

Crop Report

28-Jul-2026

UpperNorthFS:
Vanstone Church Red
Soil Low Production

Crop: Barley

Cultivar: Commander

Sowing details: 150 plants/m² on 5-May

Expected maturity date: 13-Nov

Paddock Details

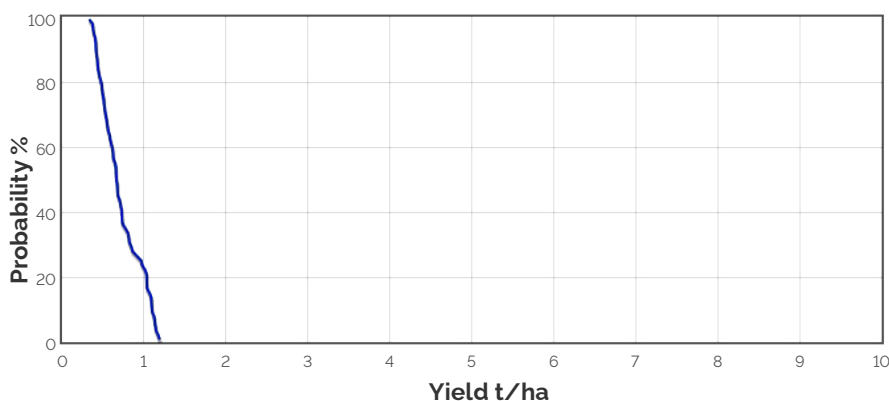
Initial conditions date: 28-May

Soil: Soil>
700 mm max rooting depth
Stubble: 1500 kg/ha of Barley
No till

Grain Yield Outcome

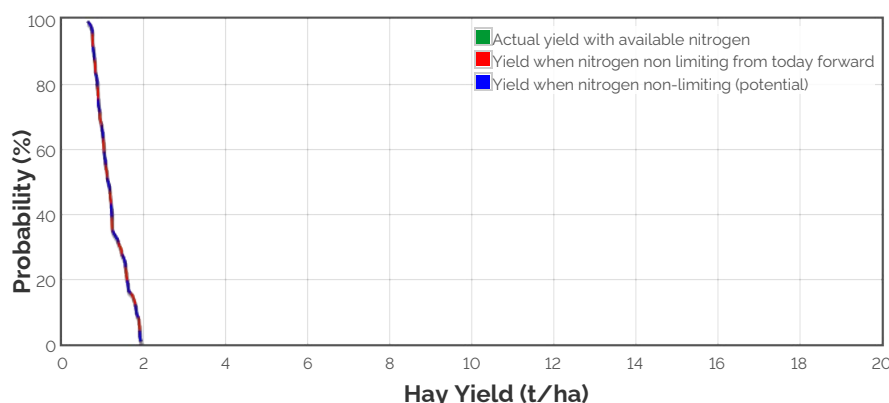
☒ Nitrogen limited Yield

☒ 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



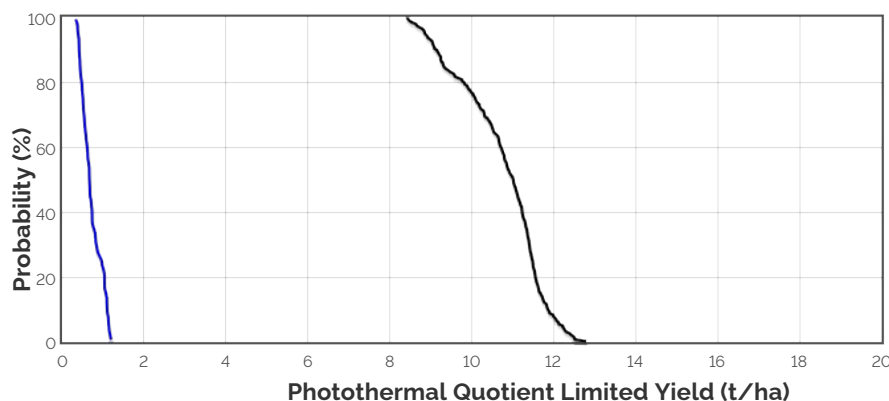
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 440.25945005220774kg/ha

PTQ Yield Outcome

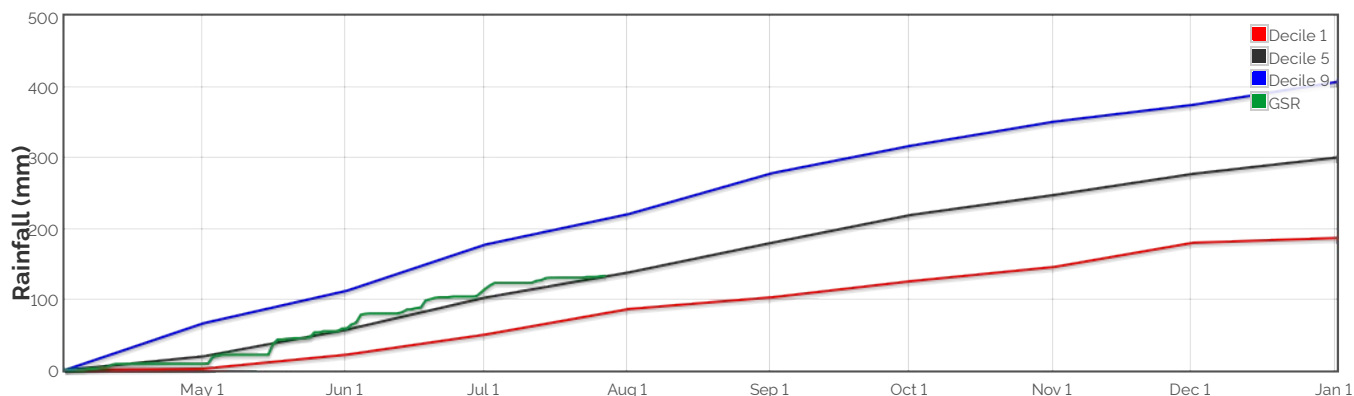
☒ Water Limited Yield

☒ Photothermal Quotient Limited Yield

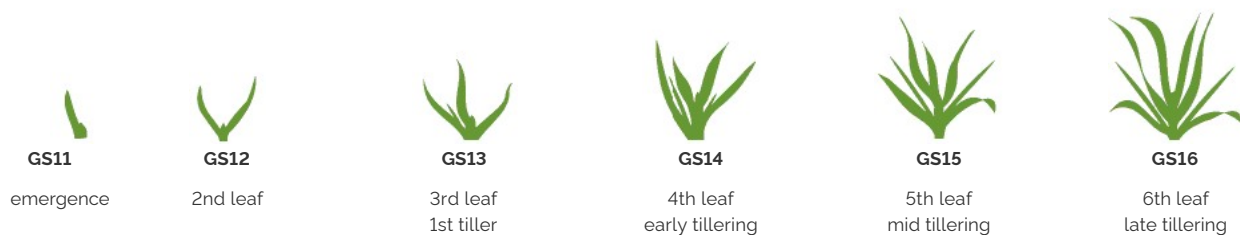


This chart shows the chances of achieving different yield outcomes this season, based on two key limits: water, and the balance of radiation and temperature during the critical period for grain number development (Photothermal quotient). Water-limited yield is estimated from pre-season soil moisture, 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-Jun	16-Jun	21-Jun	1-Jul	9-Jul	18-Jul
Median	11-Jun	16-Jun	21-Jun	1-Jul	9-Jul	18-Jul
Latest	11-Jun	16-Jun	21-Jun	1-Jul	9-Jul	18-Jul



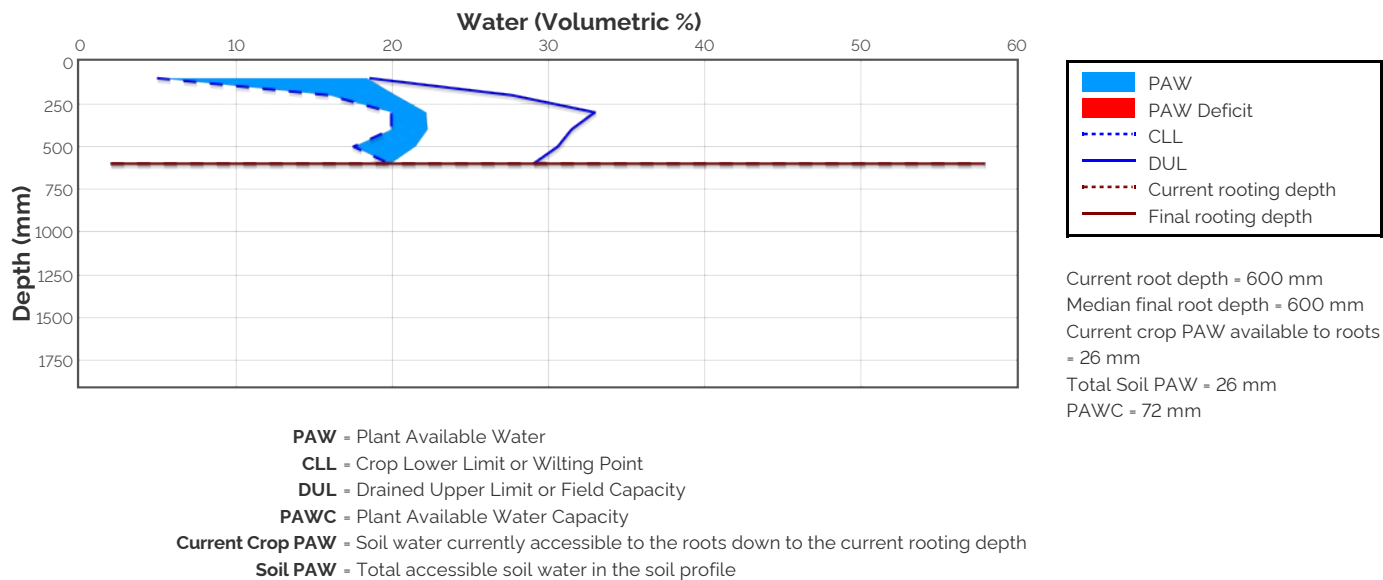
Predicted

Earliest	12-Aug	20-Aug	25-Aug	1-Sep	1-Sep	5-Sep	11-Sep	15-Sep	2-Oct
Median	16-Aug	25-Aug	1-Sep	11-Sep	11-Sep	14-Sep	18-Sep	22-Sep	8-Oct
Latest	23-Aug	1-Sep	9-Sep	18-Sep	19-Sep	23-Sep	26-Sep	30-Sep	19-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		10%	0	mild 32 to 34°C		55%	0
moderate 0 to -2°C during flowering & early grain fill		1%	0	moderate 34 to 36°C		37%	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C		15%	0

Current Distribution of PAW



Water Budget

Initial PAW status @ 28-May
Rainfall since 28-May
Irrigations
Evaporation since 28-May
Transpiration since 28-May
Deep drainage since 28-May
Run-off since 28-May

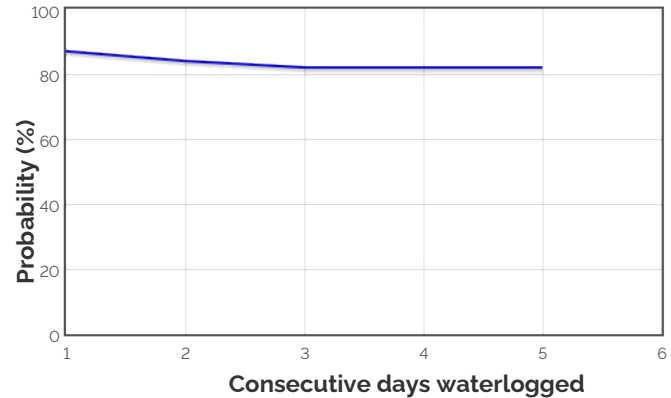
Current PAW status:

5 mm
78 mm

59 mm
16 mm
0 mm
0 mm

26 mm

Probability of Future Waterlogging Events



Nitrogen Budget

Initial N status @ 28-May
N mineralisation since 28-May
N tie up since 28-May
N applications

Total N in plant
De-nitrification since 28-May
Leaching since 28-May

Current N status:

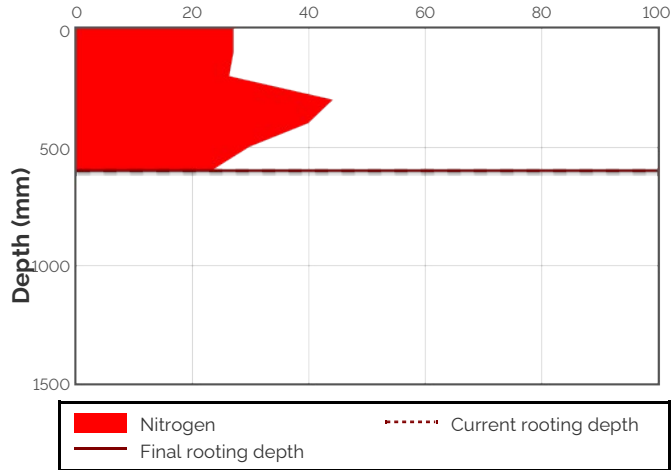
Median N mineralisation to maturity = 21.1884312454392 kg/ha
Median N tie up to maturity = 0 kg/ha

200 kg/ha
5 kg/ha
0 kg/ha

5-May : 20 kg/ha
24 kg/ha
0 kg/ha
0 kg/ha

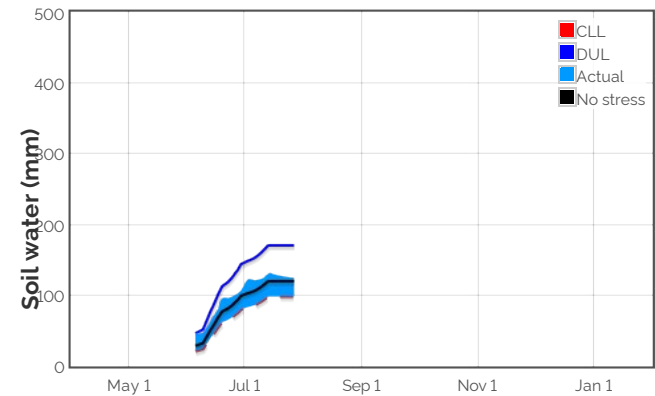
191 kg/ha

Current distribution of soil nitrogen (kg/ha)

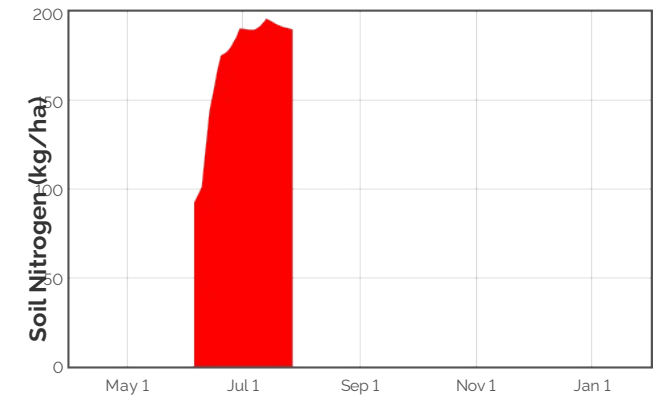


Current Crop Available N = 190 kg/ha
Total Soil N = 191 kg/ha

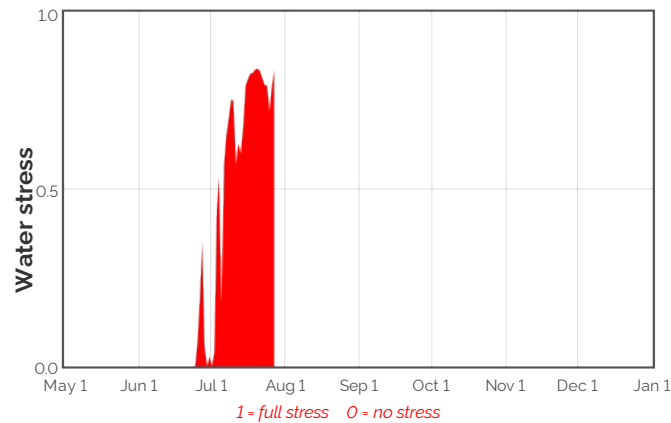
Availability of Water to Growing Roots



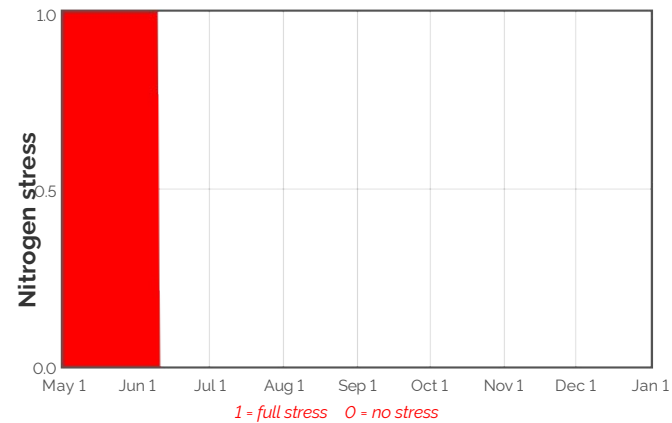
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



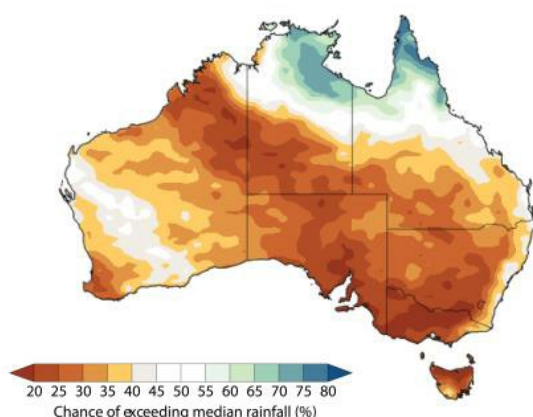
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

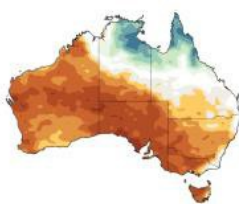
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
29-Jul	16.0	0.3	0.7	-0.3	4.4	26.0	189.9	0.1	0.0
30-Jul	16.0	0.3	0.7	-0.3	4.0	25.6	189.6	0.1	0.0
31-Jul	16.0	0.3	0.7	-0.1	3.6	25.2	189.5	0.1	0.0
1-Aug	16.0	0.2	0.7	-0.2	3.2	24.9	189.3	0.1	0.0
2-Aug	16.0	0.2	0.7	-0.1	2.8	24.5	189.2	0.1	0.0
3-Aug	16.0	0.2	0.7	-0.1	2.4	24.1	189.2	0.1	0.0
4-Aug	16.0	0.2	0.8	0.0	2.1	23.8	189.1	0.1	0.0
5-Aug	16.0	0.2	0.6	-0.1	1.7	23.4	189.1	0.1	0.0
6-Aug	16.0	0.2	0.7	0.0	1.4	23.1	189.1	0.1	0.0
7-Aug	16.0	0.2	0.7	0.0	1.1	22.7	189.1	0.1	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.

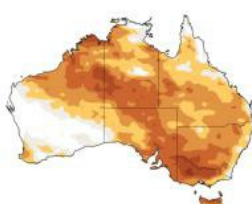
3 MONTH RAINFALL OUTLOOK FOR
APRIL TO JUNE



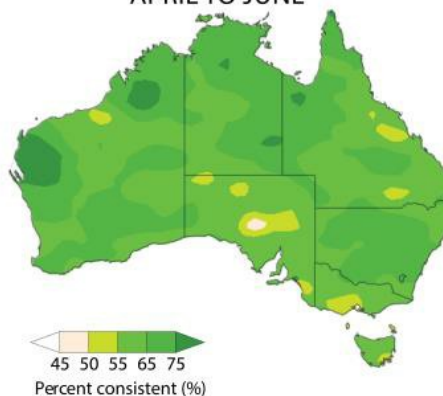
APRIL
RAINFALL OUTLOOK



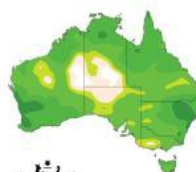
MAY
RAINFALL OUTLOOK



PAST ACCURACY FOR
APRIL TO JUNE



PAST ACCURACY FOR
APRIL



PAST ACCURACY FOR
MAY

