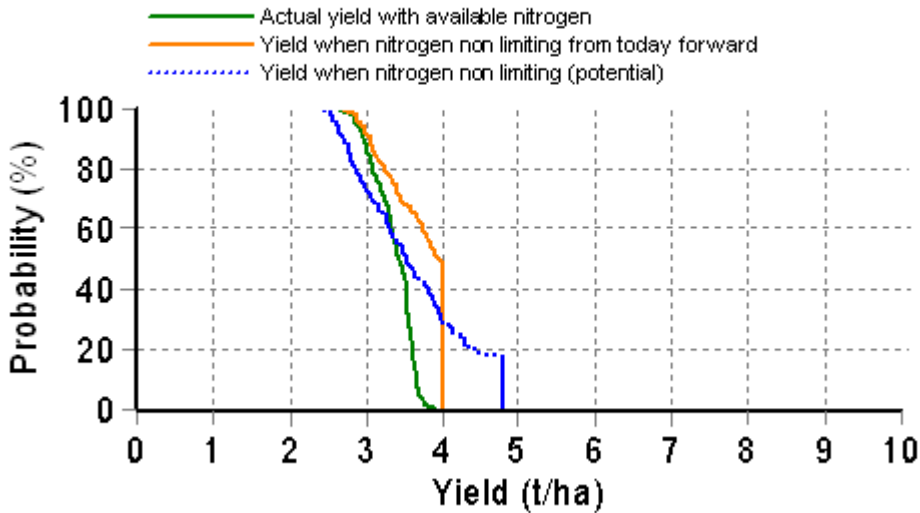


Crop Report

Report name: [Block 510C] Crop report
 Report date: 19/10/2011
 Last climate date available: 17/10/2011
 Client name: EH Graham Centre
 Paddock name: Block 510C
 Report generated by: EH Graham Centre
 Date sown: 14-May
 Crop type: Wheat
 Variety sown: Wedgetail
 Sowing density: 89 plants/m²

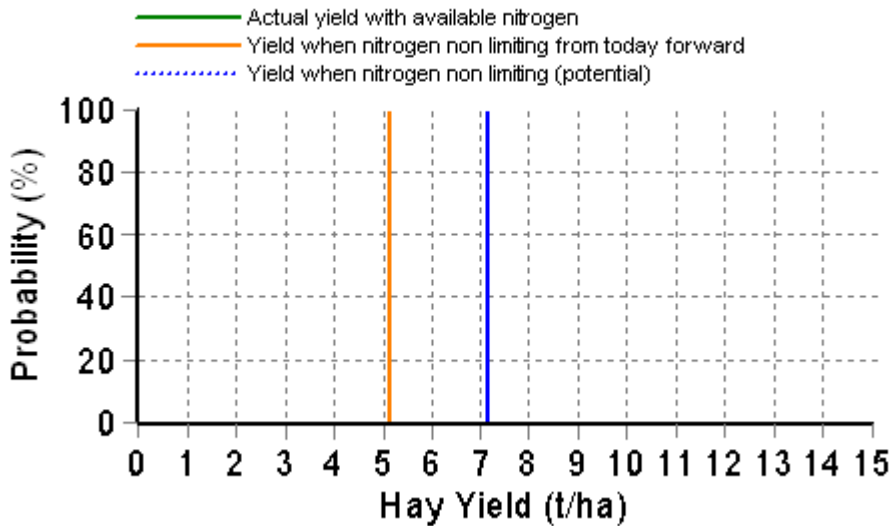
Weather station used: Wagga Wagga AMO
 Rainfall records used: Weather station
 Soil type: Dirnaseer Red Kandosol
 Maximum rooting depth: 180 cm
 Roots constrained by EC:
 Stubble type: canola
 Stubble amount: 2500 kg/ha
 Start of growing season: 01-Apr
 Initial conditions date: 12-May
 Growing season rainfall to date: 212.2 mm
 Date of last rainfall entry: ?
 Expected harvest date: 24-Nov

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 of the past 100 years. The yield results are used to produce this graph.

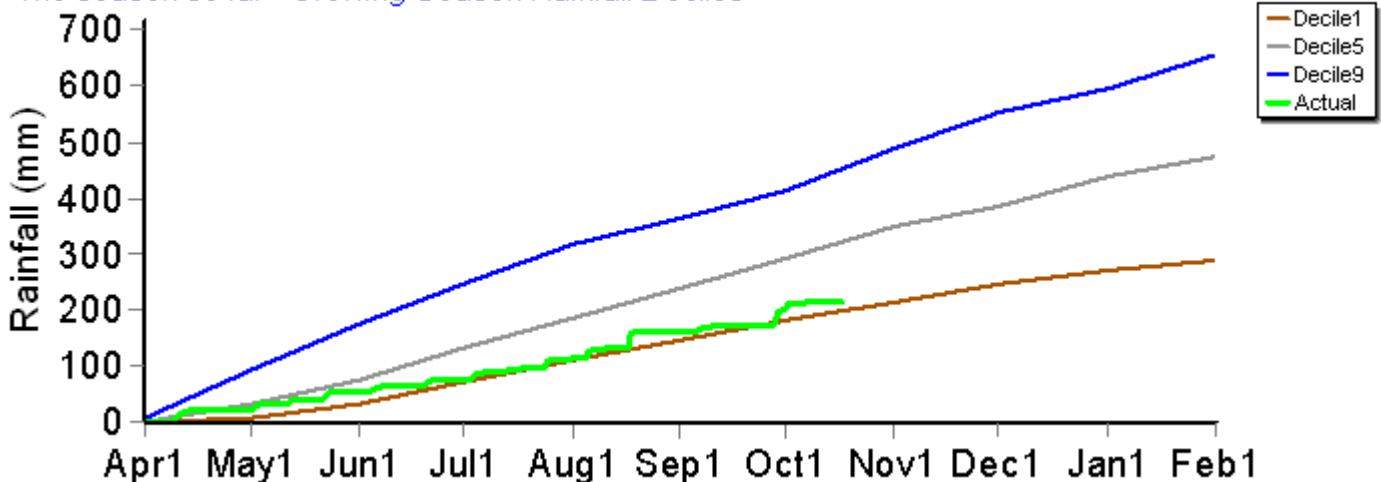
Hay Yield Outcome

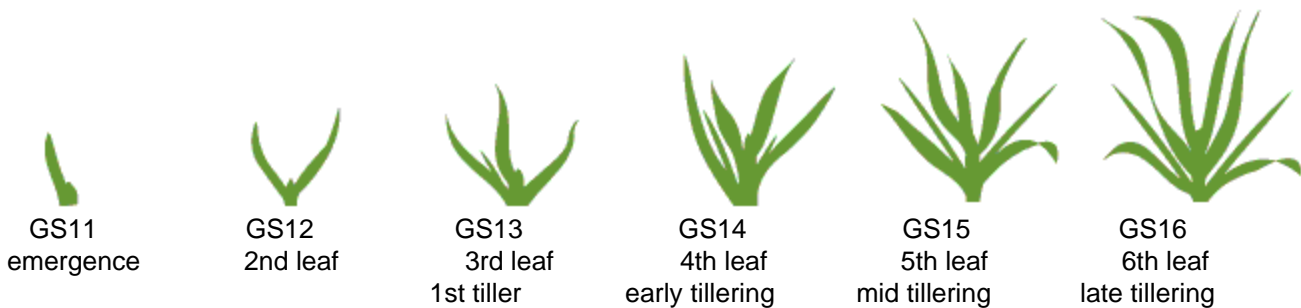


This graph show the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 6830 kg/ha

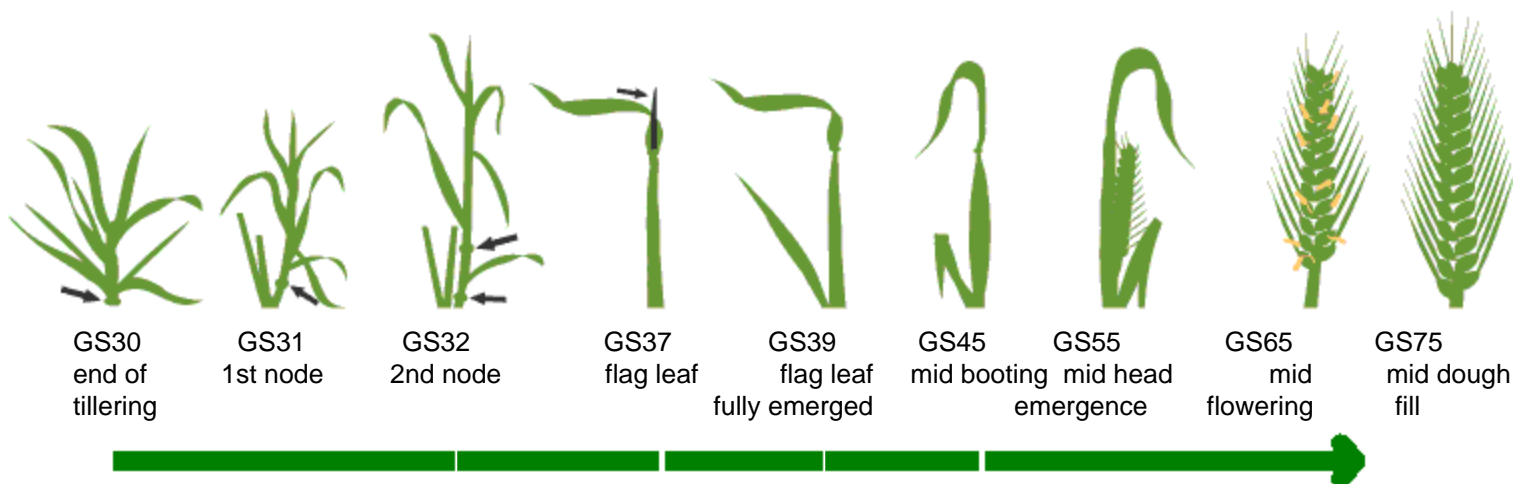
The season so far - Growing Season Rainfall Deciles





Predicted

Earliest	24-May	5-Jun	17-Jun	28-Jun	7-Jul	20-Jul
Median	24-May	5-Jun	17-Jun	28-Jun	7-Jul	20-Jul
Latest	24-May	5-Jun	17-Jun	28-Jun	7-Jul	20-Jul



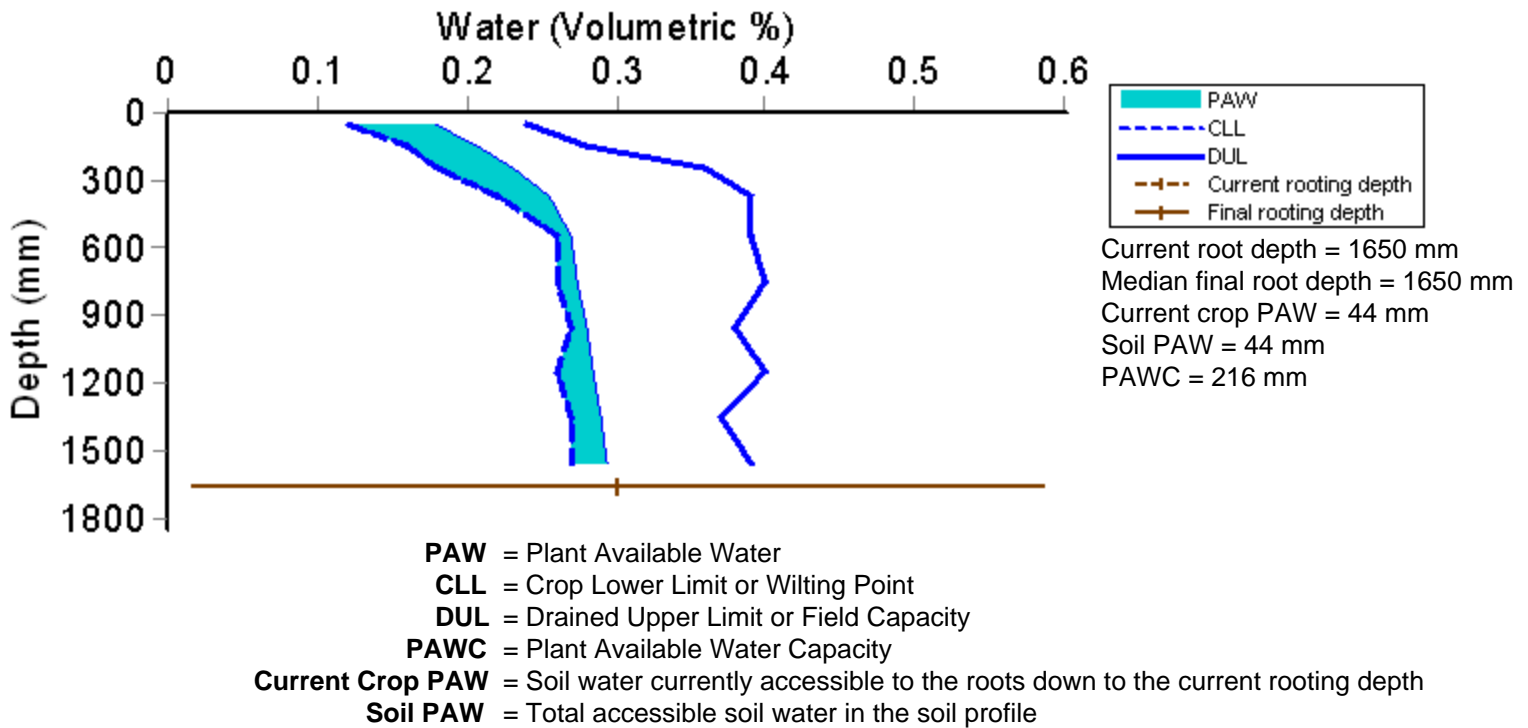
Predicted

Earliest	5-Sep	8-Sep	12-Sep	20-Sep	23-Sep	28-Sep	6-Oct	13-Oct	26-Oct
Median	6-Sep	8-Sep	12-Sep	20-Sep	23-Sep	28-Sep	6-Oct	13-Oct	30-Oct
Latest	6-Sep	8-Sep	12-Sep	20-Sep	23-Sep	28-Sep	6-Oct	13-Oct	2-Nov

<i>Percentage of years in which frost occurs during flowering</i>		<i>Percentage of years in which heat shock occurs during grain fill (Z70-79)</i>	
Mild		Mild	
Minimum temperature between 2 and 0°C during flowering (Z60-69)	100%	Maximum temperature between 32 and 34°C	36%
Moderate		Moderate	
Minimum temperature between 0 and -2°C during flowering and early grain fill (Z60-75)	1%	Maximum temperature between 34 and 36°C	21%
Severe		Severe	
Minimum temperature less than -2°C during flowering and grain fill (Z60-79)	0%	Maximum temperature above 36°	7%

<i>Incidence of frost for this growing season, during flowering</i>		<i>Incidence of heat shock for this growing season, during grain fill (Z70-79)</i>	
Mild		Mild	
Minimum temperature between 2 and 0°C during flowering (Z60-69)	1	Maximum temperature between 32 and 34°C	0
Moderate		Moderate	
Minimum temperature between 0 and -2°C during flowering and early grain fill (Z60-75)	0	Maximum temperature between 34 and 36°C	0
Severe		Severe	
Minimum temperature less than -2°C during flowering and grain fill (Z60-79)	0	Maximum temperature above 36°	0

Current distribution of PAW

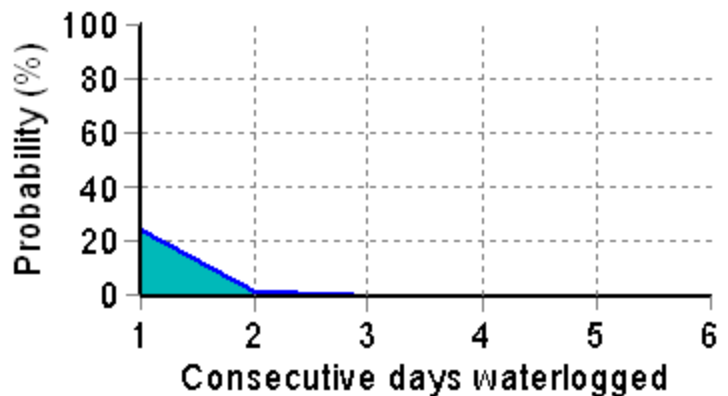


Water Budget

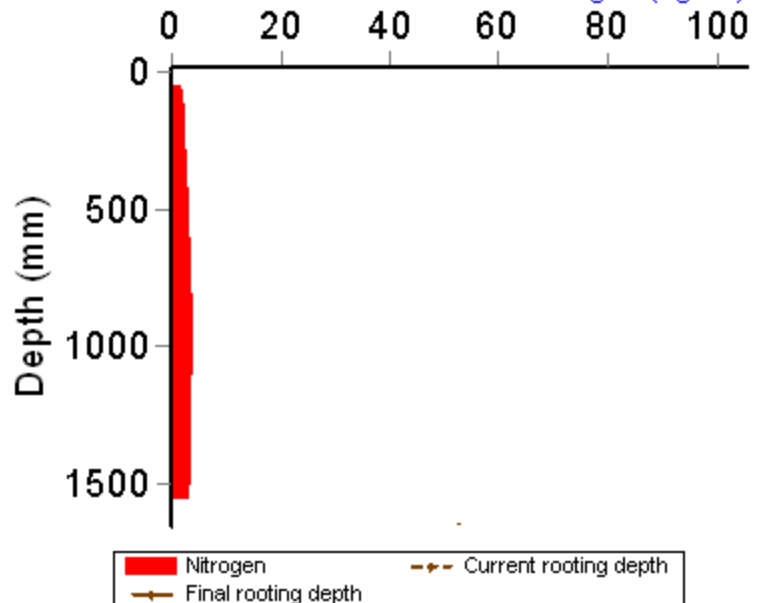
Initial PAW status @ 12-May	78 mm
Rainfall since 12-May	179.6 mm
Irrigations	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
Evaporation since 12-May	107 mm
Transpiration since 12-May	109 mm
Deep drainage since 12-May	0 mm
Run-off since 12-May	0 mm

Current PAW status: 44 mm

Probability of Future Waterlogging Events



Current distribution of soil nitrogen (kg/ha)

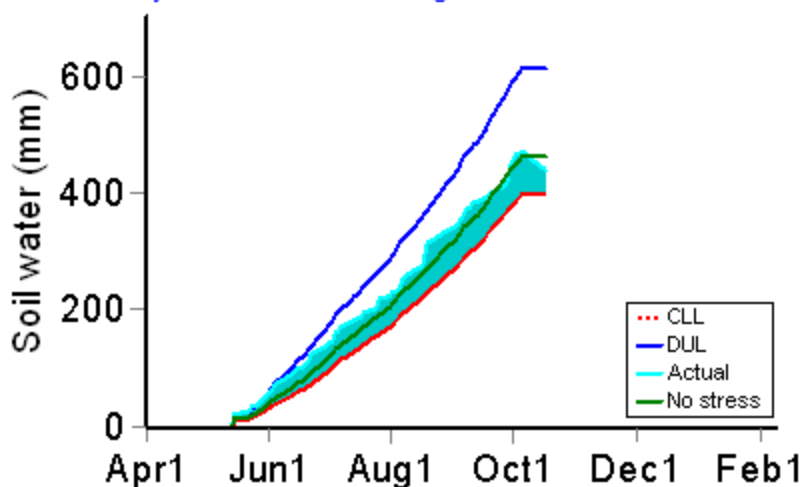


Nitrogen Budget

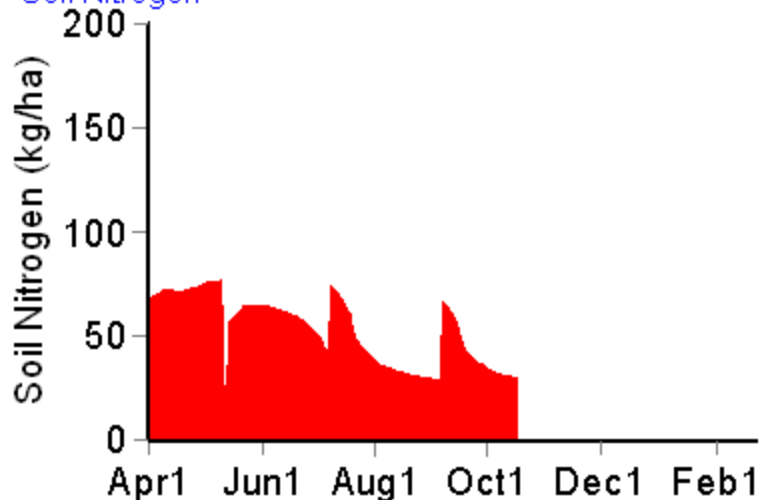
Initial N status @ 12-May	44 kg/ha
Mineralisation since 12-May	-10 kg/ha
N applications	14-May: 30 kg/ha
	8-Jul: 32 kg/ha
	6-Sep: 38 kg/ha
	: kg/ha
	: kg/ha
Total N in plant	99 kg/ha
De-nitrification since 12-May	1 kg/ha
Leaching	0 kg/ha

Current N status: 31 kg/ha

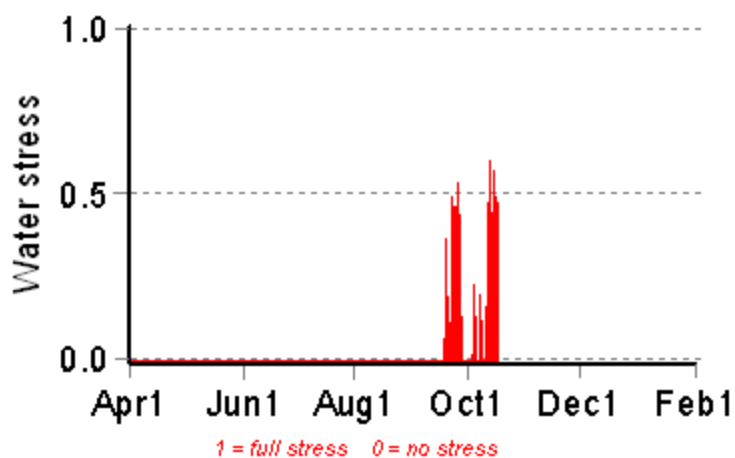
Availability of Water to Growing Roots



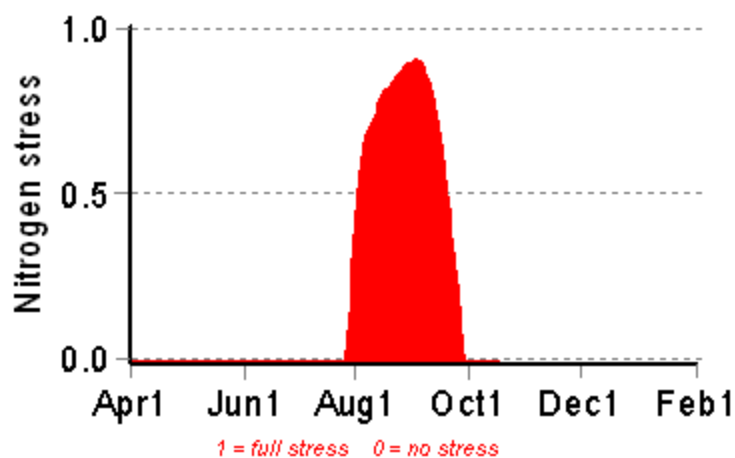
Soil Nitrogen



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.

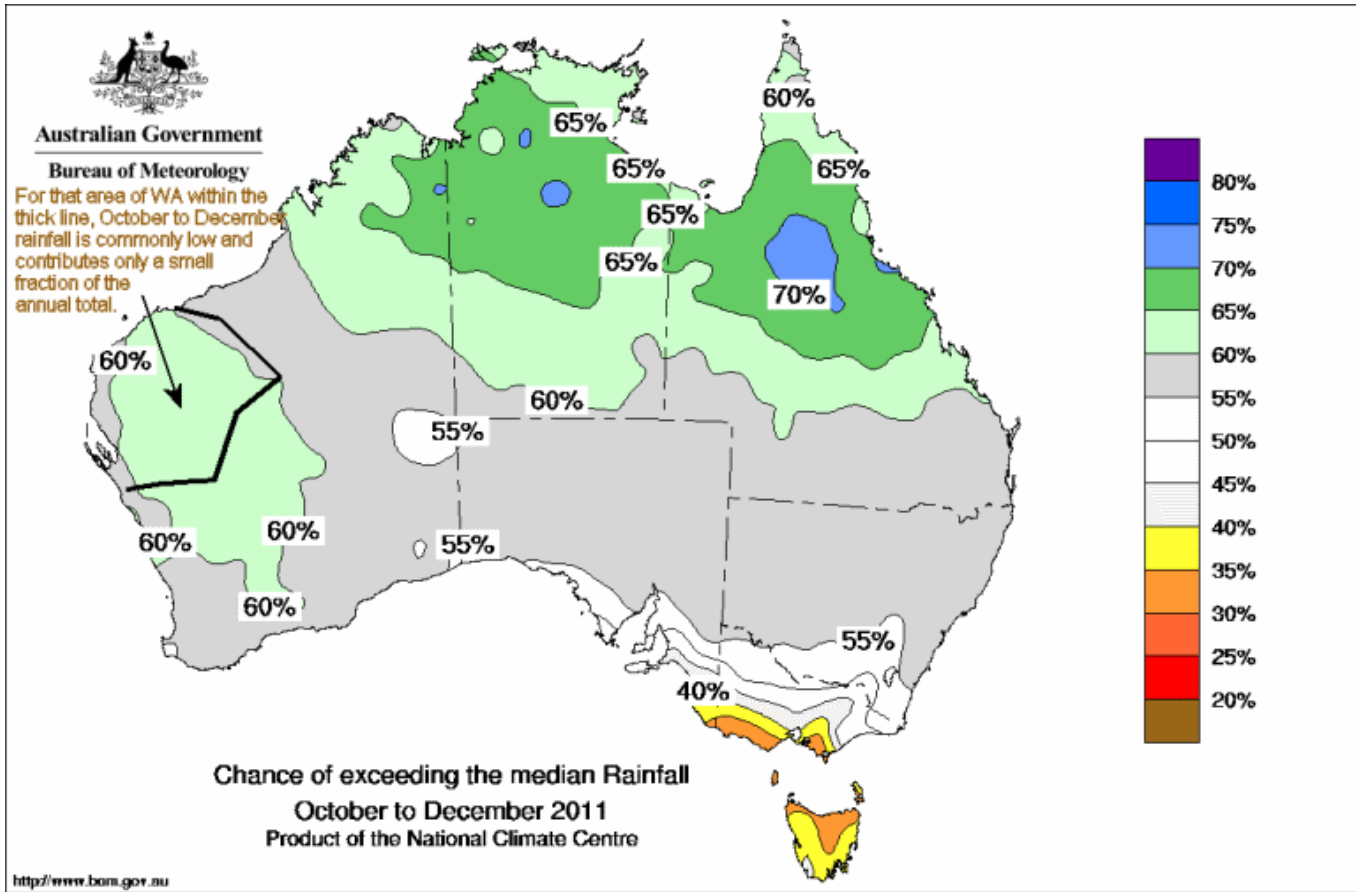
Mean projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser.

Date	Growth Stage	Evap (mm)	Daily water use (mm)	Daily N use (kg/ha)	Water available to roots above stress threshold (mm)	Water available to roots above crop lower limit (mm)	N available to roots (kg/ha)
19-Oct	70.7	0.3	1.6	0.2	-26.8	37.9	31.4
20-Oct	71.0	0.4	1.5	0.1	-28.5	36.1	31.4
21-Oct	71.7	0.5	1.4	0.1	-29.3	35.3	31.4
22-Oct	72.2	0.7	1.4	0.1	-29.4	35.3	31.3
23-Oct	72.7	0.6	1.3	0.1	-29.5	35.1	31.3
24-Oct	73.1	0.6	1.3	0.1	-30.2	34.4	31.2
25-Oct	73.6	0.7	1.3	0.1	-29.7	35.0	31.2
26-Oct	74.0	0.8	1.3	0.1	-31.6	33.1	31.1
27-Oct	74.5	0.8	1.3	0.1	-30.8	33.8	31.1
28-Oct	75.0	0.7	1.3	0.1	-32.3	32.4	31.1

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.

How much rainfall can I expect?

The Bureau of Meteorology Forecast for the next 3 months

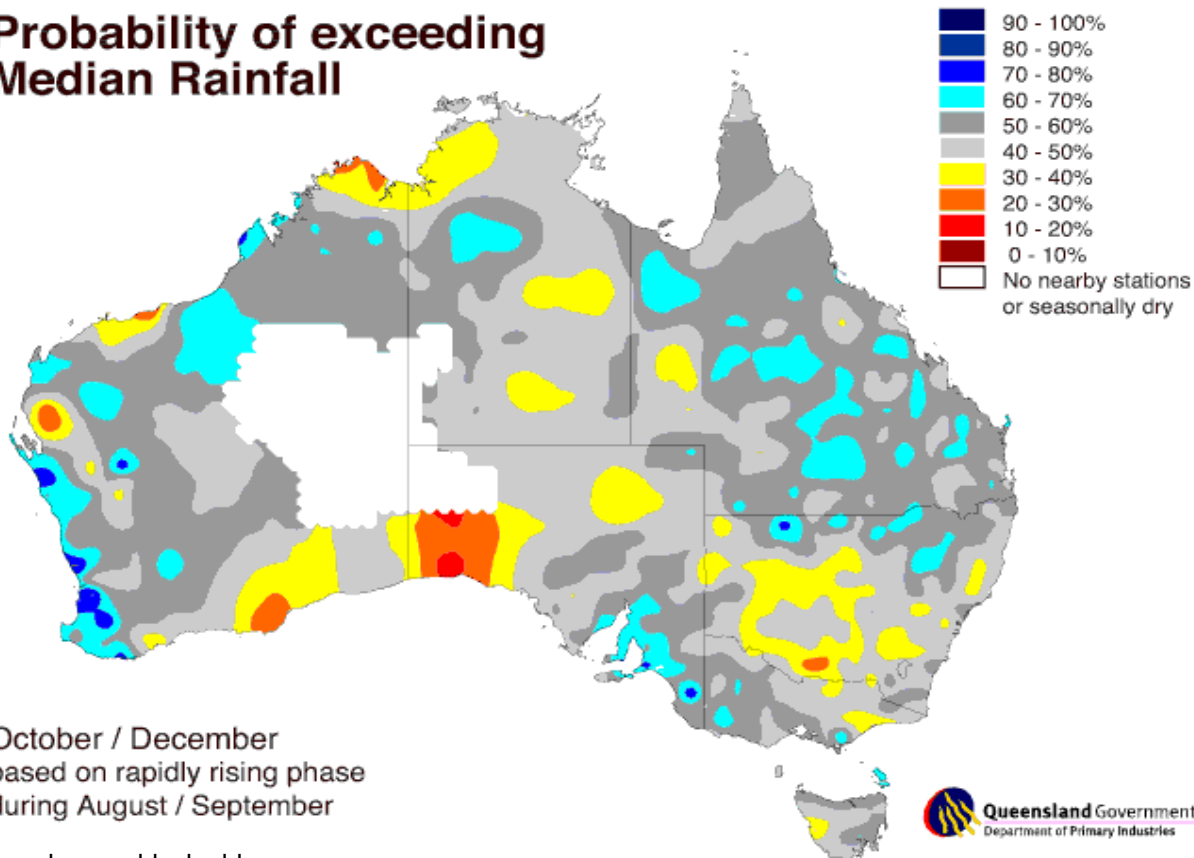


National Seasonal Rainfall Outlook: probabilities October to December 2011

Issued by the bureau of Meteorology 19th September 2011

Queensland Department of Environment and Resource Management (DERM) 3 month rainfall forecast based on the current phase of the SOI

Probability of exceeding Median Rainfall



SOI Phase and analogue years

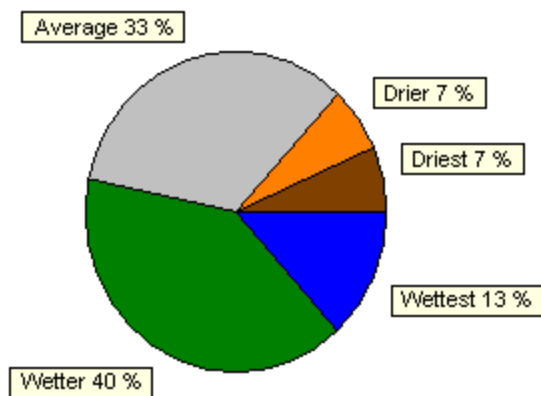
The SOI is currently in the Rising phase. The 30 day mean SOI for September was 11.1, in August it was 2.65.

The years in history with the same SOI phase:

1891, 1899, 1929, 1930, 1934, 1948, 1950, 1952, 1953, 1956, 1957, 1976, 1986, 1999, 2005

How much rainfall can I expect?

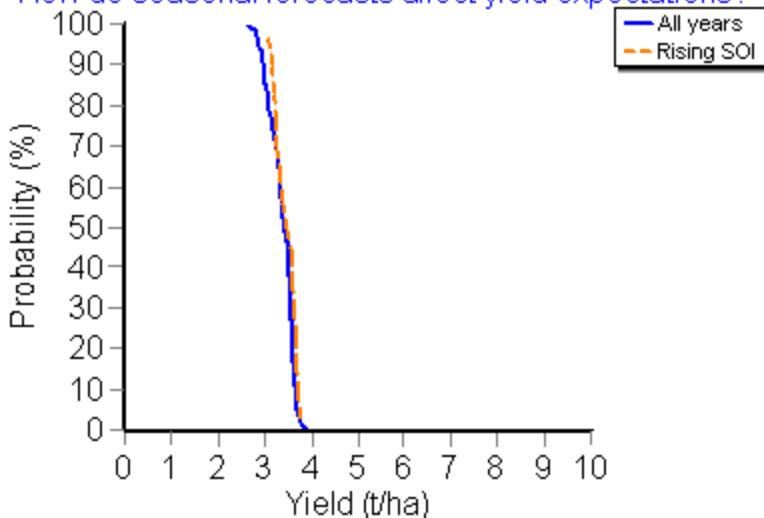
The SOI seasonal forecast for the next 3 months.



The SOI is an index that compares the atmospheric pressure between Tahiti and Darwin. SOI Phases are determined by comparing average monthly SOI values of the past two months. Phases of the SOI have been shown to be related to rainfall variability in a range of locations in Australia and around the world.

	Rainfall
Driest	0 to 64 mm
Drier	64 to 94 mm
Average	94 to 128 mm
Wetter	128 to 171 mm
Wettest	171 to 316 mm

How do seasonal forecasts affect yield expectations?



The 30 day mean SOI for September was 11.1, in August it was 2.65.

Yield outcomes of the current SOI Phase ARE NOT significantly different from yield outcomes of all years. Significance is determined on a 90% probability threshold. (PValue=0.219)