



# Crop Report

23-Jun-2022

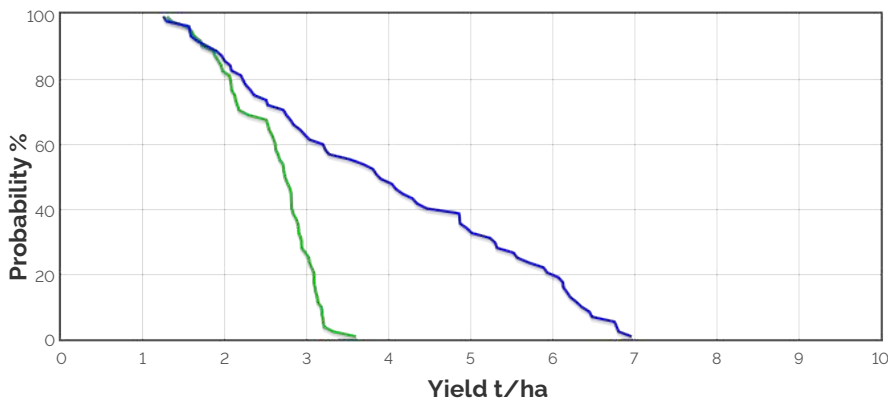
Resilient EP Soil  
Moisture Probe Network:  
Pinkawillinie

Crop: Wheat  
Cultivar: GrenadeCLPlus  
Sowing details: 150 plants/m<sup>2</sup> on 12-May  
Expected maturity date: 27-Oct

Paddock Details  
Initial conditions date: 16-Mar  
Soil: ResEP-Buckleboo Sandy Loam over Clay Loam  
800 mm max rooting depth  
Stubble: 1500 kg/ha of Barley  
No till

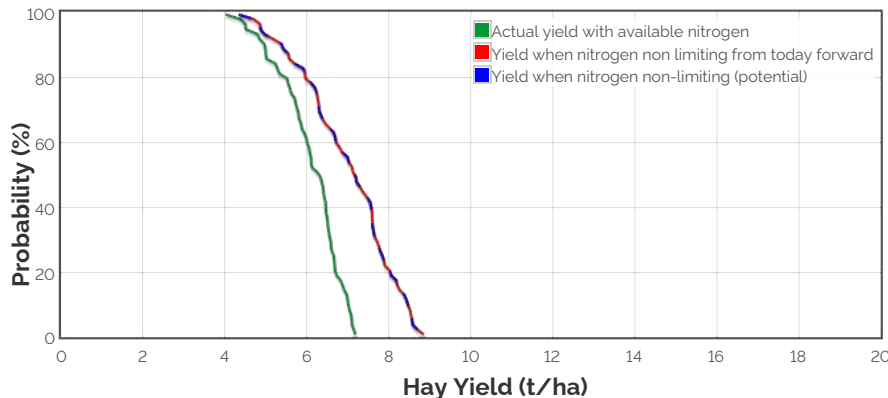
## Grain Yield Outcome

- Nitrogen limited Yield
- Water limited Yield
- Nitrogen limited Yield with Frost and heat Effects
- 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.

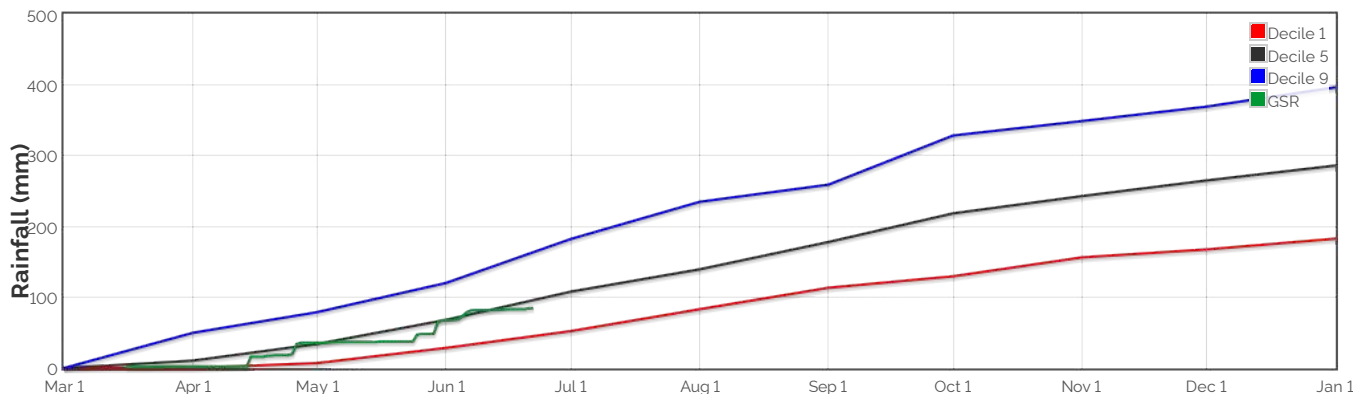
## Hay Yield Outcome



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: 530.9kg/ha

## The Season So Far - Growing Season Rainfall Deciles



# Simulated and Predicted Crop Growth Stage



Predicted

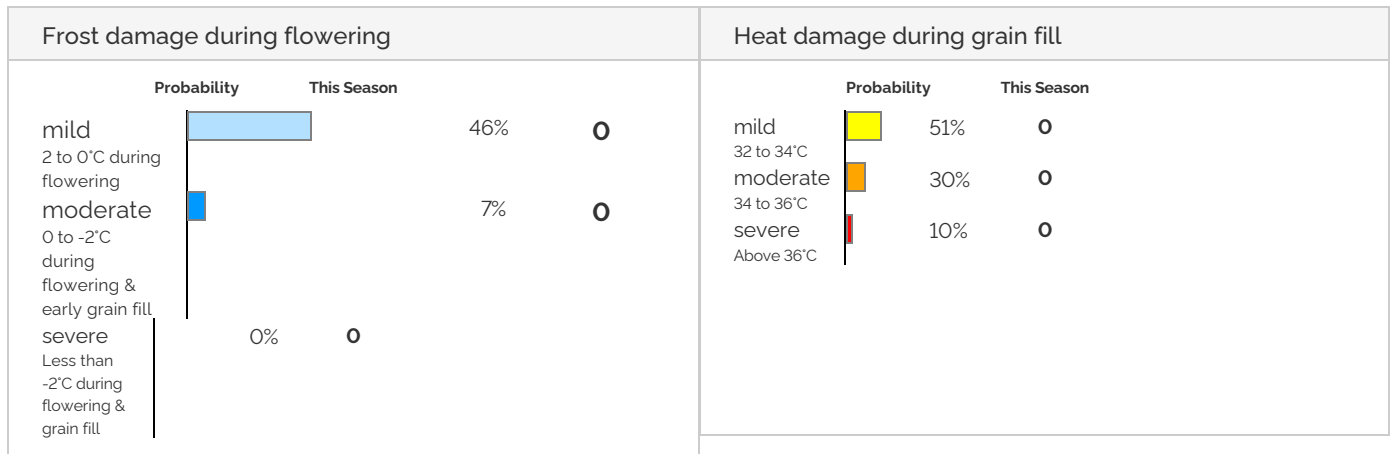
Earliest	22-May	31-May	9-Jun	18-Jun	25-Jun	2-Jul
Median	22-May	31-May	9-Jun	18-Jun	26-Jun	5-Jul
Latest	22-May	31-May	9-Jun	18-Jun	27-Jun	8-Jul



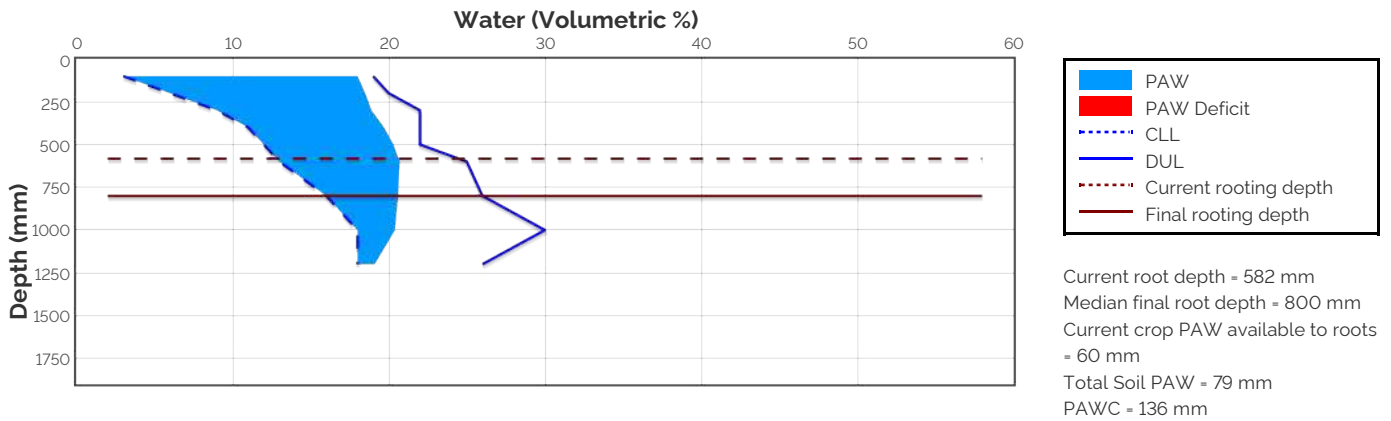
Predicted

Earliest	19-Jul	22-Jul	27-Jul	7-Aug	12-Aug	19-Aug	29-Aug	7-Sep	23-Sep
Median	22-Jul	26-Jul	30-Jul	11-Aug	17-Aug	25-Aug	4-Sep	14-Sep	2-Oct
Latest	28-Jul	31-Jul	5-Aug	19-Aug	25-Aug	3-Sep	13-Sep	23-Sep	12-Oct

## Probability and Incidence of Frost and Heat Shock



## Current Distribution of PAW



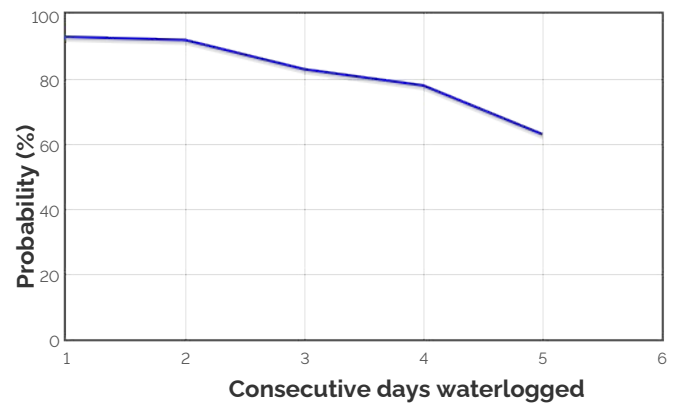
## Water Budget

Initial PAW status @ 16-Mar  
 Rainfall since 16-Mar  
 Irrigations  
 Evaporation since 16-Mar  
 Transpiration since 16-Mar  
 Deep drainage since 16-Mar  
 Run-off since 16-Mar

70 mm  
 83.5 mm  
 69 mm  
 6 mm  
 0 mm  
 0 mm  
**79 mm**

**Current PAW status:**

## Probability of Future Waterlogging Events



## Nitrogen Budget

Initial N status @ 16-Mar  
 N mineralisation since 16-Mar  
 N tie up since 16-Mar  
 N applications

81 kg/ha  
 6 kg/ha  
 9 kg/ha

Total N in plant  
 De-nitrification since 16-Mar  
 Leaching since 16-Mar

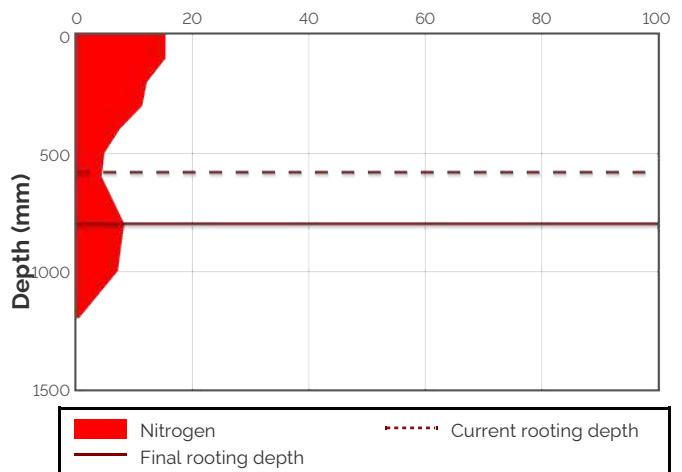
12-May : 25.4 kg/ha  
 28 kg/ha  
 0 kg/ha  
 0 kg/ha

**Current N status:**

Median N mineralisation to maturity = 2.329 kg/ha  
 Median N tie up to maturity = 1.127 kg/ha

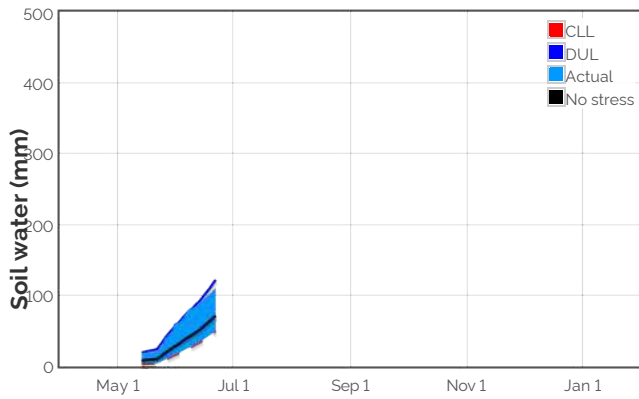
**74 kg/ha**

## Current distribution of soil nitrogen (kg/ha)

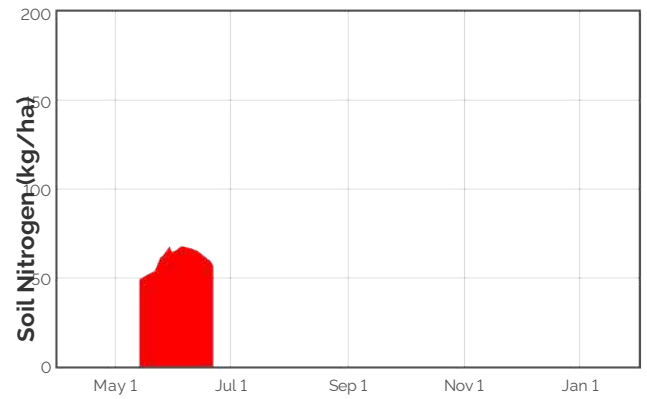


Current Crop Available N = 57 kg/ha  
 Total Soil N = 74 kg/ha

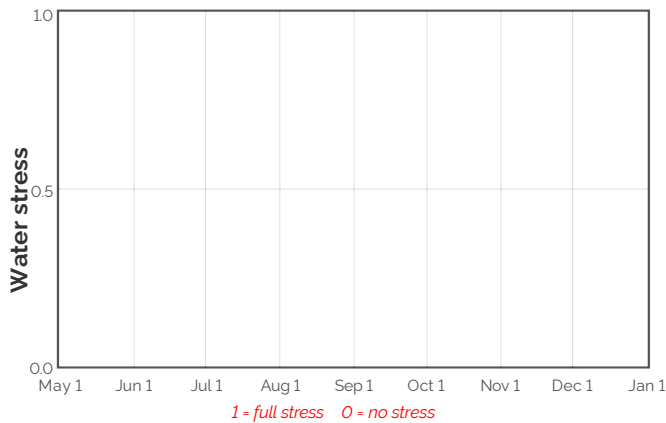
## Availability of Water to Growing Roots



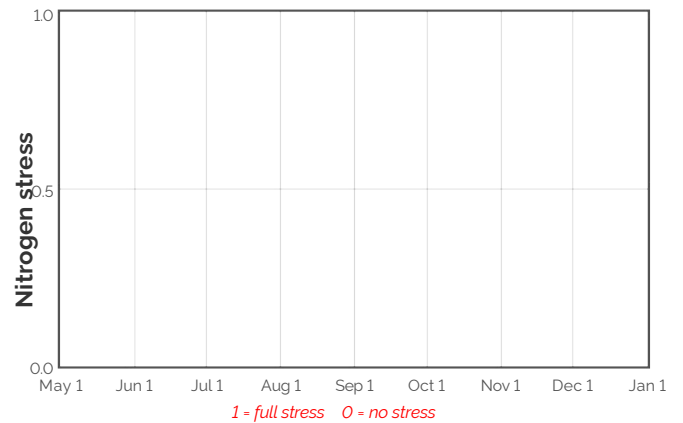
## Availability of Soil Nitrogen to Growing Roots



## Water Stress



## Nitrogen Stress



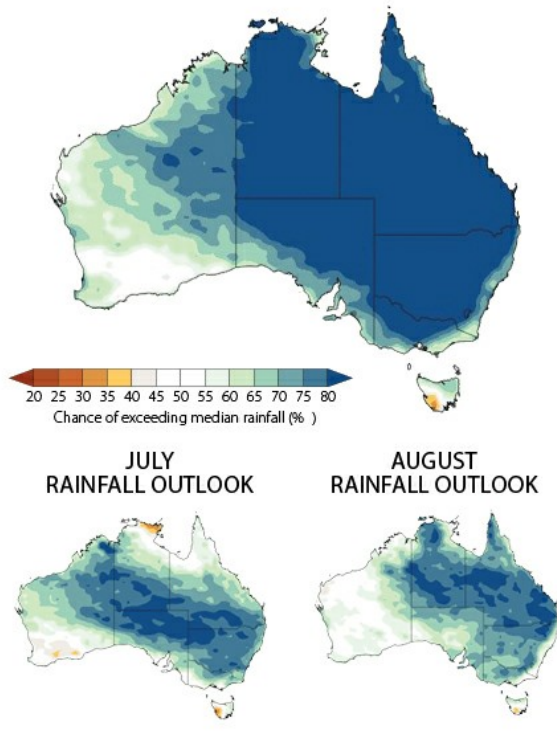
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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

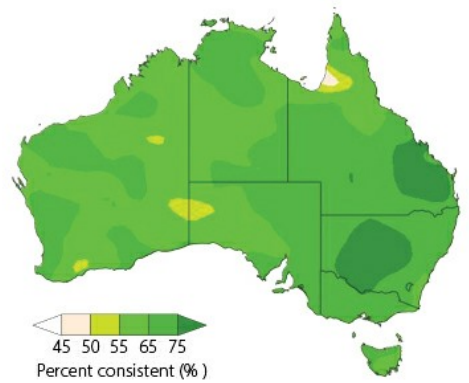
Date	Growth Stage	Evap. (mm)	Water use (mm)	N use (kg/ha)	Water avail. to roots above stress threshold (mm)	Water avail. to roots above CLL (mm)	N avail. to roots (kg/ha)	Mineralisation (kg/ha)	N tie up (kg/ha)
24-Jun	15.0	0.3	0.4	1.9	38.0	61.0	52.0	0.1	0.0
25-Jun	15.1	0.3	0.5	2.2	37.4	60.8	50.7	0.1	0.0
26-Jun	15.2	0.2	0.5	2.3	36.9	60.6	49.0	0.1	0.0
27-Jun	15.3	0.2	0.6	2.5	36.3	60.4	47.2	0.1	0.0
28-Jun	15.4	0.2	0.7	2.7	35.6	60.1	45.0	0.1	0.0
29-Jun	15.5	0.2	0.6	2.6	34.8	59.8	43.4	0.1	0.0
30-Jun	15.6	0.2	0.6	2.7	34.1	59.4	41.2	0.1	0.0
1-Jul	15.7	0.2	0.6	2.5	33.3	59.2	39.6	0.1	0.0
2-Jul	15.8	0.2	0.6	2.3	32.6	59.0	37.8	0.1	0.0
3-Jul	16.0	0.2	0.7	2.2	32.0	58.2	36.2	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 JULY TO SEPTEMBER



PAST ACCURACY FOR JULY TO SEPTEMBER



PAST ACCURACY FOR JULY



PAST ACCURACY FOR AUGUST



Australian Government  
Bureau of Meteorology

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