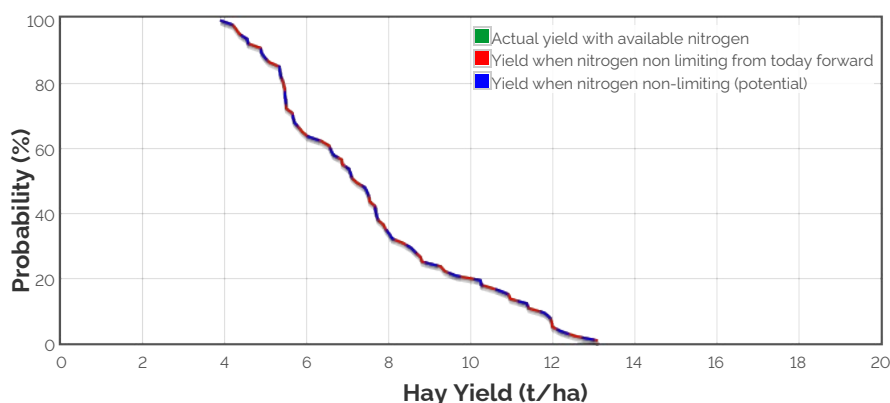
Soil: Soil>
900 mm max rooting depth
Stubble: 1500 kg/ha of Lentil
No till

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.

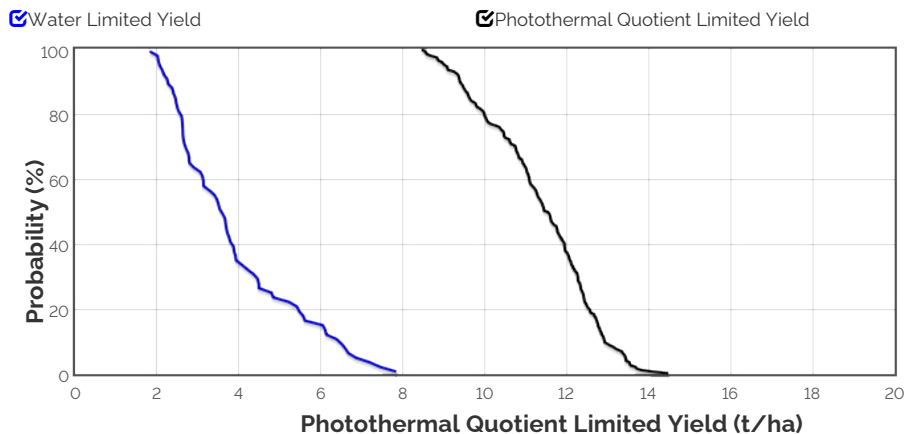
Hay Yield Outcome



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).

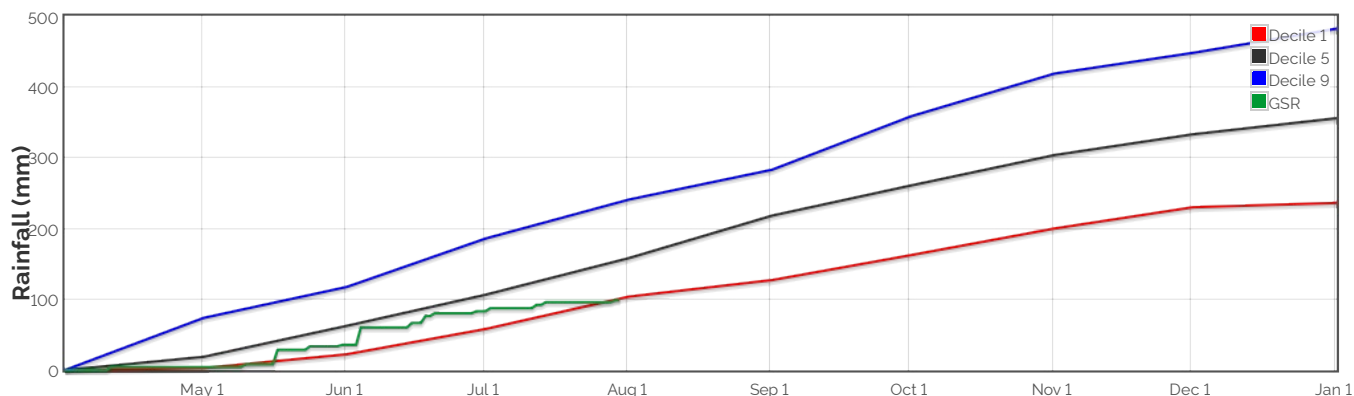
Current dry matter: 1406.9788283972289kg/ha

PTQ Yield Outcome

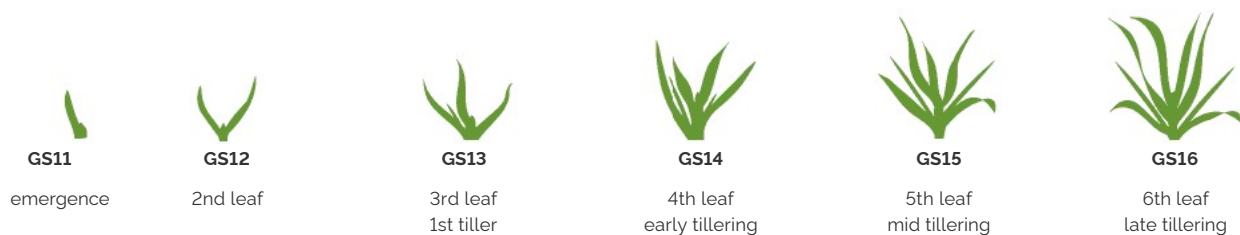


This chart shows the chances of achieving different yield outcomes this season, based on two key limits: water, and the balance of radiation and temperature during the critical period for grain number development (Photothermal quotient). Water-limited yield is estimated from pre-season soil moisture, seasonal weather to date, and agronomic inputs, with future conditions simulated using the long-term weather record from your chosen station. Radiation and temperature-limited yield is estimated by modelling a range of flowering dates and calculating the ratio between radiation and temperature during the critical period for grain number determination. In most cases, water is the main constraint on yield, but in wetter seasons or locations, radiation and temperature can also limit yield if crop development is not well aligned with the environment. Earlier flowering often reduces potential from radiation due to shorter day lengths and cloudier conditions, while later flowering increases radiation but higher temperatures shorten the critical period, causing yield potential to decline again. These limits assume >90% light interception during the critical period and do not account for frost or heat events pre or post flowering, nor for other grain-filling stresses that reduce harvest index and grain size.

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

Earliest	10-Jun	16-Jun	27-Jun	8-Jul	19-Jul	31-Jul
Median	10-Jun	16-Jun	27-Jun	8-Jul	19-Jul	31-Jul
Latest	10-Jun	16-Jun	27-Jun	8-Jul	19-Jul	31-Jul



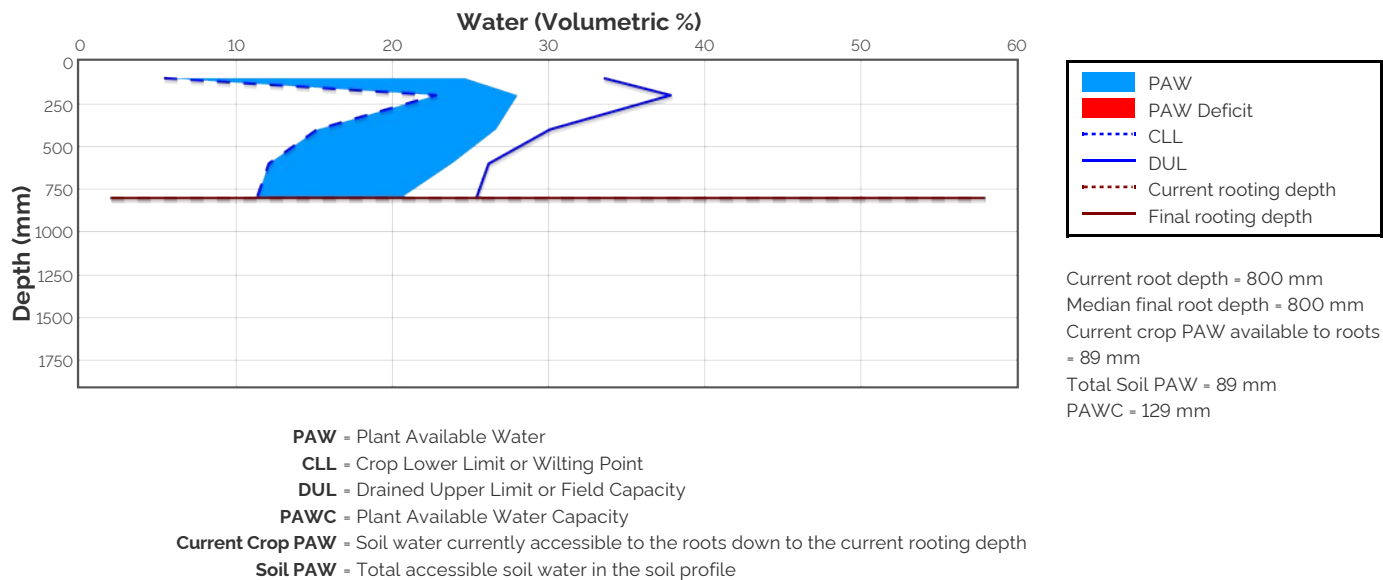
Predicted

Earliest	8-Aug	13-Aug	21-Aug	27-Aug	28-Aug	4-Sep	14-Sep	19-Sep	8-Oct
Median	10-Aug	15-Aug	25-Aug	1-Sep	2-Sep	10-Sep	21-Sep	27-Sep	14-Oct
Latest	12-Aug	18-Aug	4-Sep	8-Sep	9-Sep	16-Sep	28-Sep	4-Oct	24-Oct

Probability and Incidence of Frost and Heat Shock

Frost damage during flowering				Heat damage during grain fill			
Probability		This Season		Probability		This Season	
mild 2 to 0°C during flowering		42%	0	mild 32 to 34°C	38%	0	
moderate 0 to -2°C during flowering & early grain fill		2%	0	moderate 34 to 36°C	22%	0	
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C	12%	0	

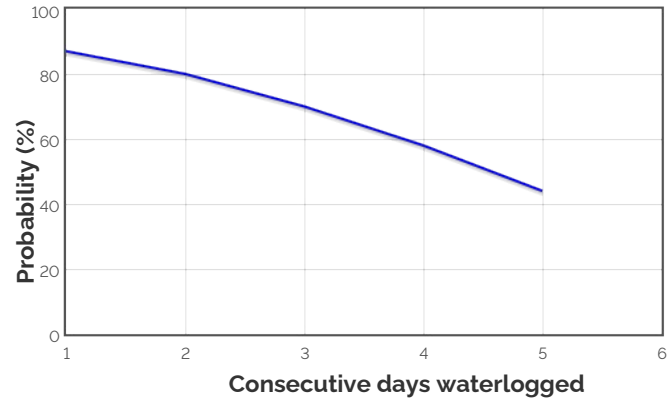
Current Distribution of PAW



Water Budget

Initial PAW status @ 11-Jun	78 mm
Rainfall since 11-Jun	38.5 mm
Irrigations	
Evaporation since 11-Jun	34 mm
Transpiration since 11-Jun	21 mm
Deep drainage since 11-Jun	0 mm
Run-off since 11-Jun	0 mm
Current PAW status:	89 mm

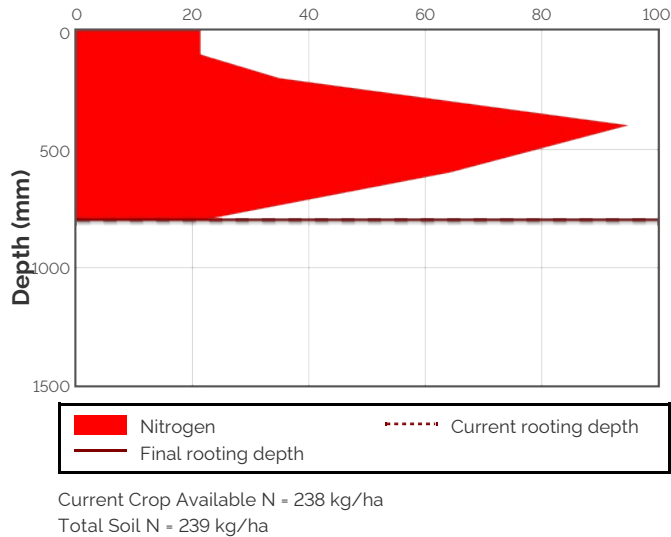
Probability of Future Waterlogging Events



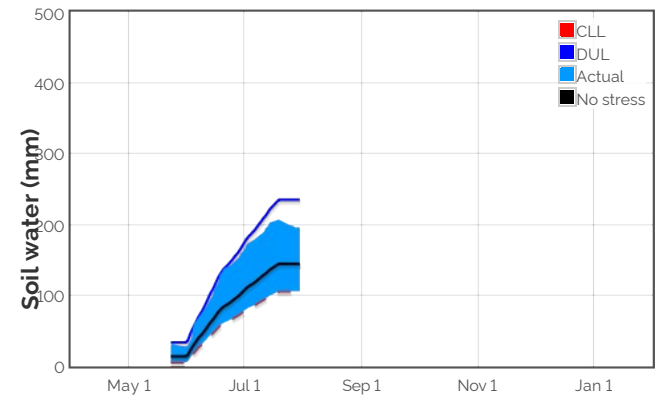
Nitrogen Budget

Initial N status @ 11-Jun	268 kg/ha
N mineralisation since 11-Jun	11 kg/ha
N tie up since 11-Jun	0 kg/ha
N applications	
22-May : 30 kg/ha	
Total N in plant	71 kg/ha
De-nitrification since 11-Jun	0 kg/ha
Leaching since 11-Jun	0 kg/ha
Current N status:	239 kg/ha
Median N mineralisation to maturity = 43.9878502786315 kg/ha	
Median N tie up to maturity = 0 kg/ha	

Current distribution of soil nitrogen (kg/ha)



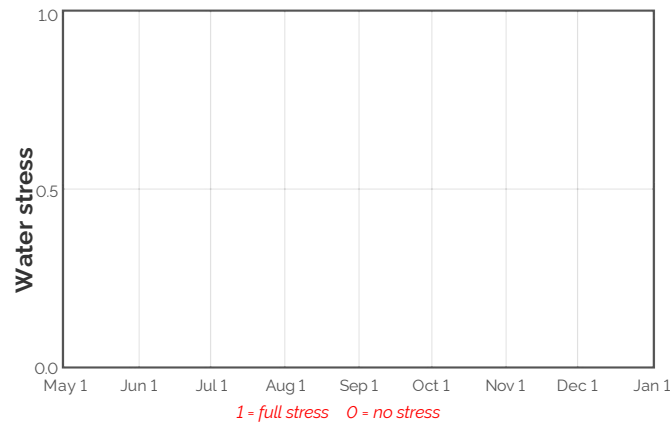
Availability of Water to Growing Roots



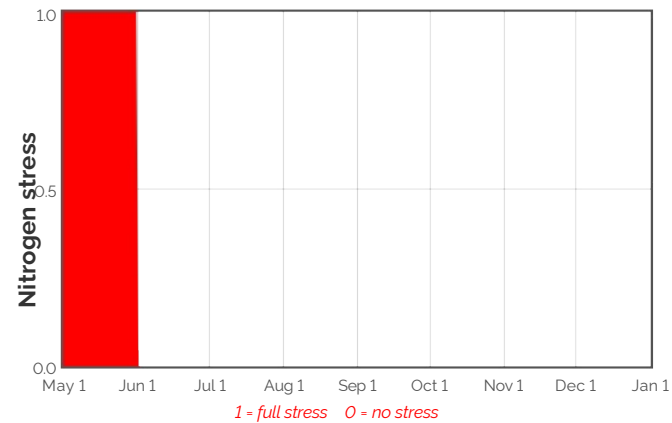
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



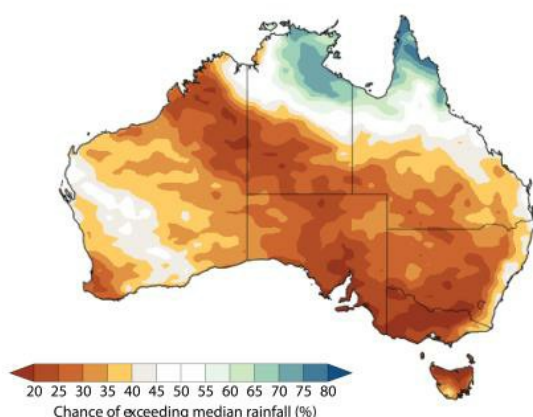
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

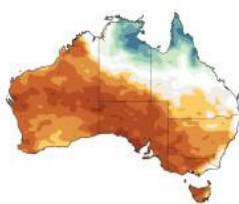
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
1-Aug	16.0	0.6	1.1	-3.9	49.4	88.2	233.7	0.2	0.0
2-Aug	16.0	0.5	1.2	-4.0	47.8	86.6	229.9	0.2	0.0
3-Aug	16.0	0.3	1.2	-3.9	46.6	85.4	226.4	0.2	0.0
4-Aug	16.0	0.3	1.3	-3.6	45.2	84.0	222.6	0.2	0.0
5-Aug	16.0	0.3	1.2	-3.4	43.5	82.3	219.2	0.2	0.0
6-Aug	16.0	0.3	1.3	-3.9	42.3	81.2	215.6	0.2	0.0
7-Aug	16.0	0.2	1.4	-3.8	40.6	79.4	211.5	0.2	0.0
8-Aug	16.0	0.2	1.5	-4.0	39.0	77.8	207.8	0.2	0.0
9-Aug	16.0	0.2	1.5	-4.0	37.3	76.2	204.2	0.2	0.0
10-Aug	30.1	0.2	1.4	-4.1	35.9	74.7	199.9	0.2	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.

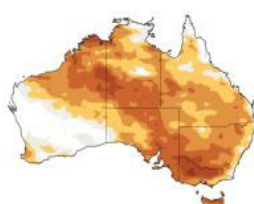
3 MONTH RAINFALL OUTLOOK FOR
APRIL TO JUNE



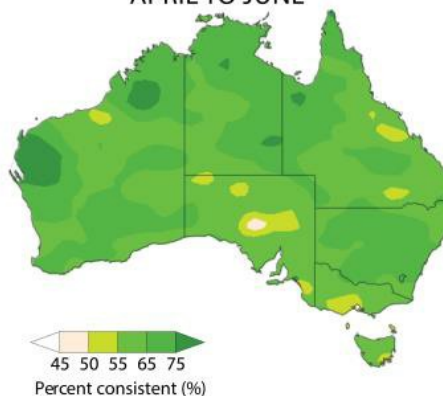
APRIL
RAINFALL OUTLOOK



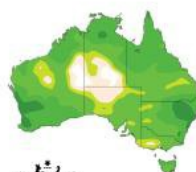
MAY
RAINFALL OUTLOOK



PAST ACCURACY FOR
APRIL TO JUNE



PAST ACCURACY FOR
APRIL



PAST ACCURACY FOR
MAY

