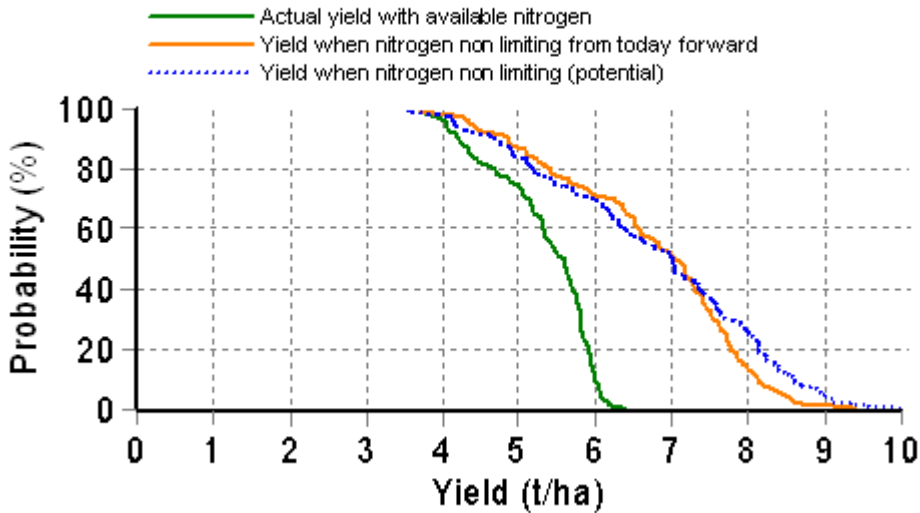


Crop Report

Report name: Block 501W Crop report
 Report date: 04/09/2012
 Last climate date available: 3/09/2012
 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

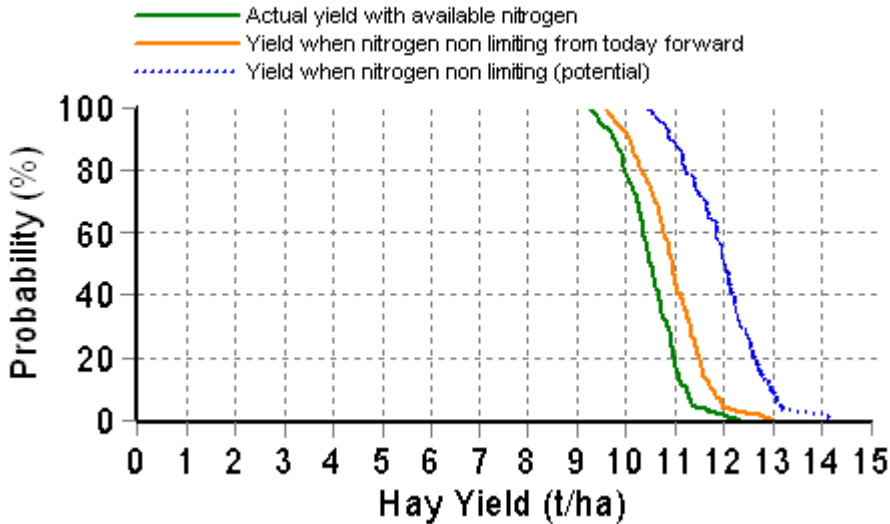
Weather station used: Wagga Wagga
 Agricultural Institute
 Rainfall records used: Weather station
 Soil type: Red Kandosol (Dirnaseer No544)
 Maximum rooting depth: 100 cm
 Roots constrained by EC, CI and ESP: Yes
 Stubble type: Canola
 Stubble amount: 1 kg/ha
 Start of growing season: 01-Apr
 Initial conditions date: 01-Jan
 Rainfall since 1-Jan: 519.9 mm
 Date of last rainfall entry: ?
 Expected harvest date: 20-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.

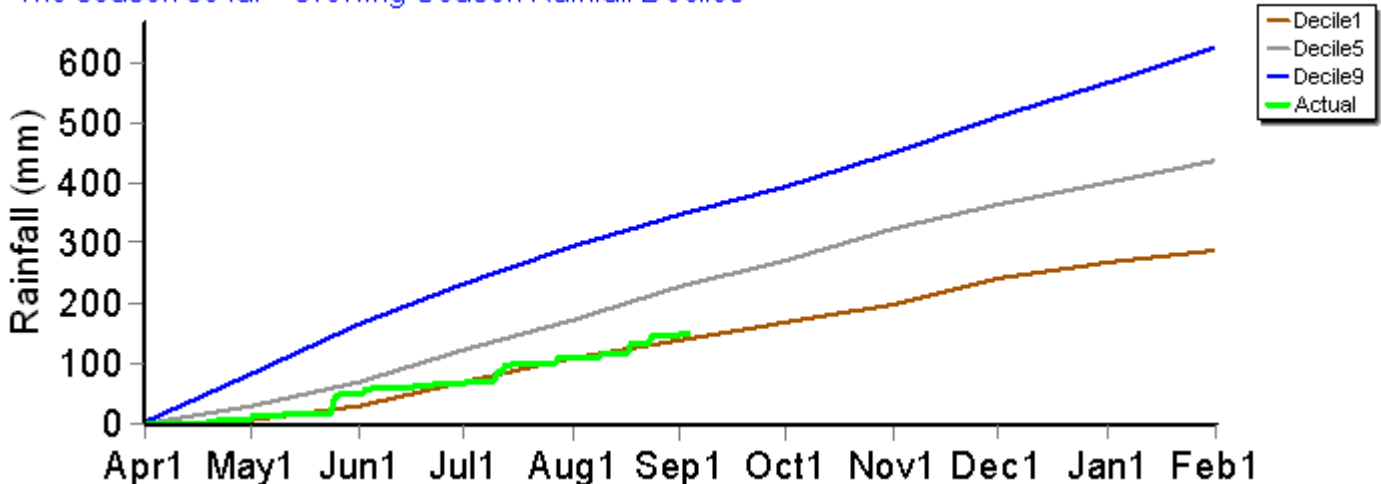
Hay Yield Outcome

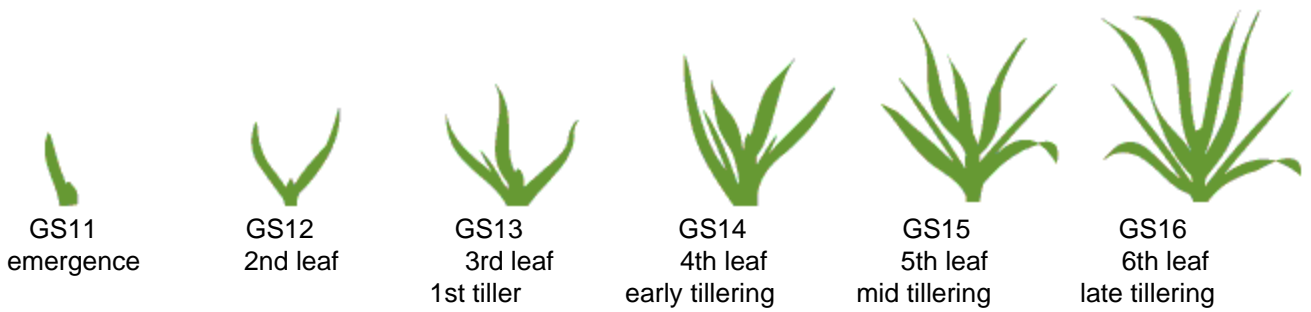


This graph show the probability of exceeding a range of hay yield outcomes this season. It takes into account the same factors as the grain yield graph above. When above ground dry matter is below 2t/ha, hay yield is assumed to be 70% of dry matter, with a moisture content of 13%. When dry matter is 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: 7070 kg/ha

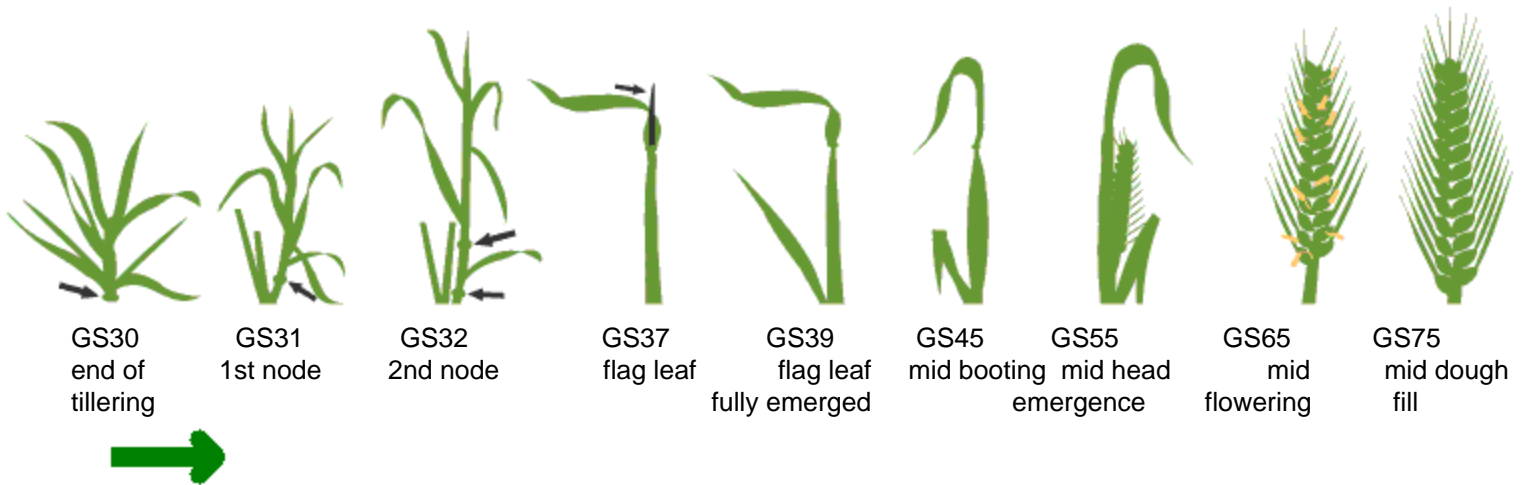
The season so far - Growing Season Rainfall Deciles





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



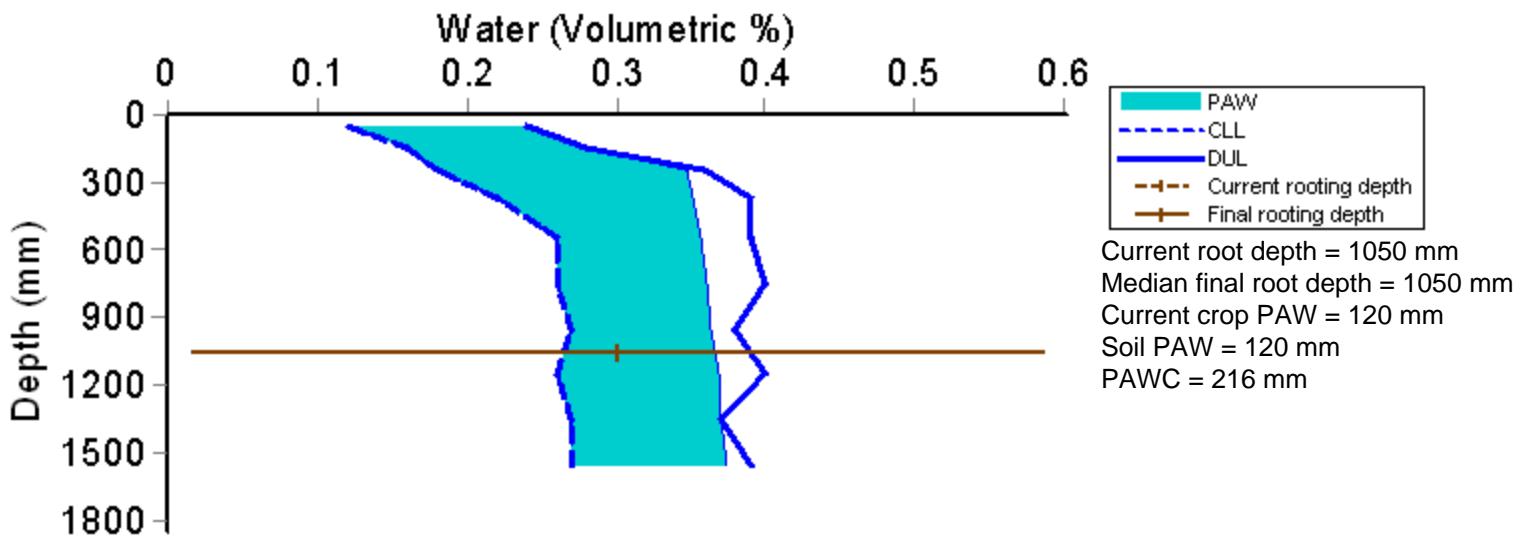
Predicted

Earliest	1-Sep	5-Sep	8-Sep	13-Sep	16-Sep	20-Sep	26-Sep	3-Oct	16-Oct
Median	1-Sep	5-Sep	9-Sep	17-Sep	20-Sep	25-Sep	2-Oct	9-Oct	25-Oct
Latest	1-Sep	6-Sep	12-Sep	24-Sep	30-Sep	6-Oct	12-Oct	19-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)	18%	Maximum temperature between 32 and 34°C	35%
Moderate		Moderate	
Minimum temperature between 0 and -2°C during flowering and early grain fill (Z60-75)	4%	Maximum temperature between 34 and 36°C	17%
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

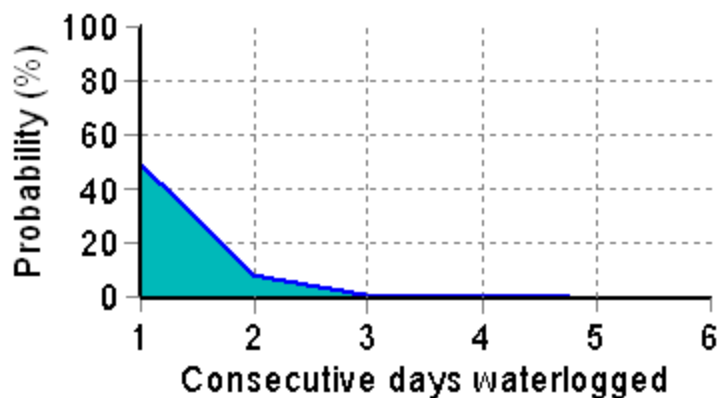


PAW = Plant Available Water
CLL = Crop Lower Limit or Wilting Point
DUL = Drained Upper Limit or Field Capacity
PAWC = Plant Available Water Capacity
Current Crop PAW = Soil water currently accessible to the roots down to the current rooting depth
Soil PAW = Total accessible soil water in the soil profile

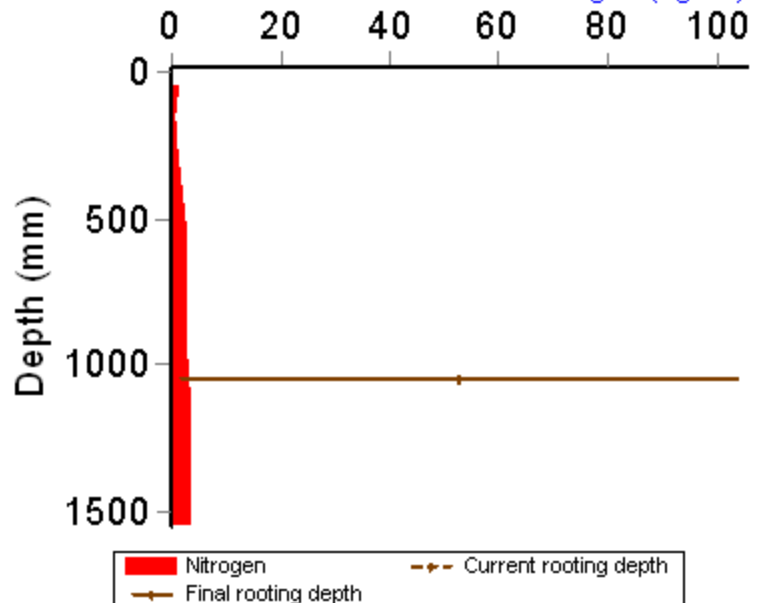
Water Budget

Initial PAW status @ 1-Jan	69 mm
Rainfall since 1-Jan	519.9 mm
Irrigations	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
Evaporation since 1-Jan	184 mm
Transpiration since 1-Jan	87 mm
Deep drainage since 1-Jan	0 mm
Run-off since 1-Jan	137 mm
Current PAW status:	120 mm

Probability of Future Waterlogging Events



Current distribution of soil nitrogen (kg/ha)

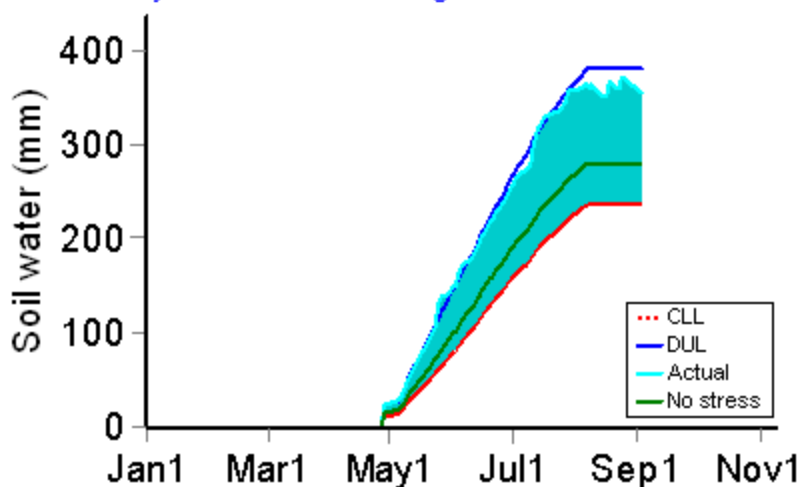


Nitrogen Budget

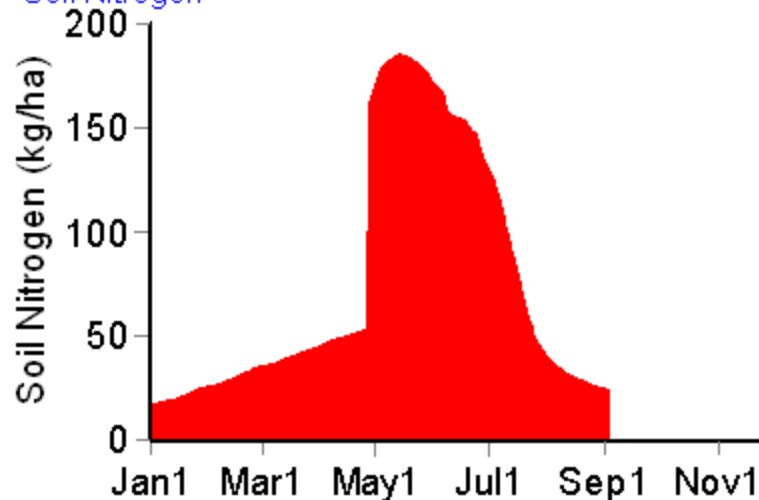
Initial N status @ 08-Jun	190 kg/ha
Mineralisation since 08-Jun	-2 kg/ha
N applications	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
Total N in plant	184 kg/ha
De-nitrification since 08-Jun	1 kg/ha
Leaching	0 kg/ha

Current N status: 26 kg/ha

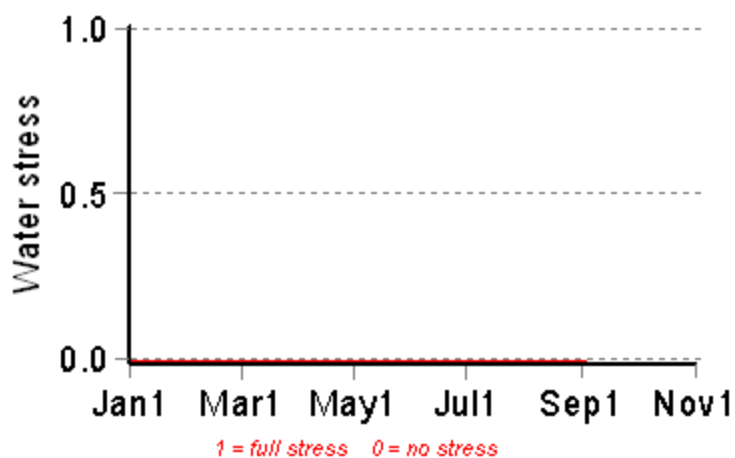
Availability of Water to Growing Roots



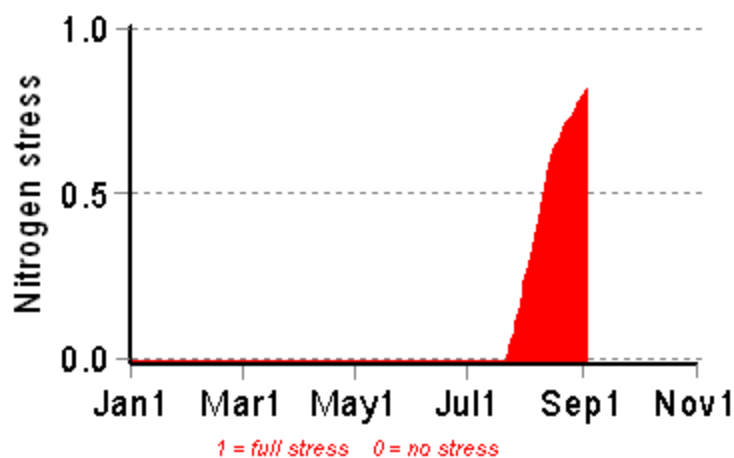
Soil Nitrogen



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.

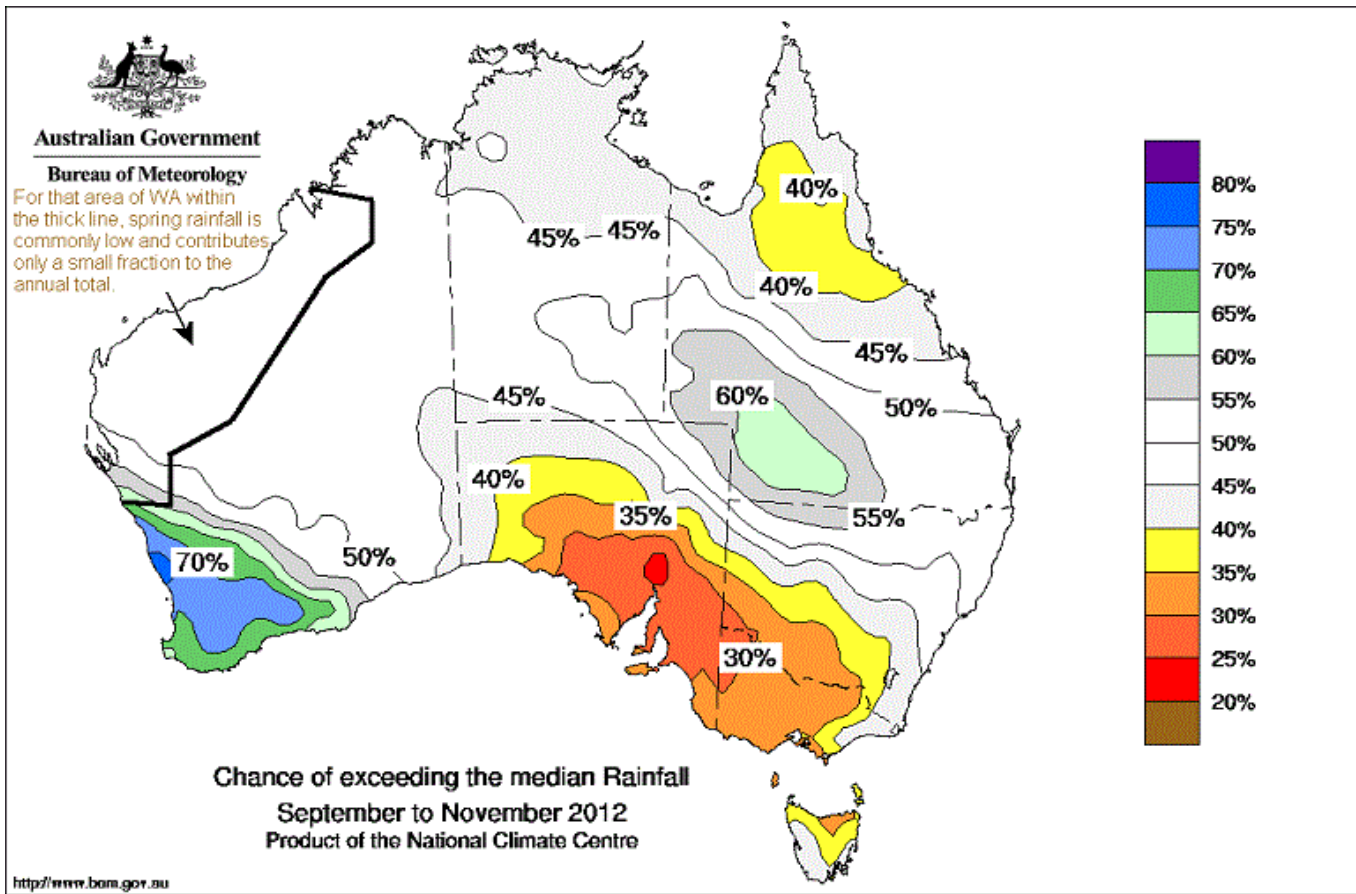
Mean projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser.

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)
4-Sep	31.1	0.5	1.3	0.2	57.7	100.8	16.5
5-Sep	31.4	0.5	1.2	0.2	59.0	102.0	16.2
6-Sep	31.7	0.5	1.2	0.2	59.2	102.3	16.0
7-Sep	32.0	0.5	1.4	0.2	58.7	101.8	15.8
8-Sep	32.6	0.5	1.5	0.2	58.3	101.4	15.5
9-Sep	33.1	0.5	1.5	0.2	57.6	100.6	15.3
10-Sep	33.7	0.5	1.6	0.2	57.8	100.8	15.1
11-Sep	34.3	0.5	1.6	0.2	57.4	100.5	14.9
12-Sep	34.9	0.5	1.6	0.2	57.1	100.1	14.7
13-Sep	35.5	0.5	1.6	0.2	56.8	99.8	14.5

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

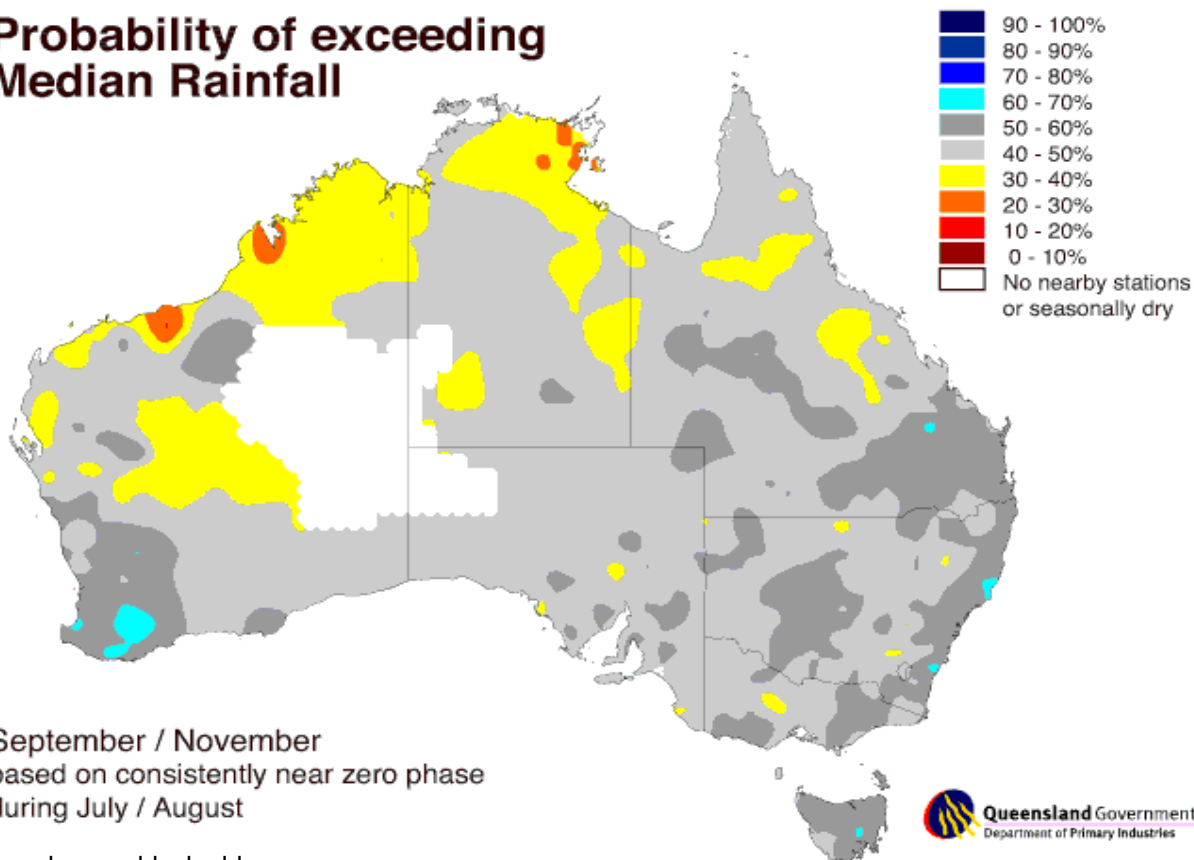


National Seasonal Rainfall Outlook: probabilities September to November 2012

Issued by the bureau of Meteorology 22nd August 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

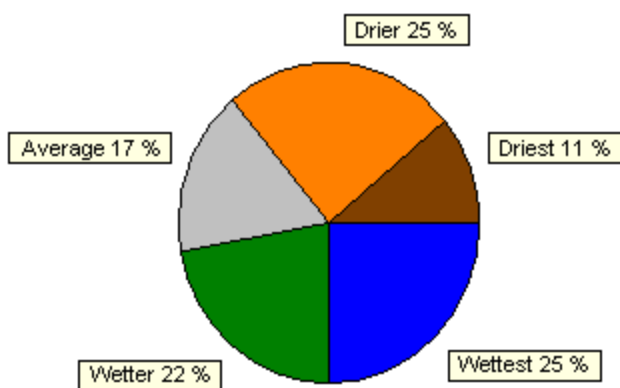
The SOI is currently in the Zero phase. The 31 day mean SOI for August was -6.1, in July the 31 day mean SOI was 0.1.

The years in history with the same SOI phase:

1895, 1897, 1898, 1904, 1905, 1907, 1912, 1913, 1915, 1918, 1919, 1927, 1929, 1930, 1931, 1933, 1937, 1944, 1948, 1952, 1959, 1961, 1963, 1966, 1968, 1978, 1980, 1984, 1985, 1986, 1992, 1995, 1999, 2003, 2004, 2007

How much rainfall can I expect?

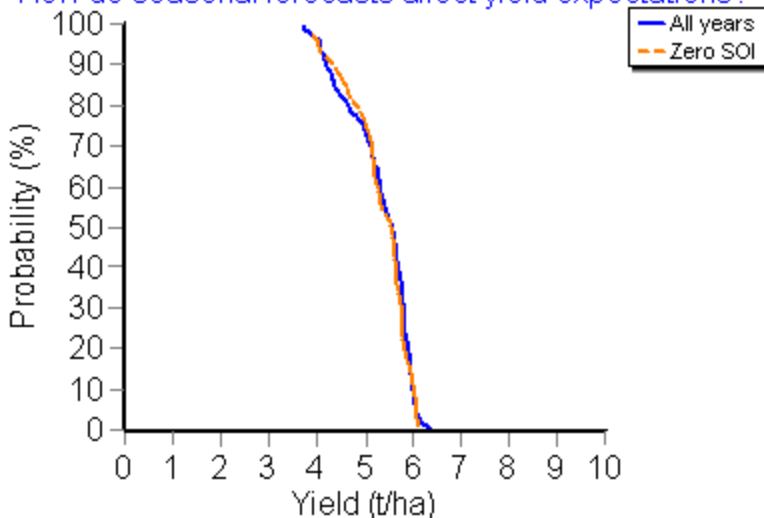
The SOI seasonal forecast for the next 3 months.



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 72 mm
Drier	72 to 110 mm
Average	110 to 134 mm
Wetter	134 to 182 mm
Wettest	182 to 367 mm

How do seasonal forecasts affect yield expectations?



The 31 day mean SOI for August was -6.1, in July the 31 day mean SOI was 0.1.

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=0.768)