

Crop Report

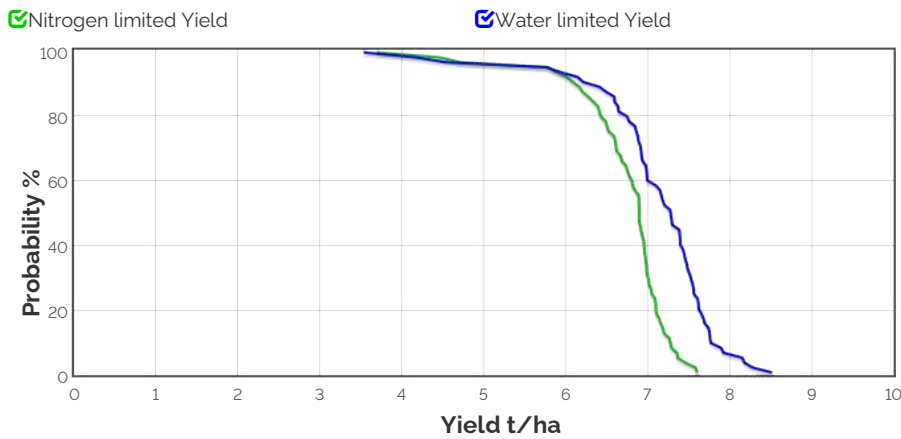
21-Jul-2022

Resilient EP Soil
Moisture Probe Network:
Wangary

Crop: Barley
Cultivar: Spartacus
Sowing details: 175 plants/m² on 9-Jun
Expected maturity date: 29-Oct

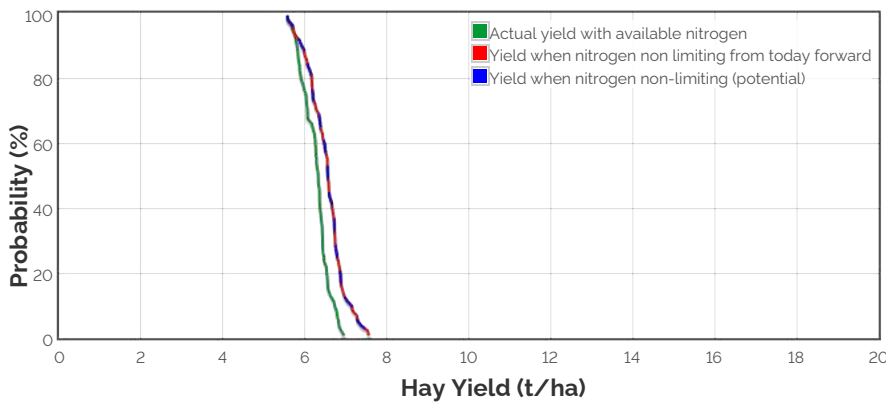
Paddock Details
Initial conditions date: 18-Mar
Soil: ResEP-Mt Dutton Loam
900 mm max rooting depth
Stubble: 4070 kg/ha of Wheat
No till

Grain Yield Outcome



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.

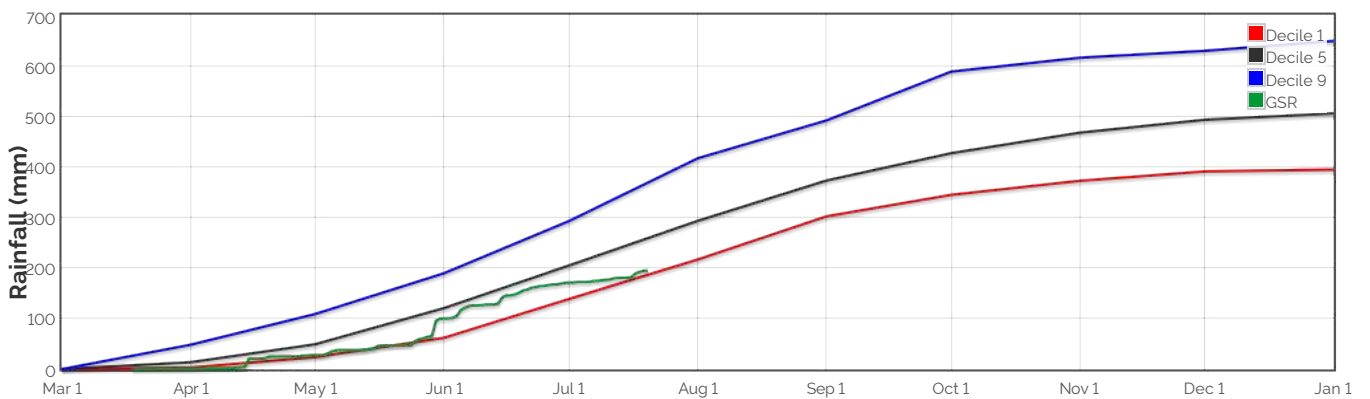
Hay Yield Outcome



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: 771.7kg/ha

The Season So Far - Growing Season Rainfall Deciles



Simulated and Predicted Crop Growth Stage



Predicted

| | | | | | | |
|----------|--------|--------|-------|--------|--------|--------|
| Earliest | 20-Jun | 28-Jun | 5-Jul | 11-Jul | 18-Jul | 24-Jul |
| Median | 20-Jun | 28-Jun | 5-Jul | 11-Jul | 18-Jul | 25-Jul |
| Latest | 20-Jun | 28-Jun | 5-Jul | 11-Jul | 18-Jul | 26-Jul |



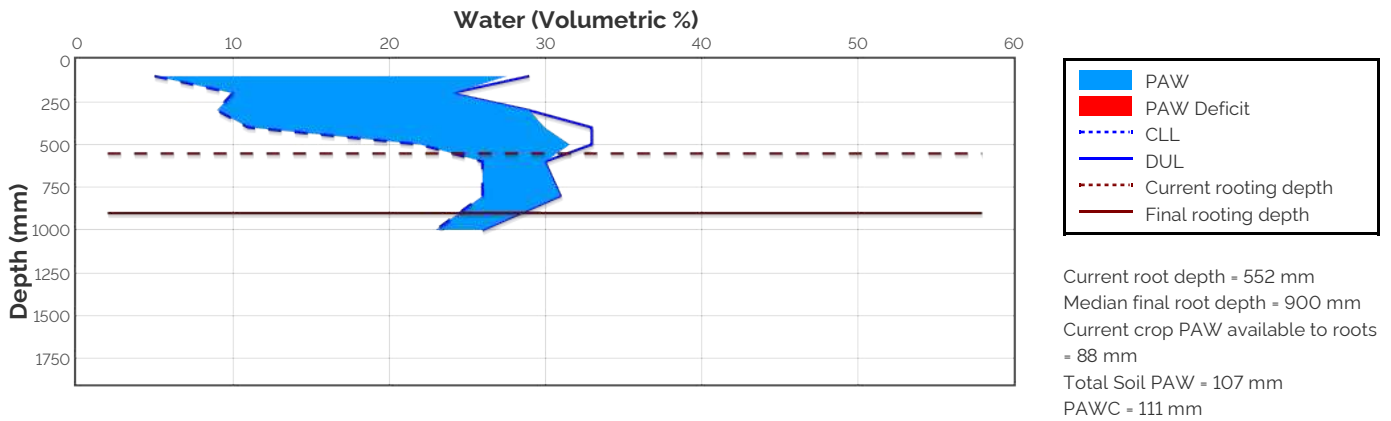
Predicted

| | | | | | | | | | |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Earliest | 19-Aug | 22-Aug | 26-Aug | 30-Aug | 31-Aug | 3-Sep | 7-Sep | 11-Sep | 28-Sep |
| Median | 22-Aug | 25-Aug | 29-Aug | 2-Sep | 3-Sep | 7-Sep | 11-Sep | 15-Sep | 4-Oct |
| Latest | 26-Aug | 30-Aug | 3-Sep | 7-Sep | 9-Sep | 12-Sep | 16-Sep | 20-Sep | 10-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 | | 1% | 0 | mild 32 to 34°C | | 10% | 0 |
| moderate 0 to -2°C during flowering & early grain fill | | 0% | 0 | moderate 34 to 36°C | | 1% | 0 |
| severe Less than -2°C during flowering & grain fill | | 0% | 0 | severe Above 36°C | | 0% | 0 |

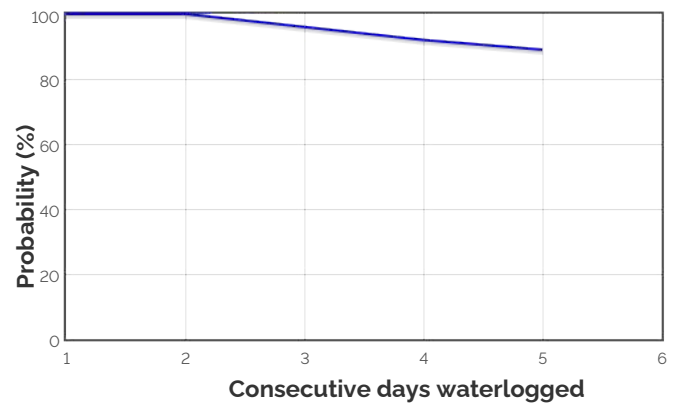
Current Distribution of PAW



Water Budget

| | |
|-----------------------------|---------------|
| Initial PAW status @ 18-Mar | 44 mm |
| Rainfall since 18-Mar | 194.4 mm |
| Irrigations | |
| Evaporation since 18-Mar | 122 mm |
| Transpiration since 18-Mar | 6 mm |
| Deep drainage since 18-Mar | 1 mm |
| Run-off since 18-Mar | 0 mm |
| Current PAW status: | 107 mm |

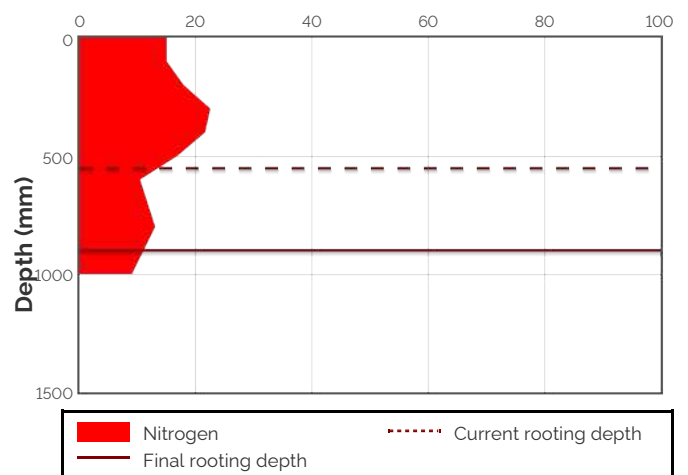
Probability of Future Waterlogging Events



Nitrogen Budget

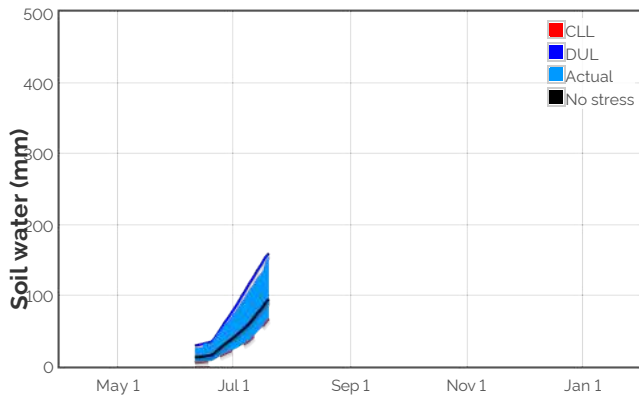
| | |
|-------------------------------------|--------------------|
| Initial N status @ 18-Mar | 151 kg/ha |
| N mineralisation since 18-Mar | 2 kg/ha |
| N tie up since 18-Mar | 36 kg/ha |
| N applications | |
| | 6-Apr : 47.3 kg/ha |
| | 9-Jun : 14.4 kg/ha |
| Total N in plant | 43 kg/ha |
| De-nitrification since 18-Mar | 3 kg/ha |
| Leaching since 18-Mar | 0 kg/ha |
| Current N status: | 131 kg/ha |
| Median N mineralisation to maturity | = 2.6435 kg/ha |
| Median N tie up to maturity | = 1.4085 kg/ha |

Current distribution of soil nitrogen (kg/ha)

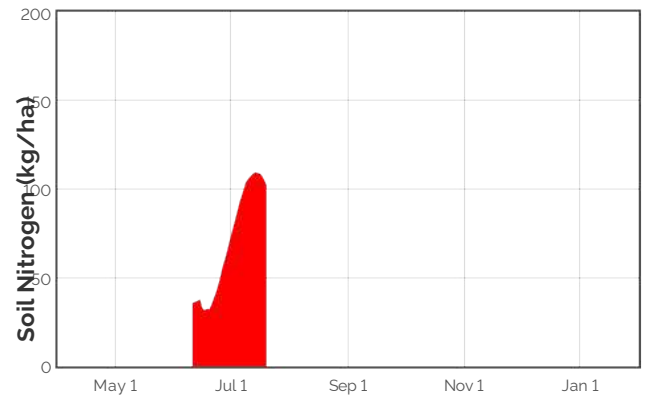


Current Crop Available N = 102 kg/ha
 Total Soil N = 131 kg/ha

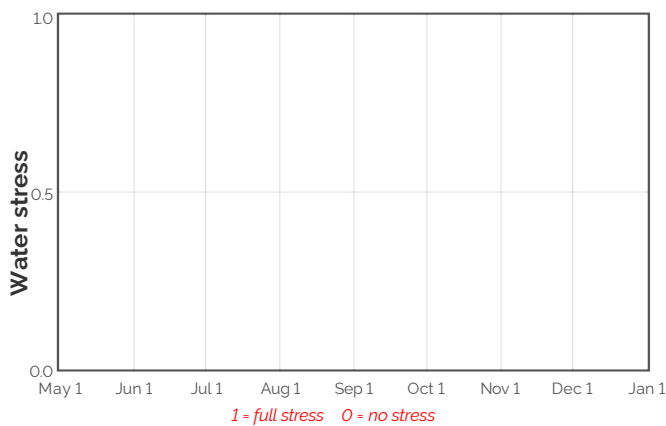
Availability of Water to Growing Roots



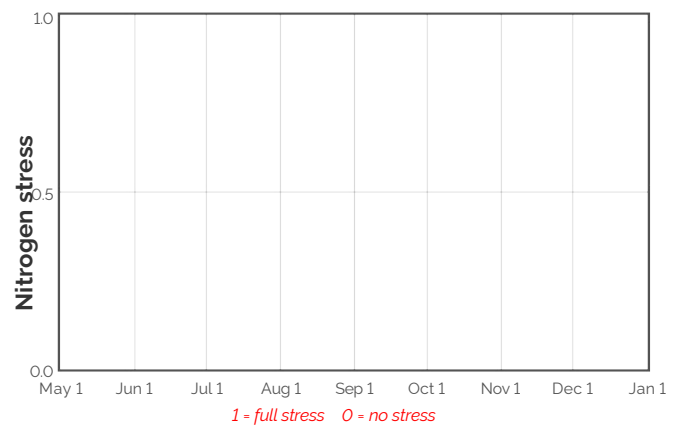
Availability of Soil Nitrogen to Growing Roots



Water Stress



Nitrogen Stress



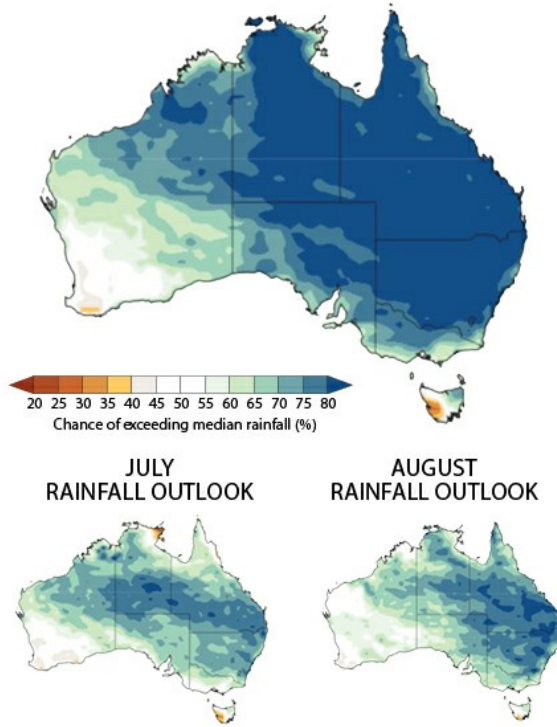
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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 | 15.8 | 0.6 | 0.5 | 3.4 | 59.0 | 87.2 | 95.8 | 0.0 | 0.1 |
| 23-Jul | 16.0 | 0.6 | 0.5 | 3.2 | 58.6 | 87.0 | 93.8 | 0.0 | 0.0 |
| 24-Jul | 16.0 | 0.6 | 0.5 | 3.4 | 57.9 | 86.6 | 91.5 | 0.0 | 0.0 |
| 25-Jul | 16.0 | 0.5 | 0.5 | 3.4 | 57.4 | 86.2 | 89.1 | 0.0 | 0.0 |
| 26-Jul | 16.0 | 0.5 | 0.6 | 3.9 | 56.8 | 85.9 | 86.4 | 0.0 | 0.0 |
| 27-Jul | 16.0 | 0.5 | 0.6 | 3.8 | 55.8 | 85.2 | 84.4 | 0.0 | 0.0 |
| 28-Jul | 16.0 | 0.5 | 0.6 | 4.0 | 55.4 | 84.8 | 81.4 | 0.0 | 0.0 |
| 29-Jul | 16.0 | 0.5 | 0.7 | 3.9 | 55.1 | 84.7 | 78.5 | 0.0 | 0.0 |
| 30-Jul | 16.0 | 0.5 | 0.8 | 4.3 | 54.0 | 83.8 | 76.0 | 0.0 | 0.0 |
| 31-Jul | 16.0 | 0.5 | 0.7 | 4.4 | 53.4 | 83.4 | 72.6 | 0.0 | 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

