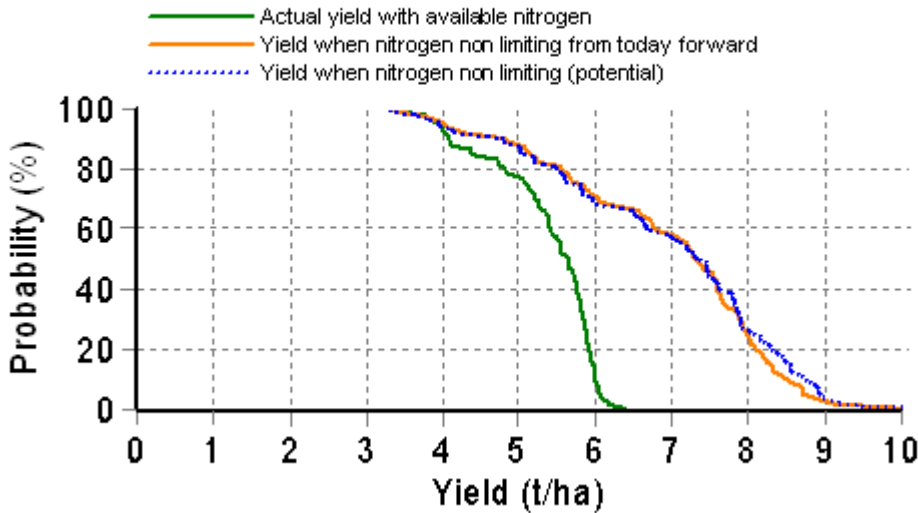


Crop Report

Report name: Block 501W Crop report
 Report date: 21/08/2012
 Last climate date available: 20/08/2012
 Client name: EH Graham Centre
 Paddock name: Block 501W
 Report generated by: EH Graham Centre
 Date sown: 27-Apr
 Crop type: Wheat
 Variety sown: Wedgetail
 Sowing density: 150 plants/m2

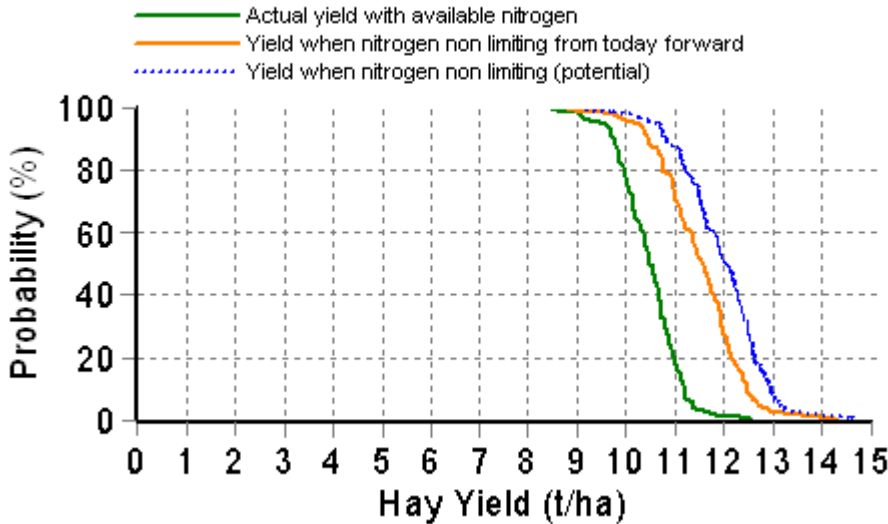
Weather station used: Wagga Wagga
 Agricultural Institute
 Rainfall records used: Weather station
 Soil type: Red Kandosol (Dirnaseer No544)
 Maximum rooting depth: 100 cm
 Roots constrained by EC, CI and ESP: Yes
 Stubble type: Canola
 Stubble amount: 1 kg/ha
 Start of growing season: 01-Apr
 Initial conditions date: 01-Jan
 Rainfall since 1-Jan: 505.1 mm
 Date of last rainfall entry: ?
 Expected harvest date: 19-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.

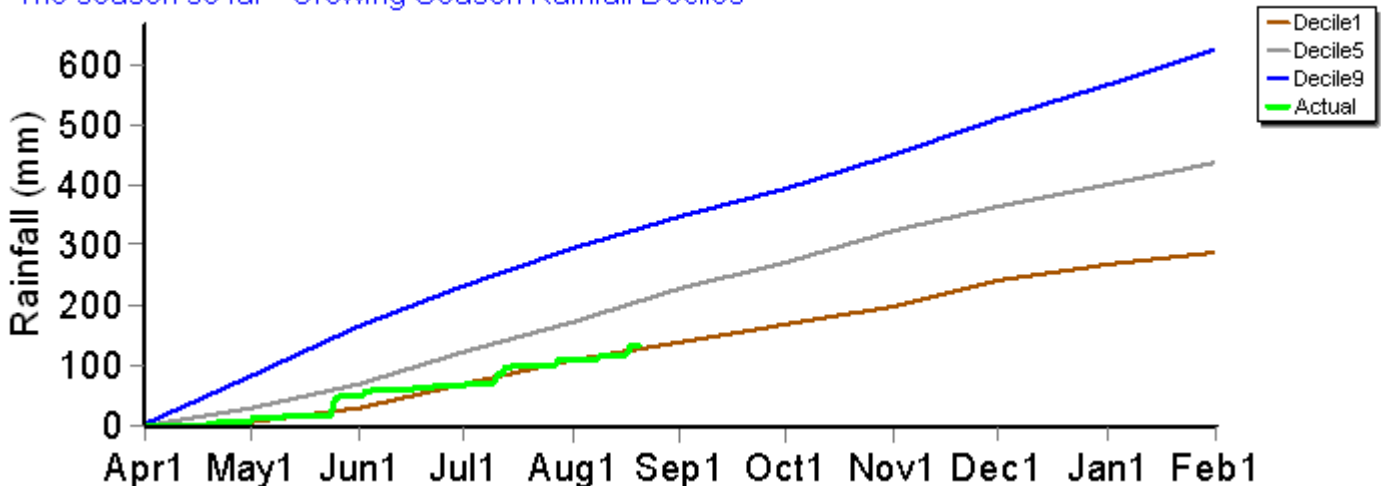
Hay Yield Outcome

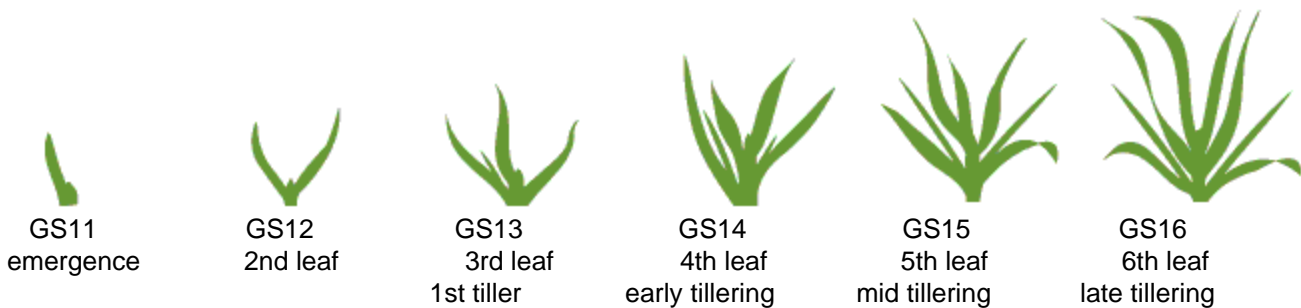


This graph show the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 5677 kg/ha

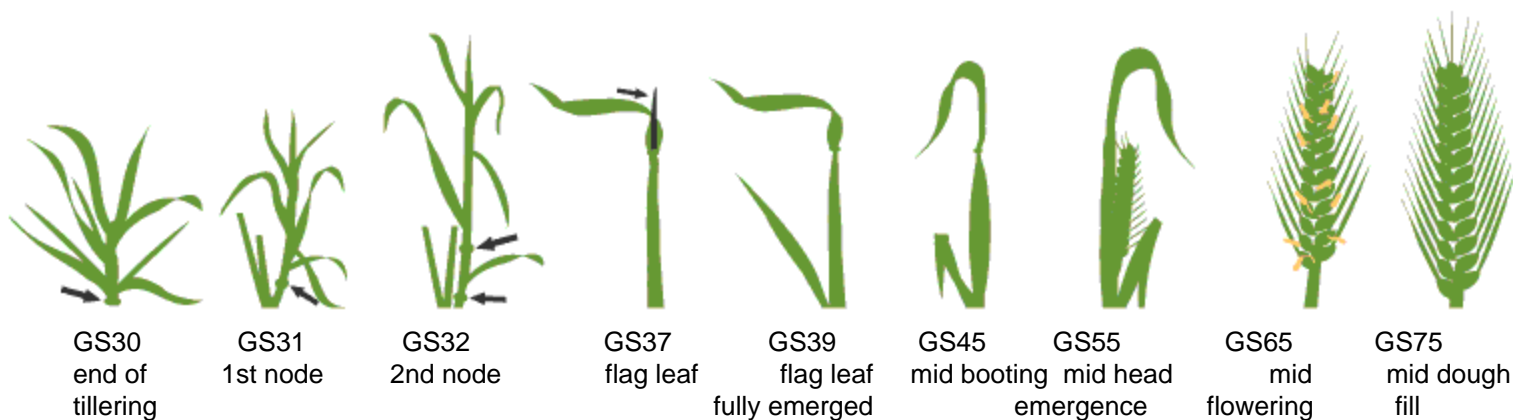
The season so far - Growing Season Rainfall Deciles





Predicted

Earliest	6-May	17-May	27-May	6-Jun	16-Jun	28-Jun
Median	6-May	17-May	27-May	6-Jun	16-Jun	28-Jun
Latest	6-May	17-May	27-May	6-Jun	16-Jun	28-Jun



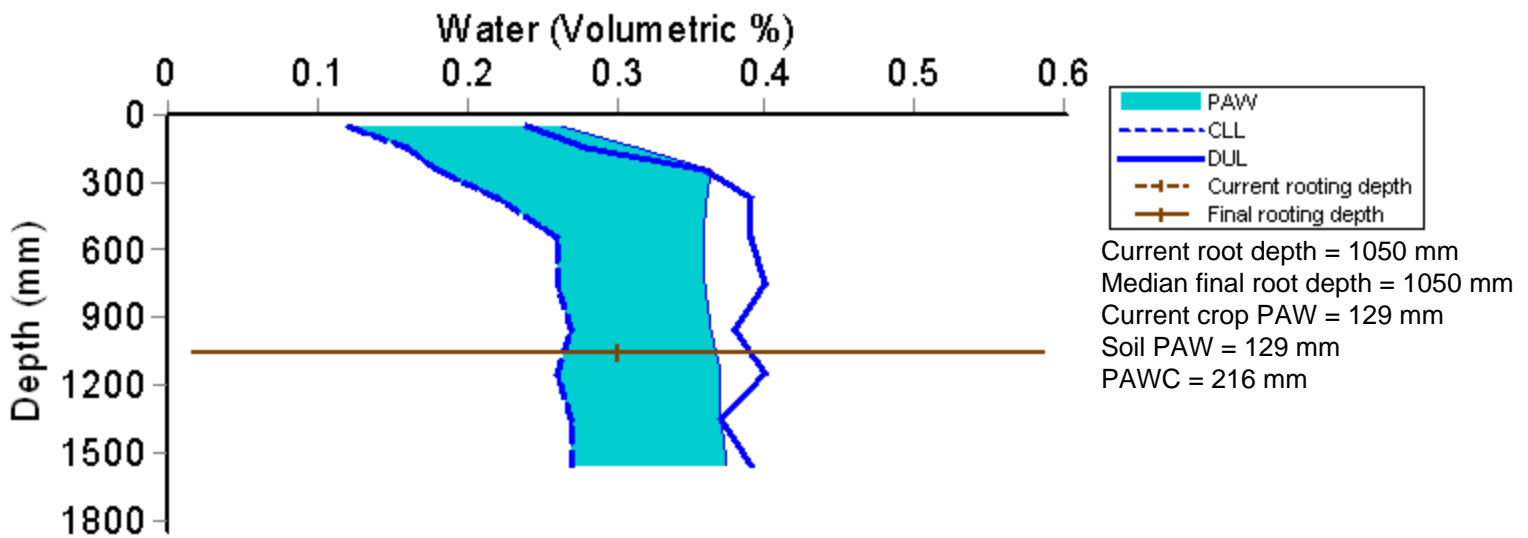
Predicted

Earliest	28-Aug	31-Aug	3-Sep	10-Sep	12-Sep	16-Sep	22-Sep	29-Sep	14-Oct
Median	31-Aug	4-Sep	8-Sep	15-Sep	19-Sep	24-Sep	1-Oct	7-Oct	24-Oct
Latest	7-Sep	11-Sep	17-Sep	1-Oct	5-Oct	10-Oct	16-Oct	22-Oct	8-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)	21%	Maximum temperature between 32 and 34°C	33%
Moderate		Moderate	
Minimum temperature between 0 and -2°C during flowering and early grain fill (Z60-75)	3%	Maximum temperature between 34 and 36°C	16%
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)	0	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

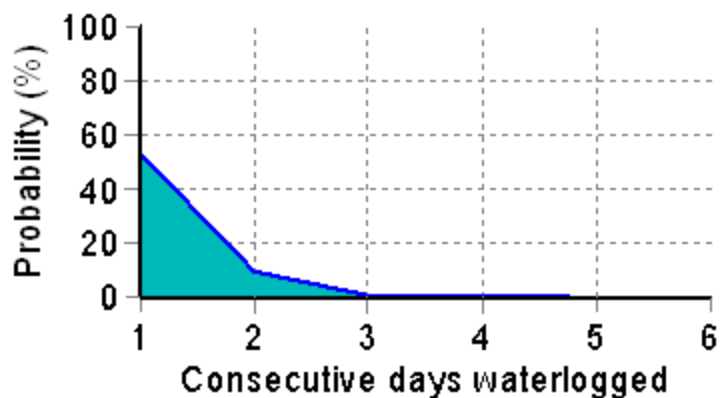
Current distribution of PAW



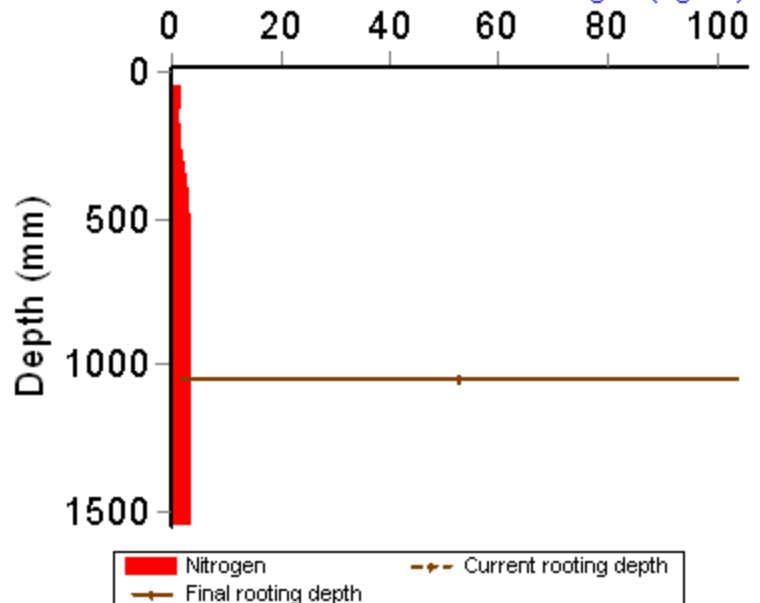
Water Budget

Initial PAW status @ 1-Jan	69 mm
Rainfall since 1-Jan	505.1 mm
Irrigations	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
Evaporation since 1-Jan	178 mm
Transpiration since 1-Jan	69 mm
Deep drainage since 1-Jan	0 mm
Run-off since 1-Jan	137 mm
Current PAW status:	129 mm

Probability of Future Waterlogging Events



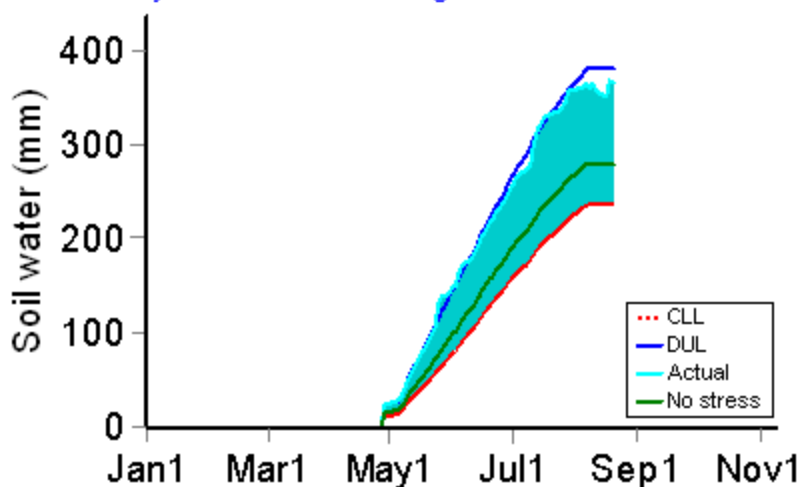
Current distribution of soil nitrogen (kg/ha)



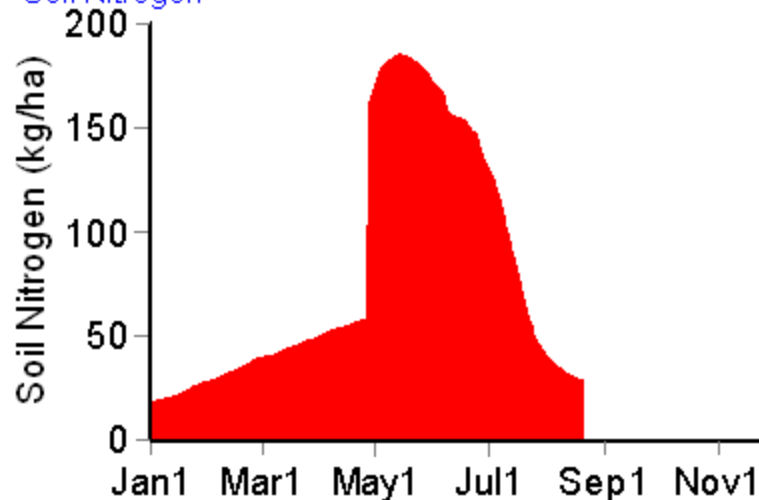
Nitrogen Budget

Initial N status @ 08-Jun	190 kg/ha
Mineralisation since 08-Jun	-2 kg/ha
N applications	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
Total N in plant	181 kg/ha
De-nitrification since 08-Jun	0 kg/ha
Leaching	0 kg/ha

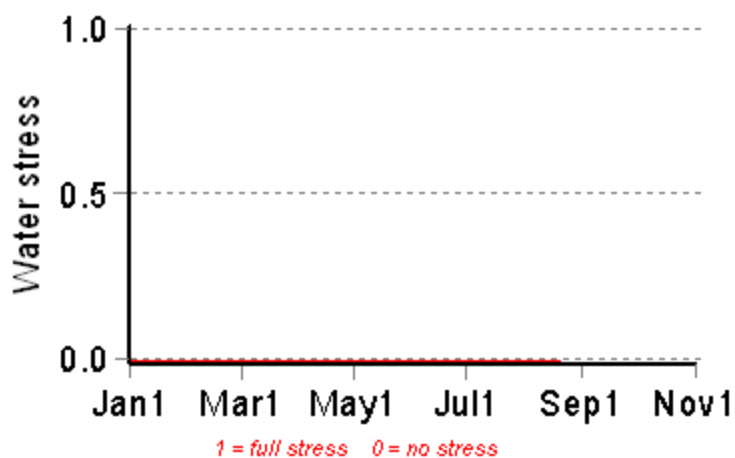
Availability of Water to Growing Roots



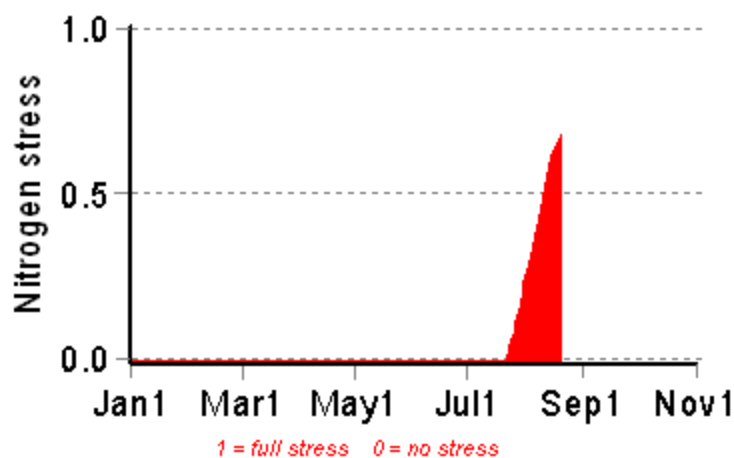
Soil Nitrogen



Water Stress



Nitrogen Stress



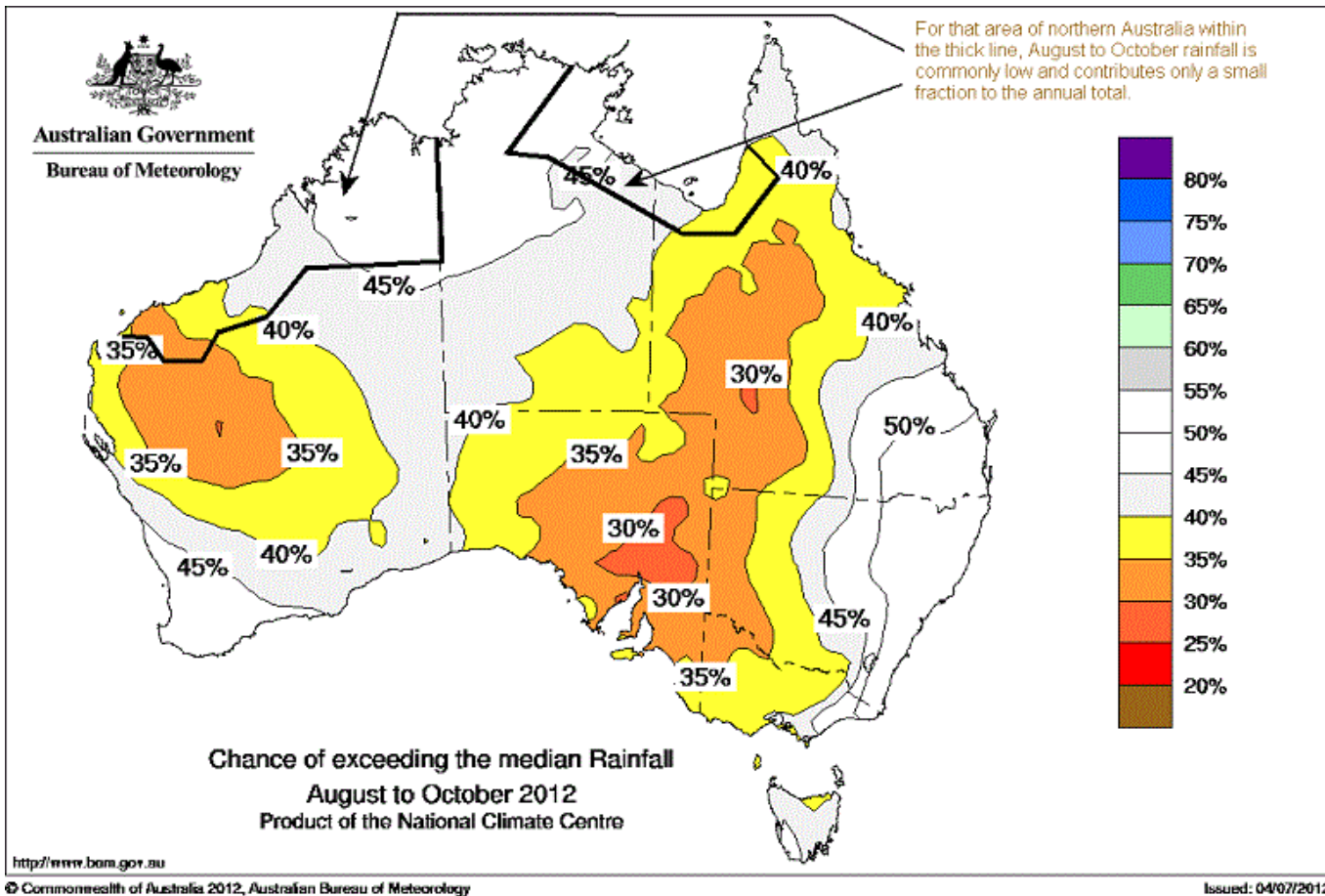
Brief periods of mild to moderate stress do not necessarily lead to reduced yield. To see the likely impacts of additional nitrogen fertiliser rates use the Nitrogen and Nitrogen Profit reports.

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)
21-Aug	16.0	0.4	1.1	0.4	65.5	108.6	21.0
22-Aug	16.0	0.4	1.1	0.4	66.8	109.8	20.6
23-Aug	16.0	0.4	1.1	0.4	67.1	110.1	20.2
24-Aug	16.0	0.4	1.0	0.4	67.8	110.9	19.8
25-Aug	16.0	0.4	1.1	0.3	68.2	111.3	19.4
26-Aug	16.0	0.5	1.1	0.3	69.1	112.2	19.1
27-Aug	16.0	0.4	1.2	0.3	69.0	112.1	18.7
28-Aug	16.0	0.4	1.0	0.3	69.3	112.3	18.4
29-Aug	16.0	0.4	1.1	0.3	68.4	111.5	18.1
30-Aug	30.1	0.5	1.1	0.3	68.0	111.0	17.7

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

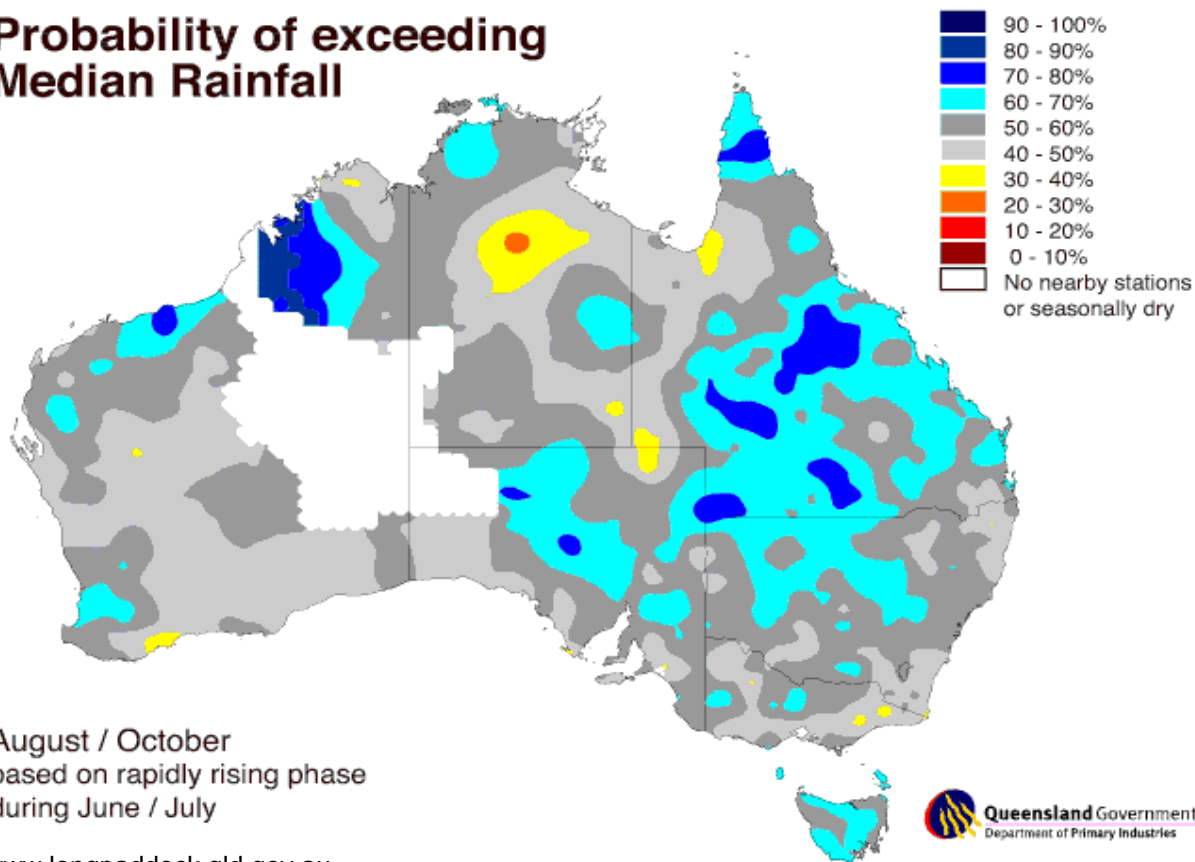


National Seasonal Rainfall Outlook: probabilities August to October 2012

Issued by the bureau of Meteorology 18th July 2012

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

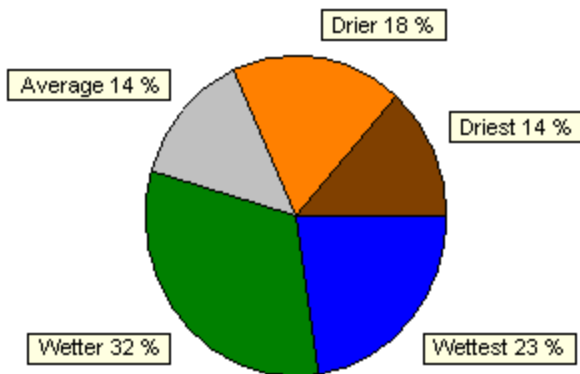
The SOI is currently in the Rising phase. The 31 day mean SOI for July was 0.1, in June the 30 day mean SOI was -10.2,

The years in history with the same SOI phase:

1901, 1904, 1906, 1908, 1928, 1937, 1942, 1943, 1944, 1945, 1954, 1962, 1964, 1966, 1967, 1970, 1971, 1983, 1985, 2000, 2007, 2008

How much rainfall can I expect?

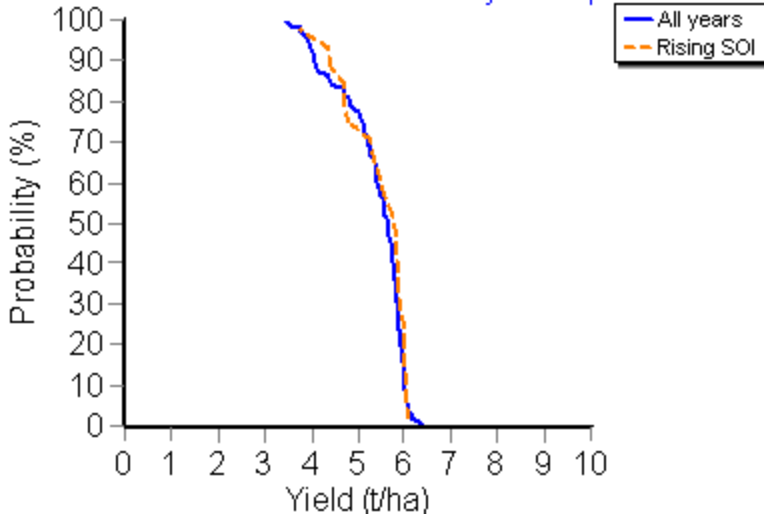
The SOI seasonal forecast for the next 3 months.



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 89 mm
Drier	89 to 114 mm
Average	114 to 144 mm
Wetter	144 to 184 mm
Wettest	184 to 328 mm

How do seasonal forecasts affect yield expectations?



The 31 day mean SOI for July was 0.1, in June the 30 day mean SOI was -10.2,

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=0.448)