

Crop Report

30-Jun-2026

UpperNorthFS:
Vanstone Church Red
Soil Low Production

Crop: Barley

Cultivar: Commander

Sowing details: 150 plants/m² on 5-May

Expected maturity date: 12-Nov

Paddock Details

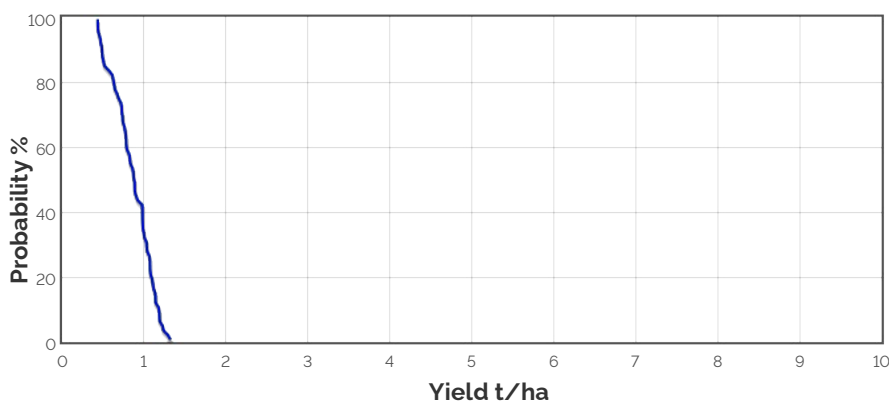
Initial conditions date: 28-May

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

Grain Yield Outcome

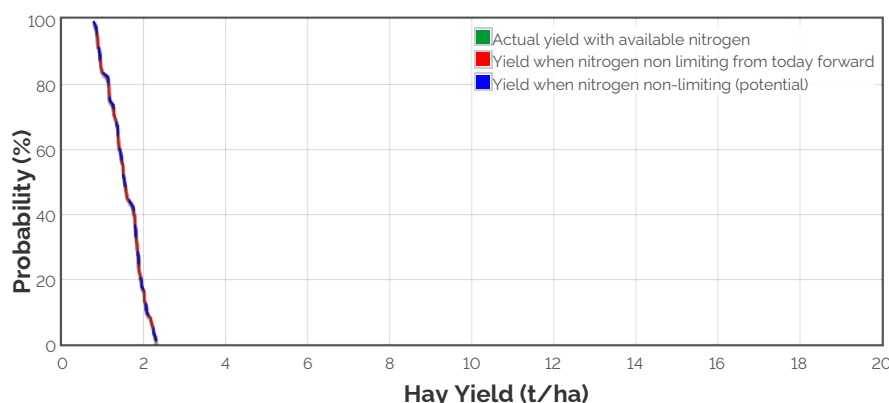
☒ Nitrogen limited Yield

☒ 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



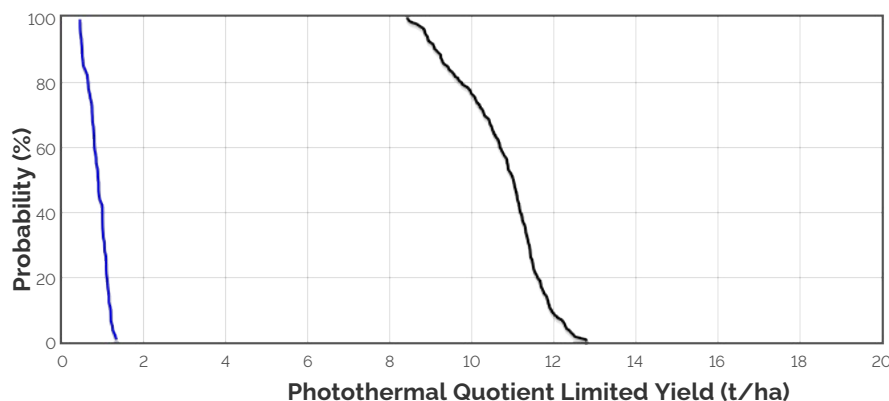
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 100.0547569886234kg/ha

PTQ Yield Outcome

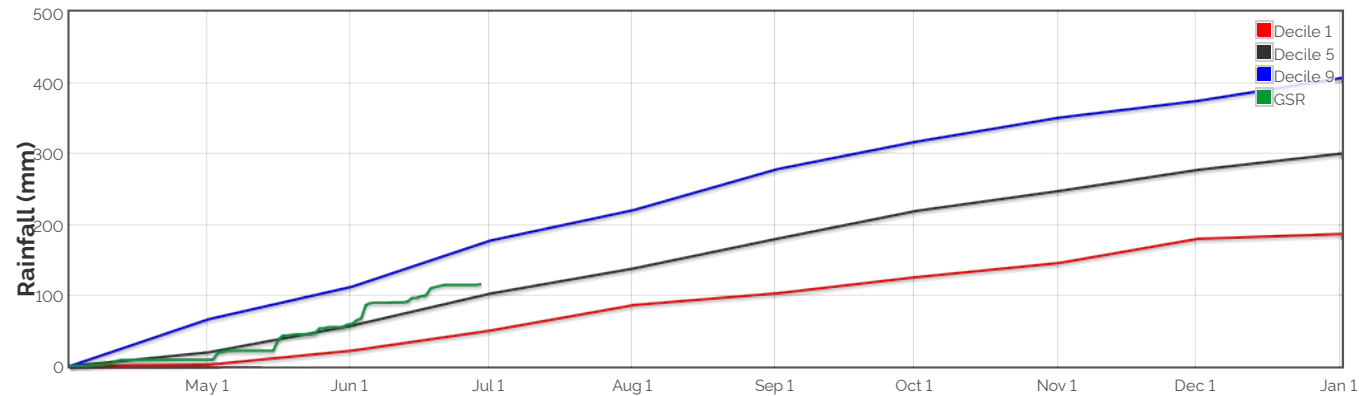
☒ Water Limited Yield

☒ Photothermal Quotient Limited Yield

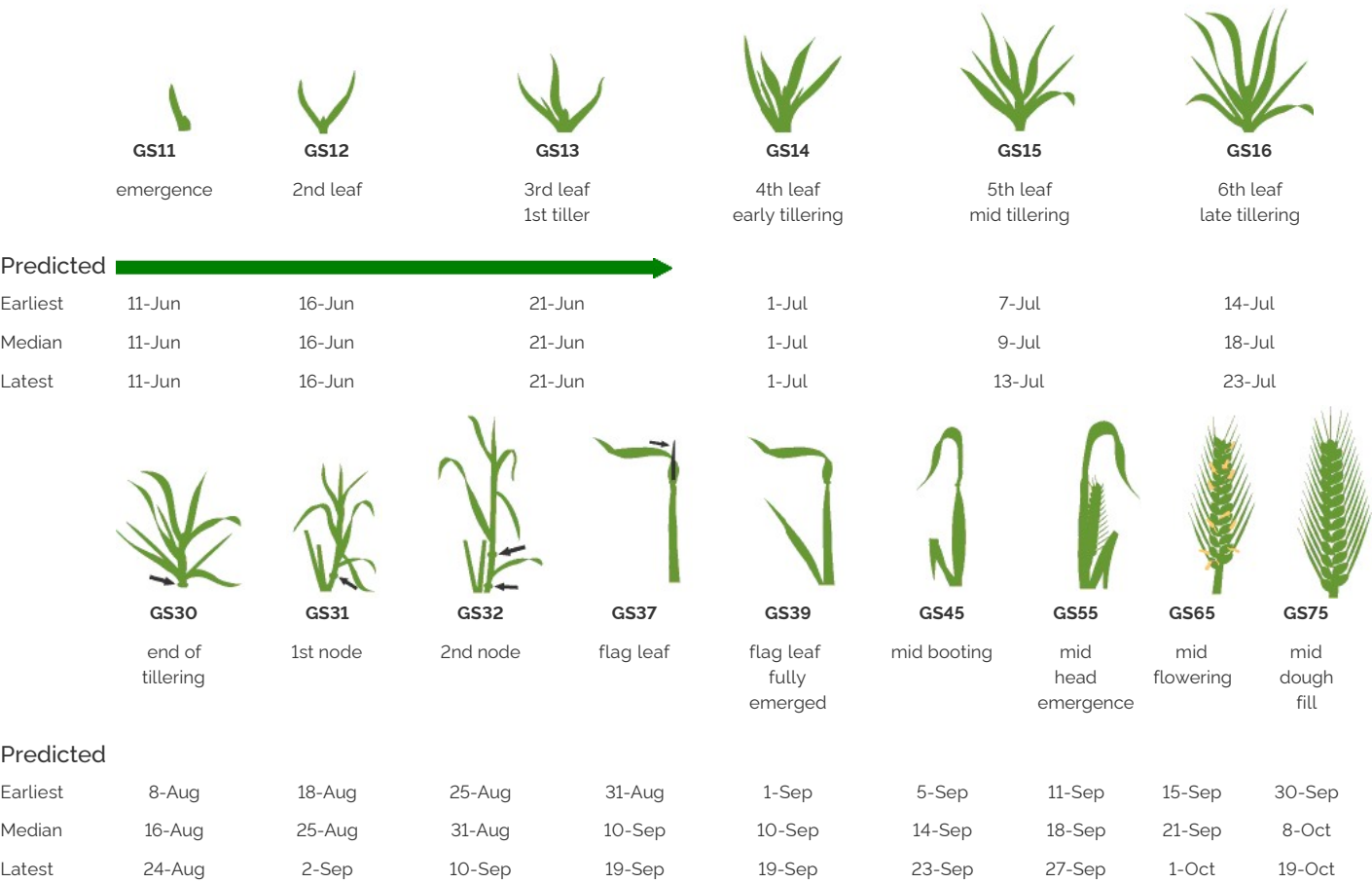


This chart shows the chances of achieving different yield outcomes this season, based on two key limits: water, and the balance of radiation and temperature during the critical period for grain number development (Photothermal quotient). Water-limited yield is estimated from pre-season soil moisture,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



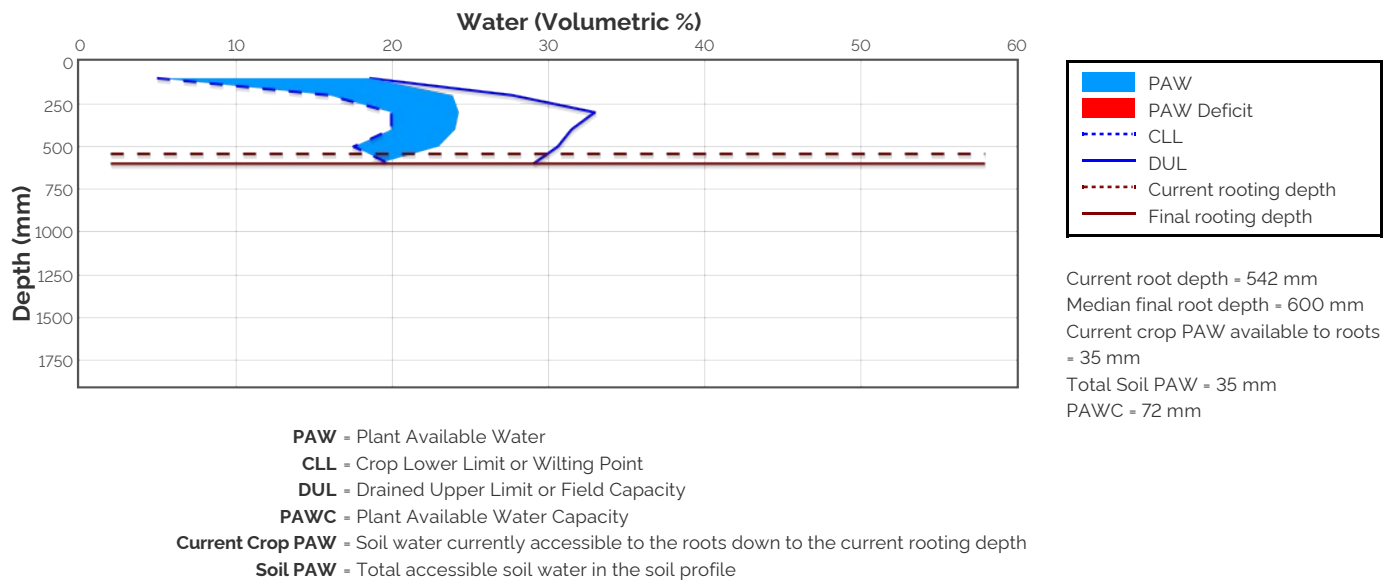
Simulated and Predicted Crop Growth Stage



Probability and Incidence of Frost and Heat Shock

Frost damage during flowering					Heat damage during grain fill				
Probability		This Season			Probability		This Season		
mild			10%	0	mild		52%	0	
2 to 0°C during flowering					32 to 34°C				
moderate			1%	0	moderate		34%	0	
0 to -2°C during flowering & early grain fill					34 to 36°C				
severe		0%	0		severe		17%	0	
Less than -2°C during flowering & grain fill					Above 36°C				

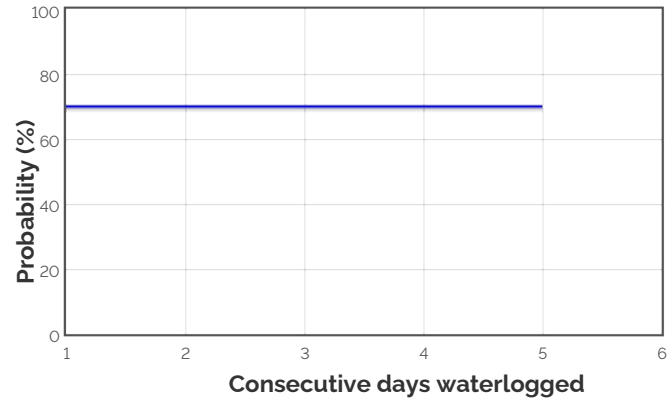
Current Distribution of PAW



Water Budget

Initial PAW status @ 28-May	5 mm
Rainfall since 28-May	60.8 mm
Irrigations	
Evaporation since 28-May	38 mm
Transpiration since 28-May	1 mm
Deep drainage since 28-May	0 mm
Run-off since 28-May	0 mm
Current PAW status:	35 mm

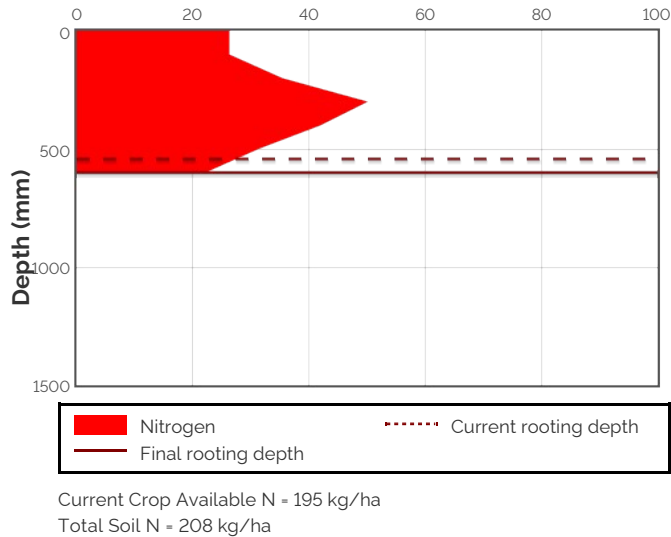
Probability of Future Waterlogging Events



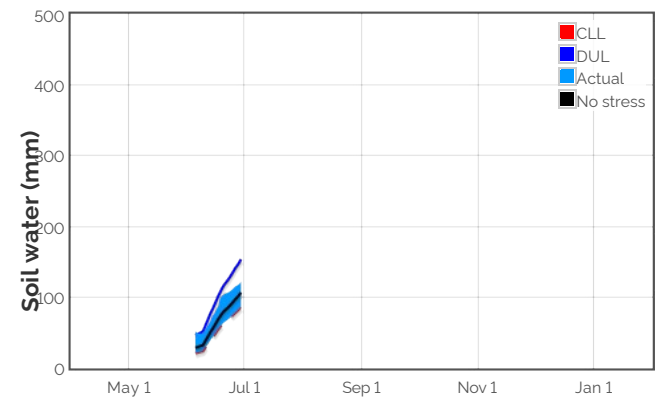
Nitrogen Budget

Initial N status @ 28-May	200 kg/ha
N mineralisation since 28-May	3 kg/ha
N tie up since 28-May	0 kg/ha
N applications	
5-May : 20 kg/ha	
Total N in plant	7 kg/ha
De-nitrification since 28-May	0 kg/ha
Leaching since 28-May	0 kg/ha
Current N status:	208 kg/ha
Median N mineralisation to maturity	= 20.9792424919829 kg/ha
Median N tie up to maturity	= 0 kg/ha

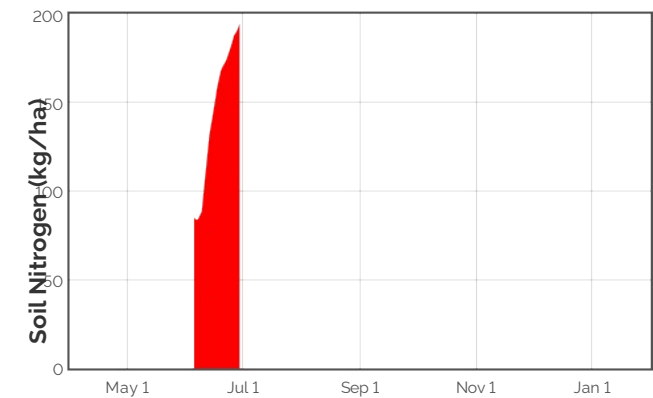
Current distribution of soil nitrogen (kg/ha)



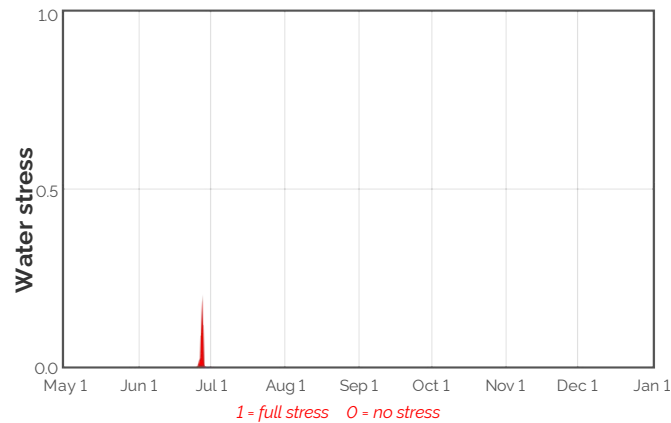
Availability of Water to Growing Roots



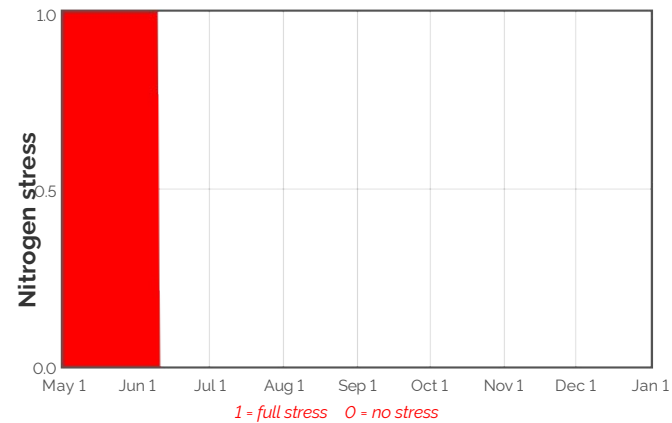
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



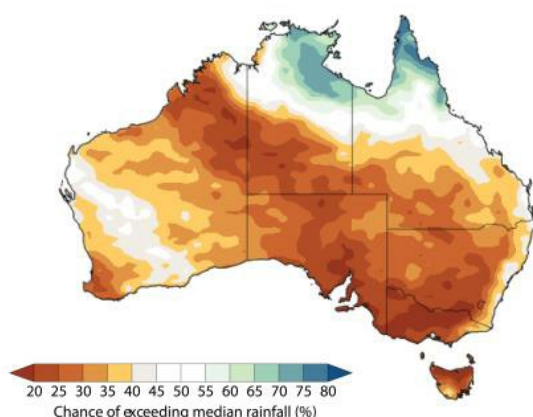
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

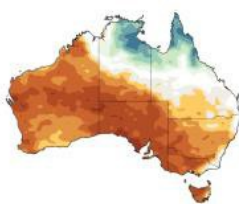
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
1-Jul	14.1	0.9	0.2	-0.8	13.5	34.0	197.1	0.1	0.0
2-Jul	14.2	0.3	0.2	-0.8	12.5	33.3	199.6	0.1	0.0
3-Jul	14.3	0.3	0.2	-0.8	11.5	32.8	202.3	0.1	0.0
4-Jul	14.4	0.3	0.3	-0.8	10.7	32.3	204.0	0.1	0.0
5-Jul	14.5	0.3	0.3	-0.8	10.2	31.9	203.5	0.1	0.0
6-Jul	14.7	0.3	0.3	-0.8	9.8	31.5	202.6	0.1	0.0
7-Jul	14.8	0.3	0.3	-0.8	9.4	31.1	201.8	0.1	0.0
8-Jul	14.9	0.3	0.3	-0.8	9.0	30.7	201.0	0.1	0.0
9-Jul	15.0	0.3	0.3	-0.8	8.6	30.3	200.2	0.1	0.0
10-Jul	15.1	0.2	0.3	-0.8	8.2	29.9	199.4	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.

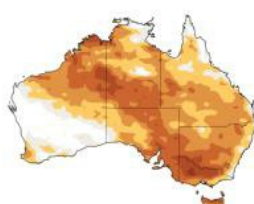
3 MONTH RAINFALL OUTLOOK FOR
APRIL TO JUNE



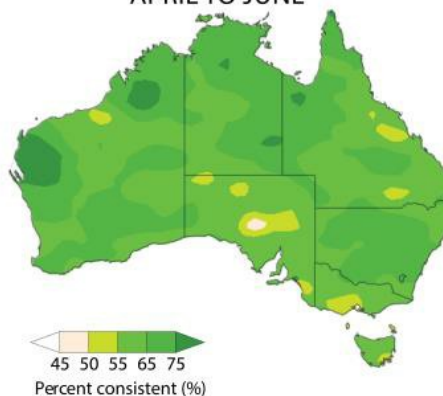
APRIL
RAINFALL OUTLOOK



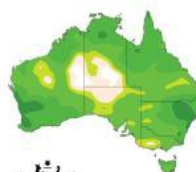
MAY
RAINFALL OUTLOOK



PAST ACCURACY FOR
APRIL TO JUNE



PAST ACCURACY FOR
APRIL



PAST ACCURACY FOR
MAY

