

Crop Report

14-Sep-2026

UpperNorthFS:
Vanstone Church Red
Soil High Production

Crop: Barley

Cultivar: Compass

Sowing details: 150 plants/m² on 4-May

Expected maturity date: 23-Oct

Paddock Details

Initial conditions date: 28-May

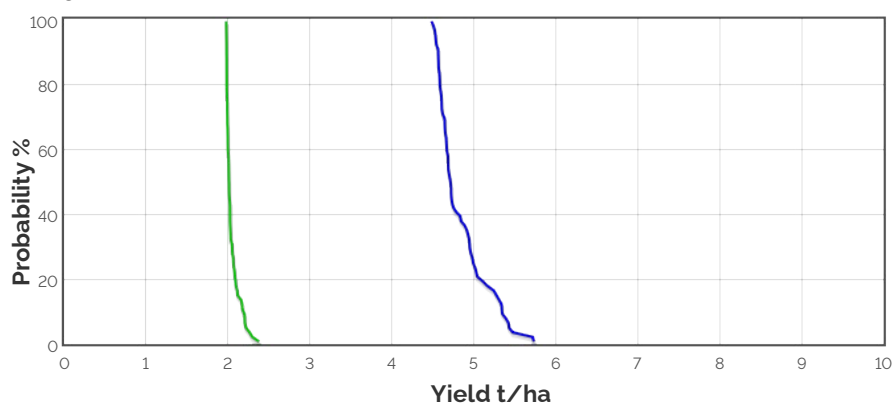
Soil: Loamy sand over red sandy clay loam
(Telowie)(CU062)
1000 mm max rooting depth

Stubble: 3000 kg/ha of Barley
No till

Grain Yield Outcome

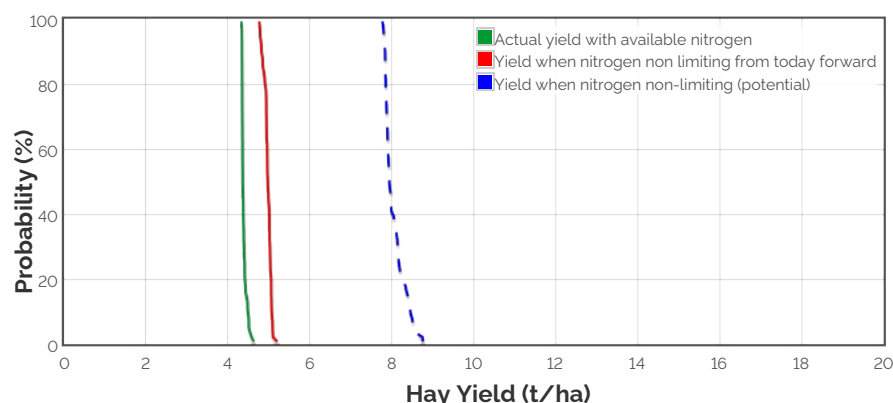
☒ Nitrogen limited Yield

☒ Water limited Yield



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



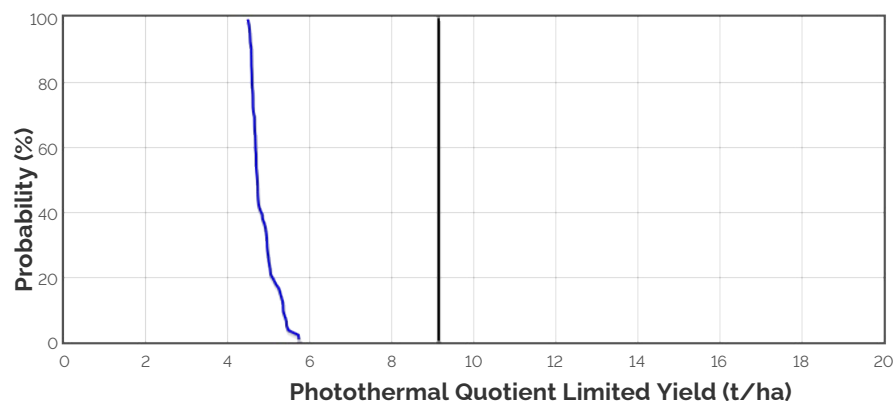
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 5648.201394109078kg/ha

PTQ Yield Outcome

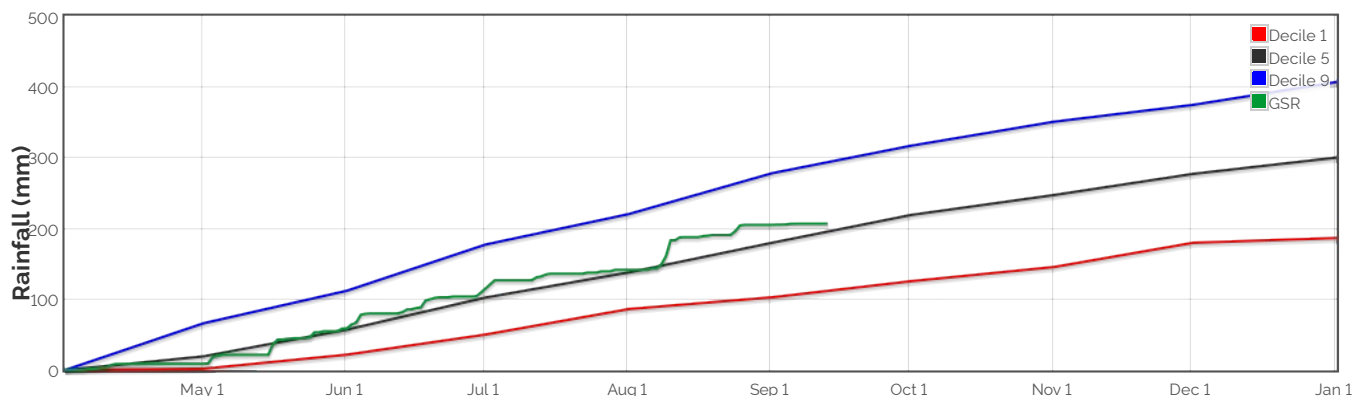
☒ Water Limited Yield

☒ Photothermal Quotient Limited Yield

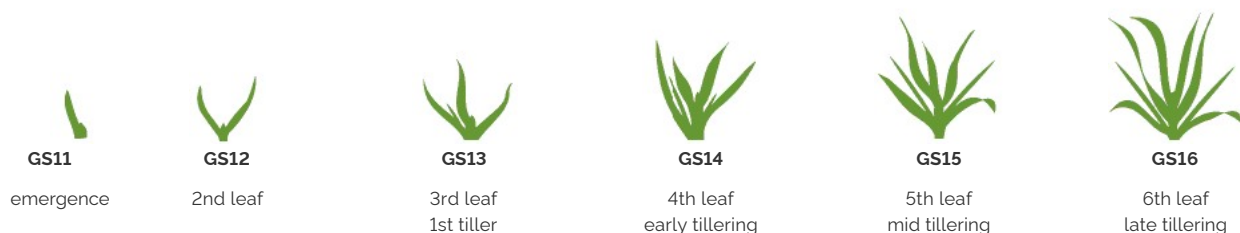


This chart shows the chances of achieving different yield outcomes this season, based on two key limits: water, and the balance of radiation and temperature during the critical period for grain number development (Photothermal quotient). Water-limited yield is estimated from pre-season soil moisture, 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	11-May	15-May	18-May	24-May	31-May	6-Jun
Median	11-May	15-May	18-May	24-May	31-May	6-Jun
Latest	11-May	15-May	18-May	24-May	31-May	6-Jun



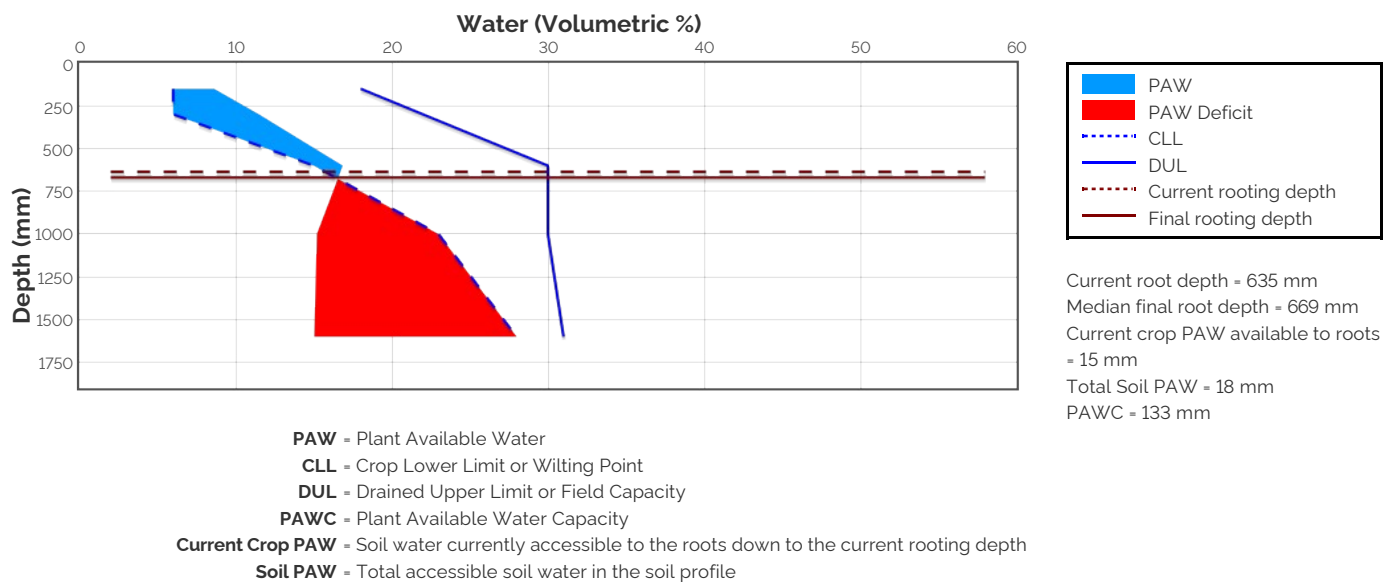
Predicted

Earliest	1-Jul	12-Jul	23-Jul	9-Aug	11-Aug	15-Aug	20-Aug	26-Aug	14-Sep
Median	1-Jul	12-Jul	23-Jul	9-Aug	11-Aug	15-Aug	20-Aug	26-Aug	14-Sep
Latest	1-Jul	12-Jul	23-Jul	9-Aug	11-Aug	15-Aug	20-Aug	26-Aug	14-Sep

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		4%	0	mild 32 to 34°C	18%	0	
moderate 0 to -2°C during flowering & early grain fill		1%	0	moderate 34 to 36°C	7%	0	
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C	0%	0	

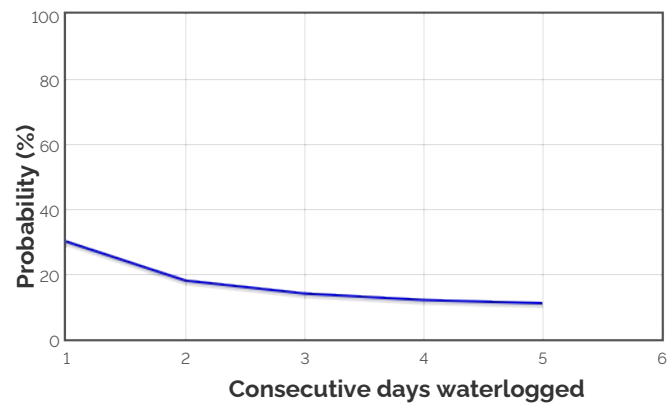
Current Distribution of PAW



Water Budget

Initial PAW status @ 28-May	12 mm
Rainfall since 28-May	151.8 mm
Irrigations	
Evaporation since 28-May	57 mm
Transpiration since 28-May	124 mm
Deep drainage since 28-May	0 mm
Run-off since 28-May	0 mm
Current PAW status:	18 mm

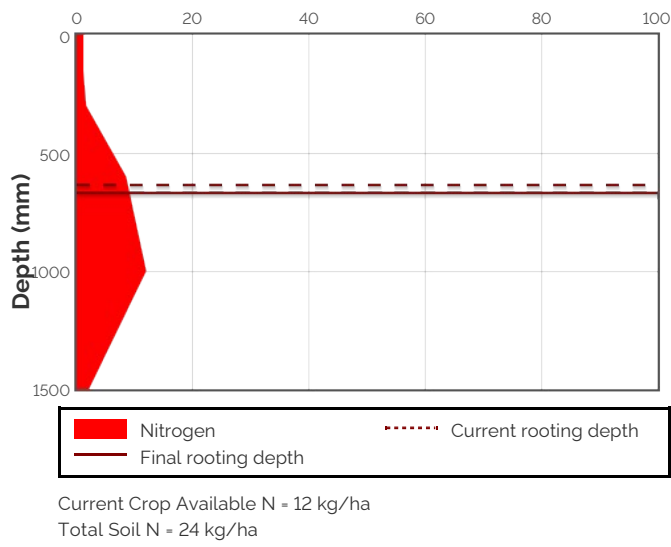
Probability of Future Waterlogging Events



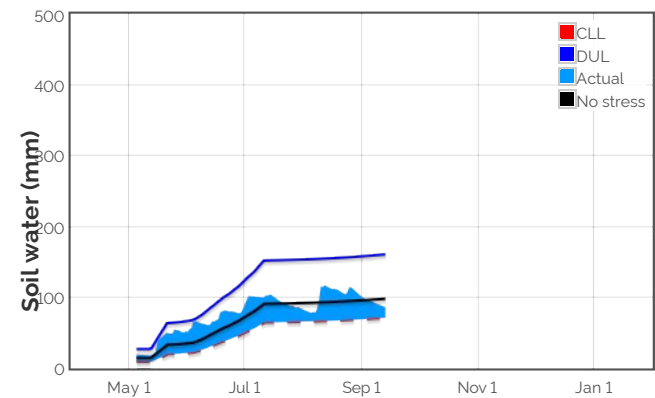
Nitrogen Budget

Initial N status @ 28-May	65 kg/ha
N mineralisation since 28-May	24 kg/ha
N tie up since 28-May	0 kg/ha
N applications	
4-May : 19 kg/ha	
Total N in plant	47 kg/ha
De-nitrification since 28-May	0 kg/ha
Leaching since 28-May	0 kg/ha
Current N status:	24 kg/ha
Median N mineralisation to maturity = 42.4088441656054 kg/ha	
Median N tie up to maturity = 0 kg/ha	

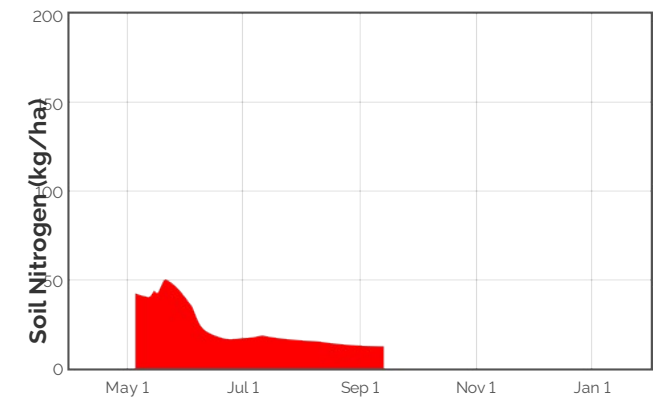
Current distribution of soil nitrogen (kg/ha)



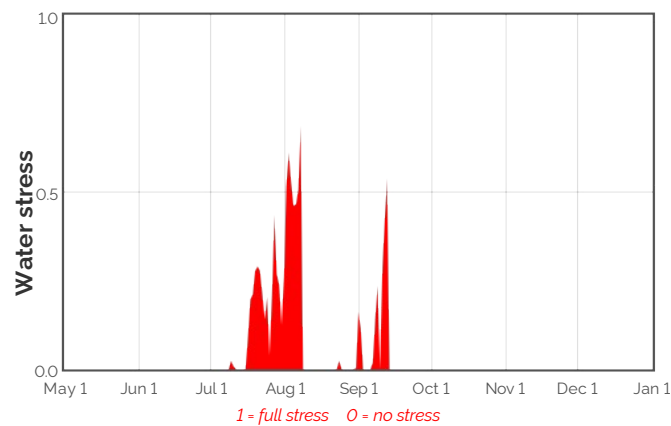
Availability of Water to Growing Roots



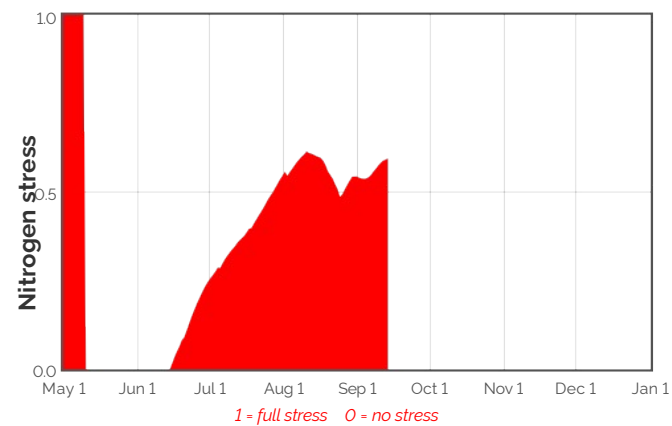
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



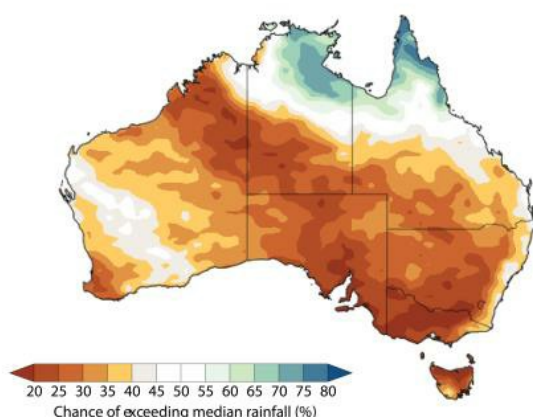
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

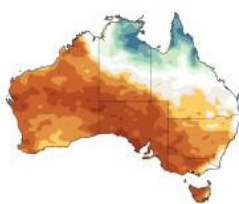
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
15-Sep	75.4	0.3	0.8	0.0	-12.5	14.3	12.4	0.3	0.0
16-Sep	75.7	0.3	0.8	0.0	-13.5	13.3	12.3	0.3	0.0
17-Sep	76.0	0.3	0.6	0.0	-14.4	12.5	12.3	0.3	0.0
18-Sep	76.3	0.2	0.6	0.0	-15.2	11.8	12.3	0.3	0.0
19-Sep	76.6	0.2	0.5	0.0	-15.9	11.0	12.3	0.3	0.0
20-Sep	77.0	0.2	0.5	0.0	-16.7	10.2	12.3	0.3	0.0
21-Sep	77.2	0.2	0.5	0.0	-17.4	9.5	12.3	0.3	0.0
22-Sep	77.6	0.2	0.5	0.0	-18.2	8.9	12.3	0.3	0.0
23-Sep	77.9	0.2	0.4	0.0	-18.8	8.1	12.3	0.3	0.0
24-Sep	78.2	0.2	0.4	0.0	-19.5	7.5	12.3	0.3	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.

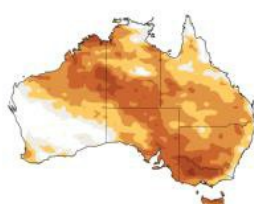
3 MONTH RAINFALL OUTLOOK FOR
APRIL TO JUNE



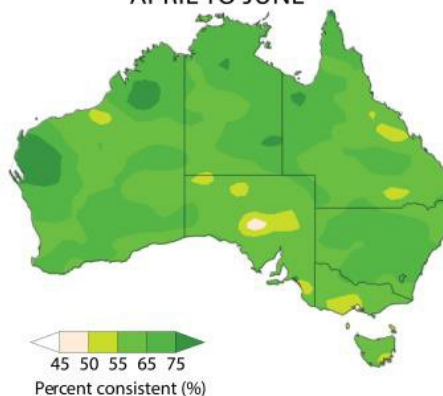
APRIL
RAINFALL OUTLOOK



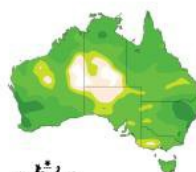
MAY
RAINFALL OUTLOOK



PAST ACCURACY FOR
APRIL TO JUNE



PAST ACCURACY FOR
APRIL



PAST ACCURACY FOR
MAY

