

Crop Report

21-Jul-2022

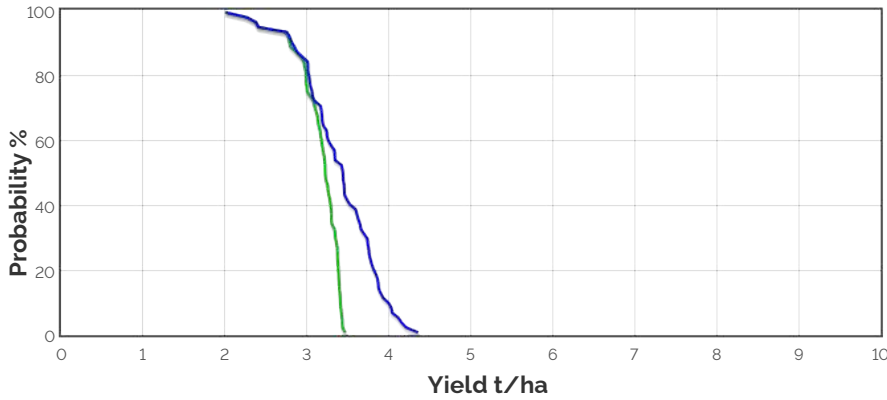
Resilient EP Soil
Moisture Probe Network:
Yeelanna

Crop: Canola
Cultivar: Early
Sowing details: 45 plants/m² on 29-Apr
Expected maturity date: 17-Oct

Paddock Details
Initial conditions date: 24-Mar
Soil: Clay Loam over Loamy Medium Clay (Yeelanna No590)
1200 mm max rooting depth
Stubble: 1000 kg/ha of Lentil
No till

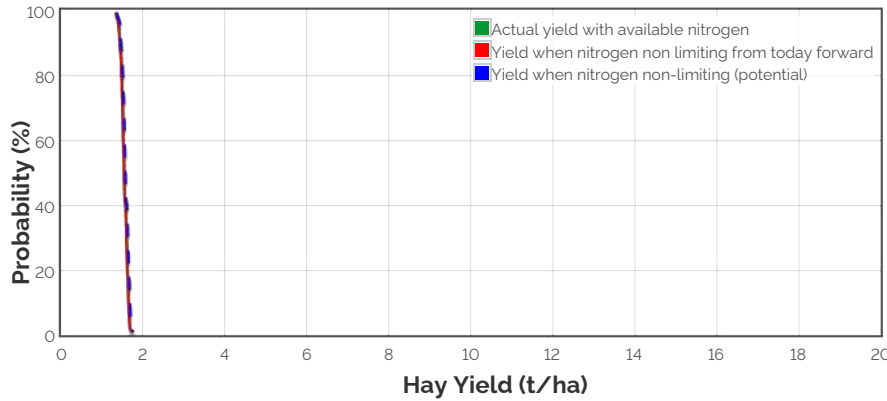
Grain Yield Outcome

- 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.

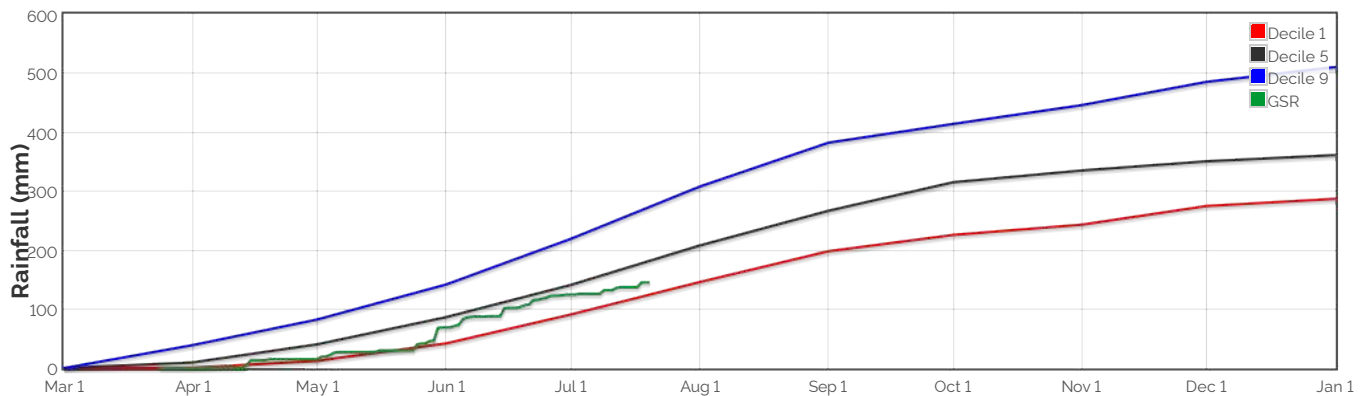
Hay Yield Outcome



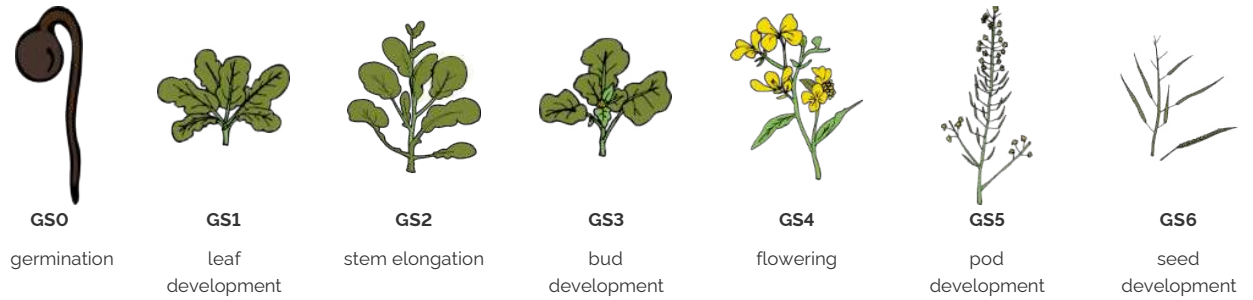
This graph shows the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 1123.3kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



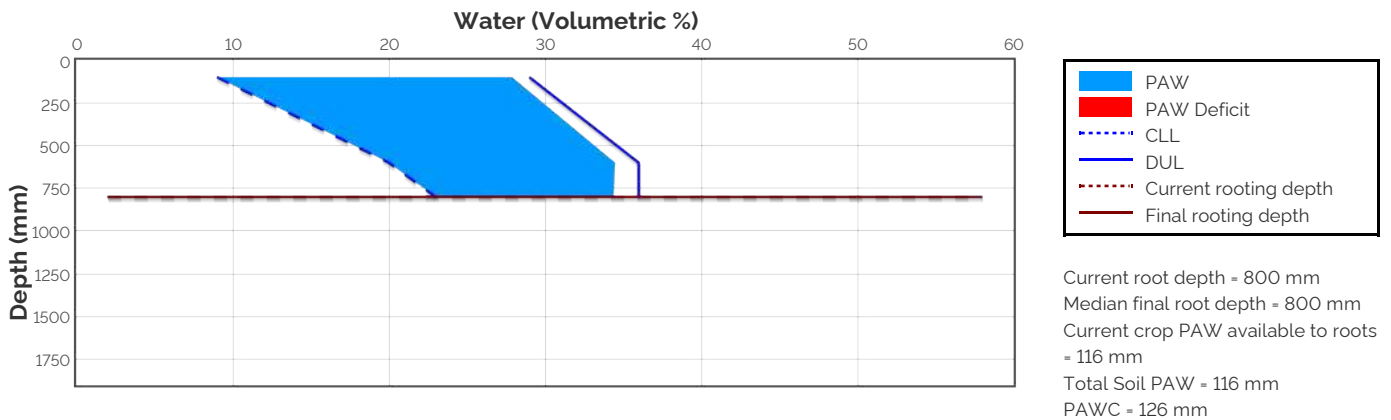
Predicted

Earliest	18-May	23-May	7-Jun	11-Jul	31-Jul	18-Aug	9-Oct
Median	18-May	23-May	7-Jun	11-Jul	3-Aug	20-Aug	14-Oct
Latest	18-May	23-May	7-Jun	11-Jul	5-Aug	27-Aug	23-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		28%	0	mild 32 to 34°C		13%	0
moderate 0 to -2°C during flowering & early grain fill		3%	0	moderate 34 to 36°C		0%	0
severe Less than -2°C during flowering & grain fill		0%	0	severe Above 36°C		0%	0

Current Distribution of PAW



PAW = Plant Available Water
CLL = Crop Lower Limit or Wilting Point
DUL = Drained Upper Limit or Field Capacity
PAWC = Plant Available Water Capacity
Current Crop PAW = Soil water currently accessible to the roots down to the current rooting depth
Soil PAW = Total accessible soil water in the soil profile

Water Budget

Initial PAW status @ 24-Mar
 Rainfall since 24-Mar
 Irrigations
 Evaporation since 24-Mar
 Transpiration since 24-Mar
 Deep drainage since 24-Mar
 Run-off since 24-Mar

90 mm
 145.3 mm
 106 mm
 13 mm
 0 mm
 1 mm
116 mm

Current PAW status:

Nitrogen Budget

Initial N status @ 24-Mar
 N mineralisation since 24-Mar
 N tie up since 24-Mar
 N applications

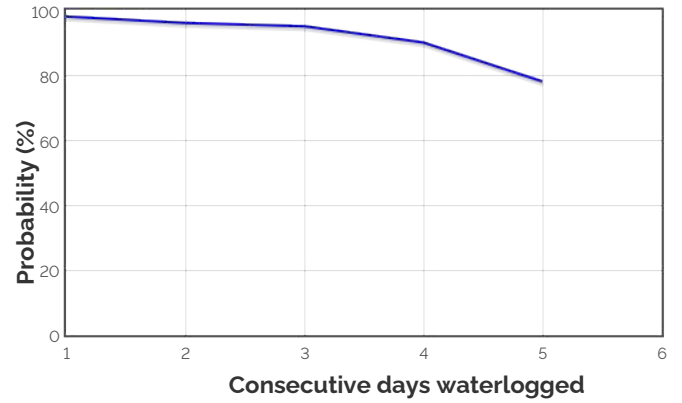
121 kg/ha
 13 kg/ha
 3 kg/ha
 29-Apr : 16.1 kg/ha
 16-Jun : 46 kg/ha
 8-Jul : 57.5 kg/ha
 61 kg/ha
 0 kg/ha
 0 kg/ha
191 kg/ha

Total N in plant
 De-nitrification since 24-Mar
 Leaching since 24-Mar

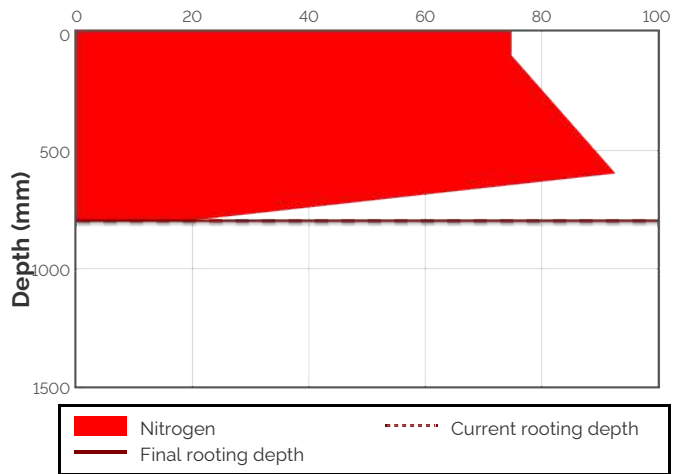
Current N status:

Median N mineralisation to maturity = 5.554 kg/ha
 Median N tie up to maturity = 0 kg/ha

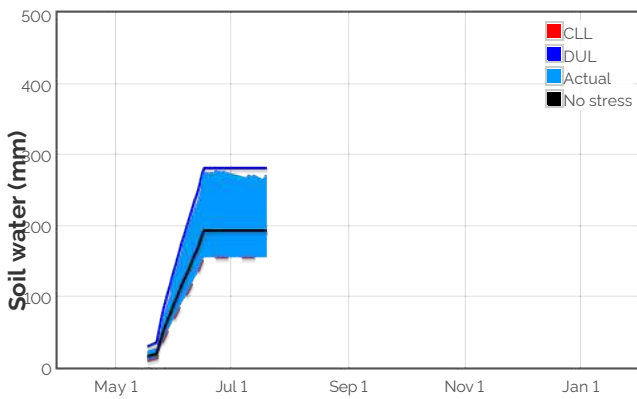
Probability of Future Waterlogging Events



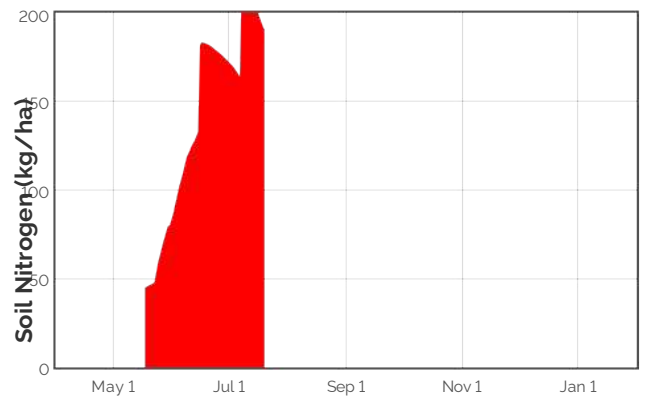
Current distribution of soil nitrogen (kg/ha)



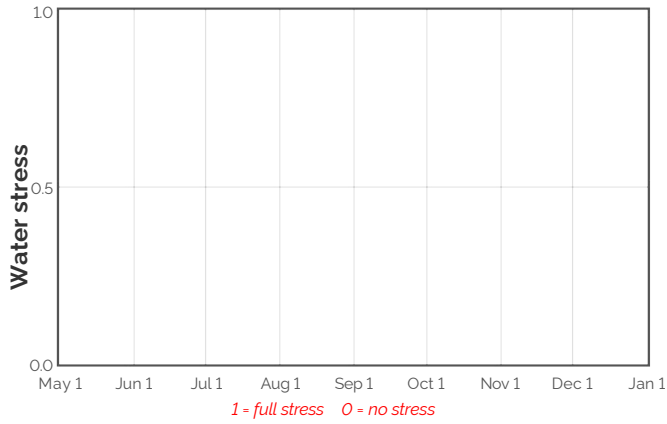
Availability of Water to Growing Roots



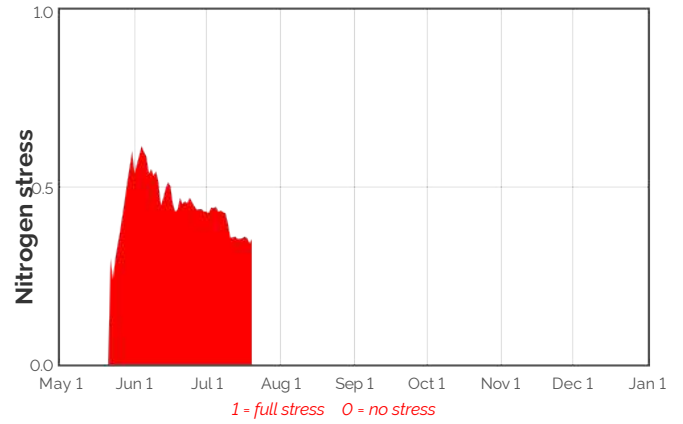
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



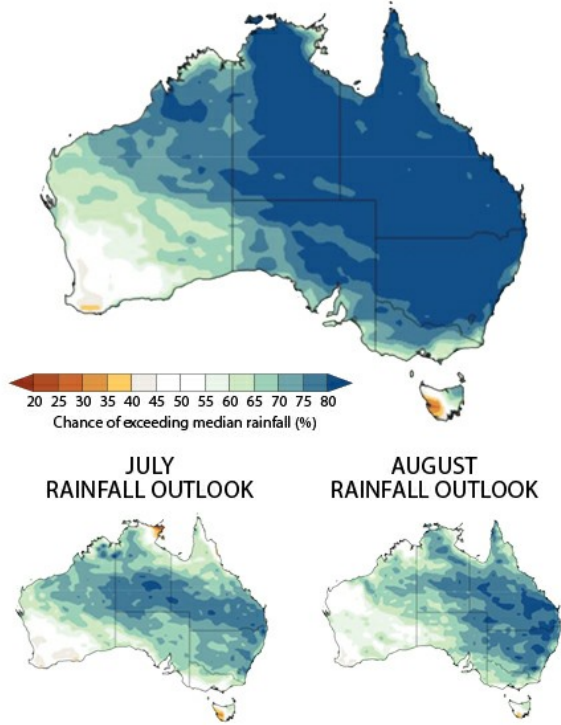
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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)
22-Jul	16.0	0.9	0.6	2.9	74.2	112.0	181.6	0.1	0.0
23-Jul	16.0	0.7	0.6	2.8	73.0	110.8	178.9	0.1	0.0
24-Jul	16.0	0.8	0.6	3.0	71.4	109.2	176.0	0.1	0.0
25-Jul	16.0	0.6	0.7	3.0	70.0	107.8	173.1	0.1	0.0
26-Jul	16.0	0.5	0.7	3.1	68.7	106.5	169.7	0.1	0.0
27-Jul	16.0	0.4	0.8	3.2	67.6	105.4	166.9	0.1	0.0
28-Jul	16.0	0.4	0.8	3.4	66.6	104.4	163.9	0.1	0.0
29-Jul	16.0	0.3	0.9	3.6	65.0	102.8	160.3	0.1	0.0
30-Jul	16.0	0.3	1.0	3.8	63.8	101.6	156.9	0.1	0.0
31-Jul	16.0	0.3	1.0	3.8	62.5	100.3	153.2	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

