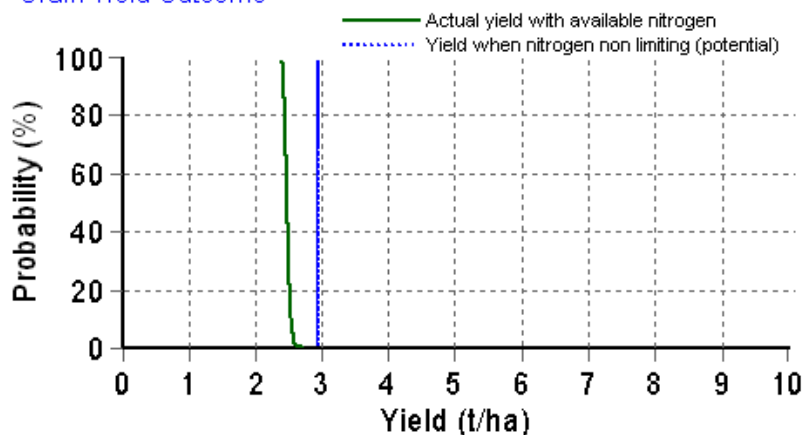


Crop Report

Report name: Millewa Crop report
 Report date: 11/10/2010
 Last climate date available: 10/10/2010
 Client name: MSF
 Paddock name: Millewa Dune
 Report generated by: MSF
 Date sown: 18-May
 Crop type: Wheat
 Variety sown: Axe
 Sowing density: 120 plants/m²

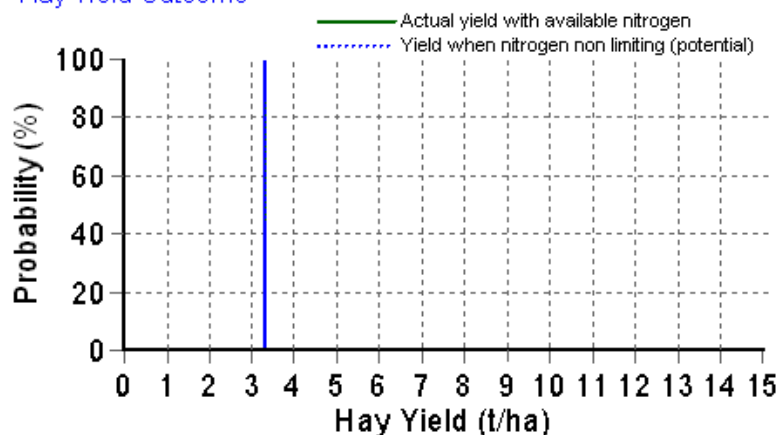
Weather station used: Mildura Airport
 Rainfall records used: Weather station
 Soil type: Sand over sandy loam (Karoonda dune No387)
 Maximum rooting depth: 180 cm
 Roots constrained by EC: yes
 Stubble type: wheat
 Stubble amount: 250 kg/ha
 Start of growing season: 01-Apr
 Initial conditions date: 17-May
 Growing season rainfall to date: 206.0 mm
 Date of last rainfall entry: ?
 Expected harvest date: 28-Oct

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.

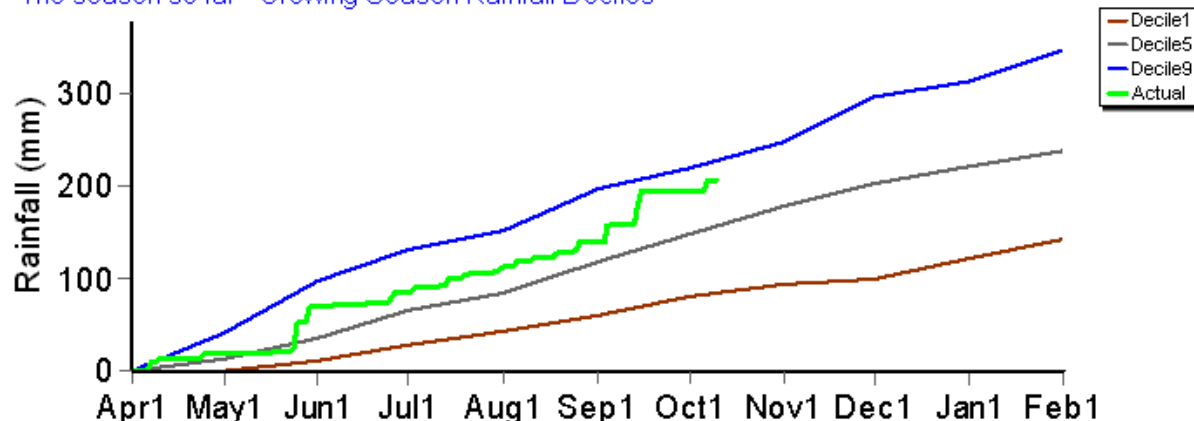
Hay Yield Outcome



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: 6397 kg/ha

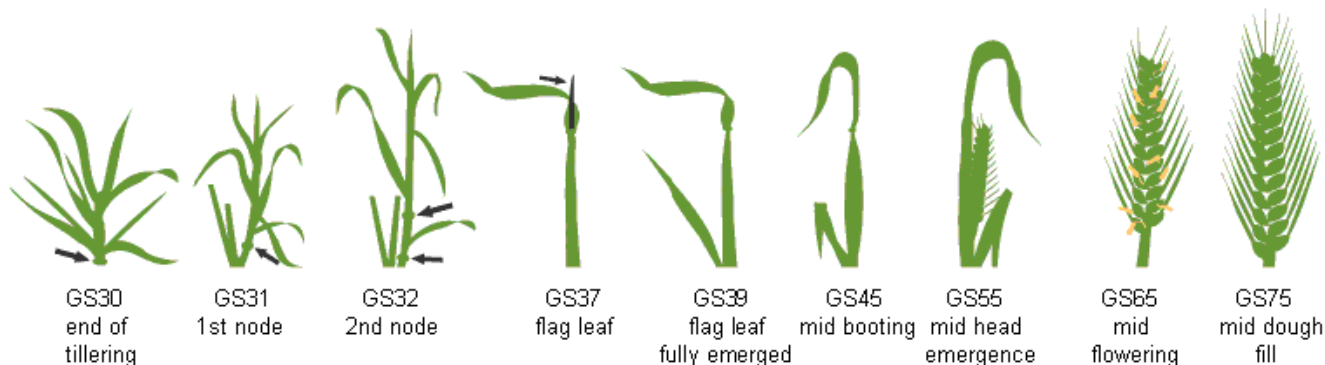
The season so far - Growing Season Rainfall Deciles





Predicted

Earliest	26-May	9-Jun	18-Jun	26-Jun	7-Jul	15-Jul
Median	26-May	9-Jun	18-Jun	26-Jun	7-Jul	15-Jul
Latest	26-May	9-Jun	18-Jun	26-Jun	7-Jul	15-Jul

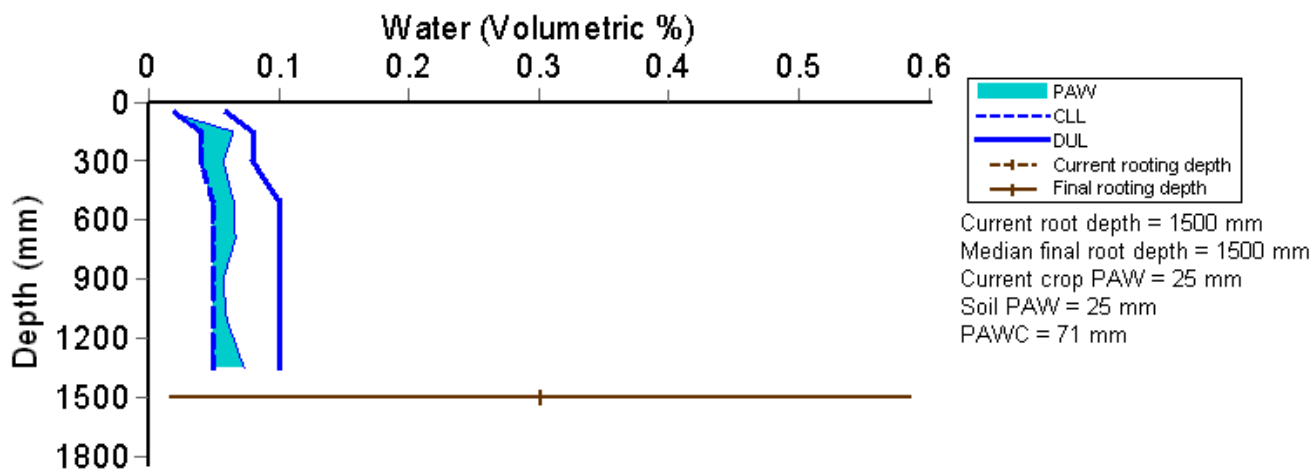


Predicted

Earliest	16-Jul	18-Jul	20-Jul	3-Aug	9-Aug	17-Aug	30-Aug	9-Sep	30-Sep
Median	16-Jul	18-Jul	20-Jul	3-Aug	9-Aug	17-Aug	30-Aug	9-Sep	30-Sep
Latest	16-Jul	18-Jul	20-Jul	3-Aug	9-Aug	17-Aug	30-Aug	9-Sep	30-Sep

<p><i>Percentage of years in which frost occurs</i></p> <p>Mild Minimum temperature between 2 and 0°C during flowering (Z60-69) 0%</p> <p>Moderate Minimum temperature between 0 and -2°C during flowering and early grain fill (Z60-75) 0%</p> <p>Severe Minimum temperature less than -2°C during flowering and grain fill (Z60-79) 0%</p>		<p><i>Percentage of years in which heat shock occurs during grain fill (Z70-79)</i></p> <p>Mild Maximum temperature between 32 and 34°C 4%</p> <p>Moderate Maximum temperature between 34 and 36°C 2%</p> <p>Severe Maximum temperature above 36° 0%</p>	
<p><i>Incidence of frost for this growing season</i></p> <p>Mild Minimum temperature between 2 and 0°C during flowering (Z60-69) 0</p> <p>Moderate Minimum temperature between 0 and -2°C during flowering and early grain fill (Z60-75) 0</p> <p>Severe Minimum temperature less than -2°C during flowering and grain fill (Z60-79) 0</p>		<p><i>Incidence of heat shock for this growing season, during grain fill (Z70-79)</i></p> <p>Mild Maximum temperature between 32 and 34°C 0</p> <p>Moderate Maximum temperature between 34 and 36°C 0</p> <p>Severe Maximum temperature above 36° 0</p>	

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 @ 17-May	41 mm
Rainfall since 17-May	187.2 mm
Irrigations	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
	: mm
Evaporation since 17-May	119 mm
Transpiration since 17-May	84 mm
Deep drainage since 17-May	3 mm
Run-off since 17-May	0 mm

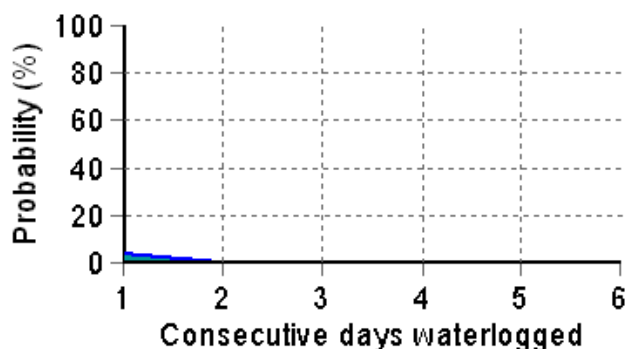
Current PAW status: 25 mm

Nitrogen Budget

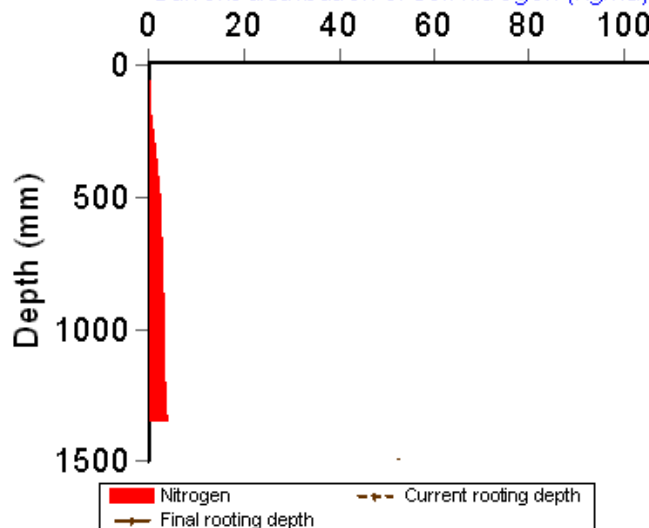
Initial N status @ 17-May	84 kg/ha
Mineralisation since 17-May	-2 kg/ha
N applications	18-May: 4 kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
	: kg/ha
Total N in plant	61 kg/ha
De-nitrification since 17-May	0 kg/ha
Leaching	1 kg/ha

Current N status: 18 kg/ha

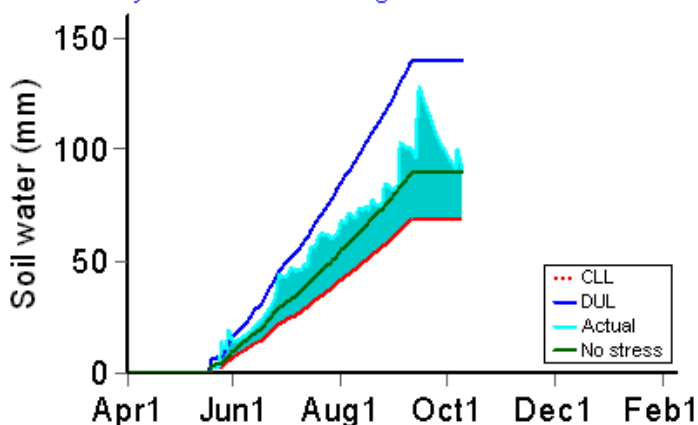
Probability of Future Waterlogging Events



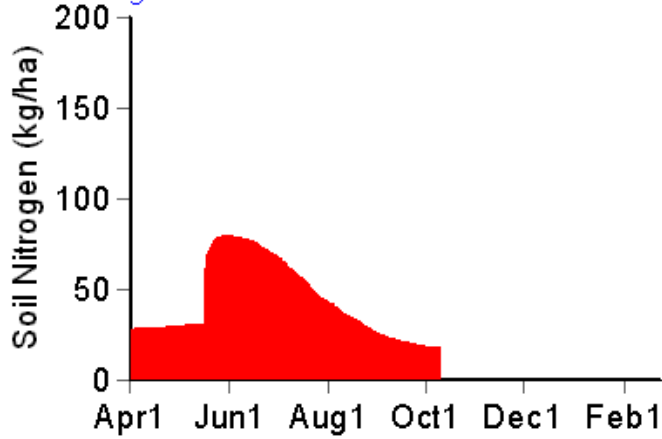
Current distribution of soil nitrogen (kg/ha)



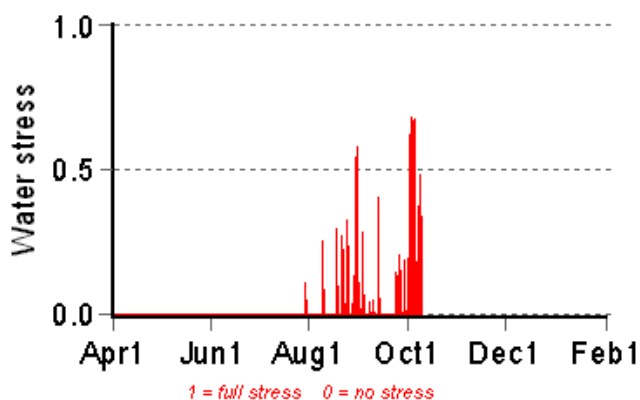
Availability of Water to Growing Roots



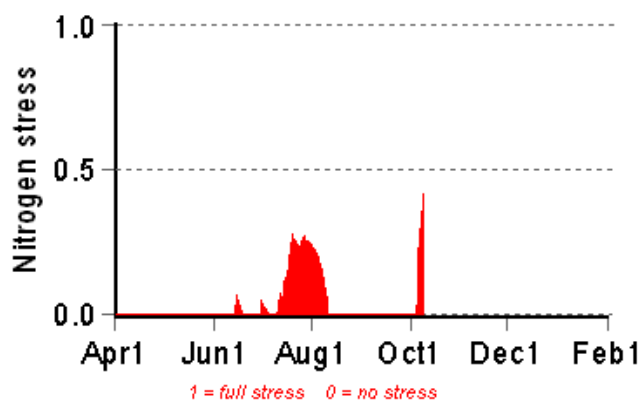
Soil Nitrogen



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.

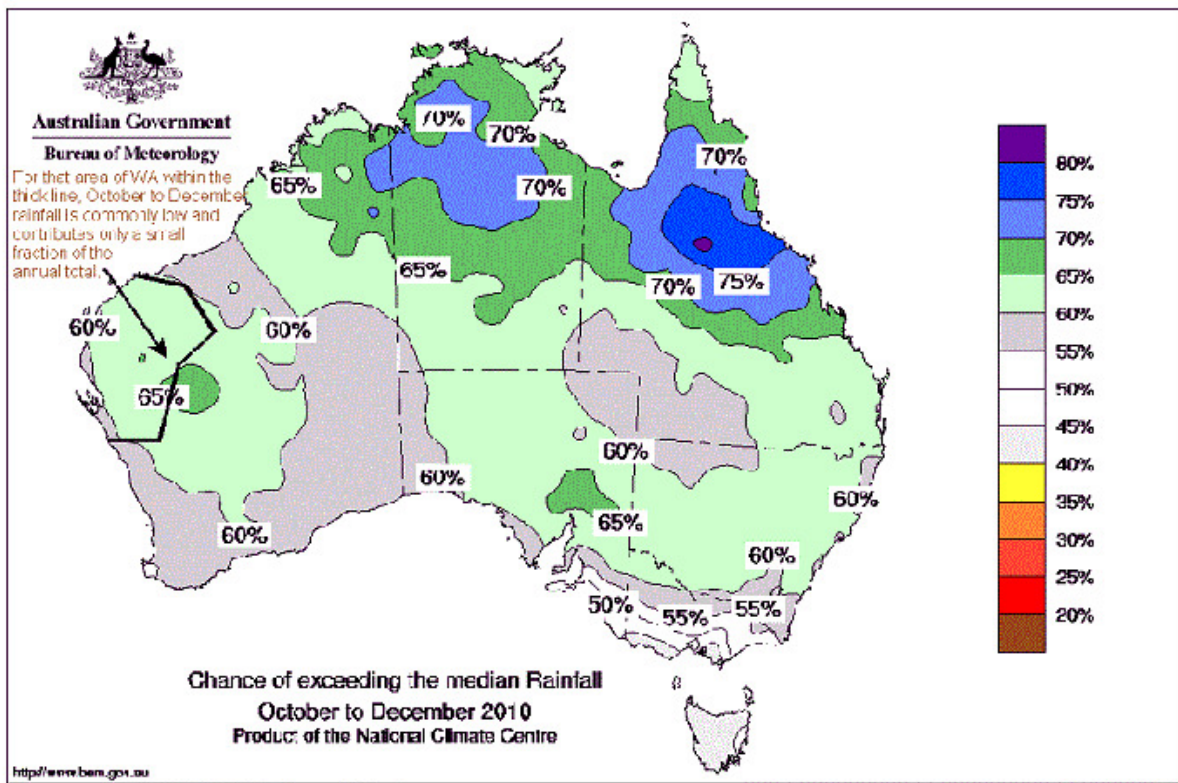
Mean projected crop performance and requirements for the next 10 days assuming no rain and no added fertiliser.

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)
9-Oct	79.9	1.9	1.1	0.1	3.6	24.9	18.0
10-Oct	80.4	0.8	1.0	0.1	1.8	23.1	17.9
11-Oct	80.9	0.6	1.0	0.1	0.4	21.7	17.8
12-Oct	81.3	0.5	0.9	0.1	-0.6	20.7	17.7
13-Oct	81.8	0.2	0.8	0.1	-1.5	19.8	17.6
14-Oct	82.3	0.2	0.8	0.1	-2.3	19.0	17.6
15-Oct	82.8	0.2	0.7	0.1	-3.0	18.3	17.5
16-Oct	83.3	0.2	0.7	0.1	-3.7	17.6	17.4
17-Oct	83.8	0.2	0.7	0.1	-4.3	17.0	17.4
18-Oct	84.3	0.2	0.6	0.1	-4.8	16.5	17.3

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



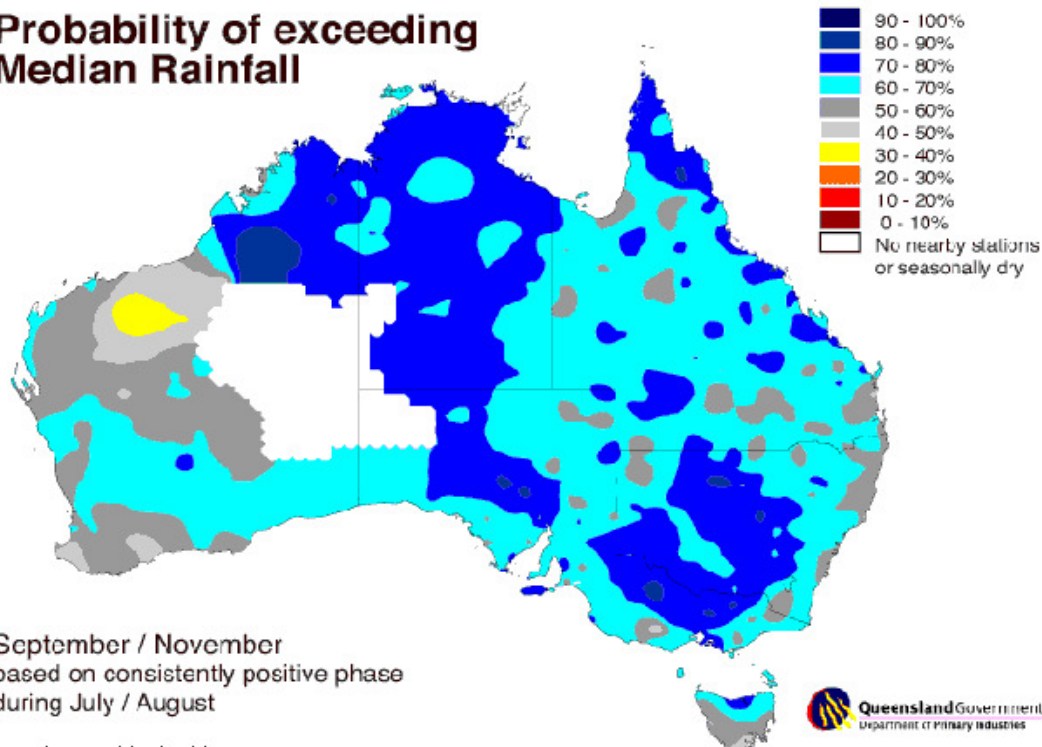
© Commonwealth of Australia 2010, Australian Bureau of Meteorology Issued: 17/09/2010

National Seasonal Rainfall Outlook: probabilities October to December 2010

Issued by the bureau of Meteorology 23rd September 2010

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



<http://www.longpaddock.qld.gov.au>

SOI Phase and analogue years

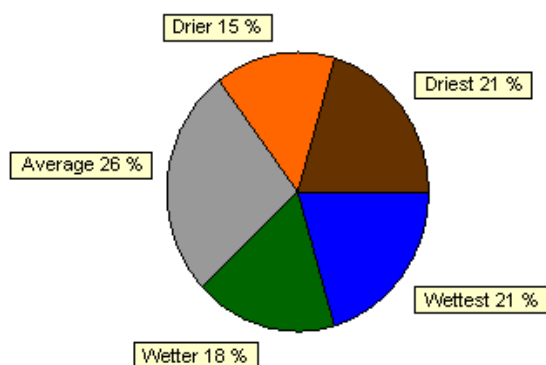
The SOI is currently in the Positive phase. The 30 day mean SOI for September was 25.8, in August it was 17.0.

The years in history with the same SOI phase:

1892, 1893, 1894, 1906, 1909, 1910, 1916, 1917, 1920, 1924, 1928, 1938, 1942, 1943, 1945, 1947, 1950, 1954, 1955, 1956, 1960, 1962, 1964, 1967, 1971, 1973, 1974, 1975, 1981, 1988, 1996, 1998, 2000, 2008

How much rainfall can I expect?

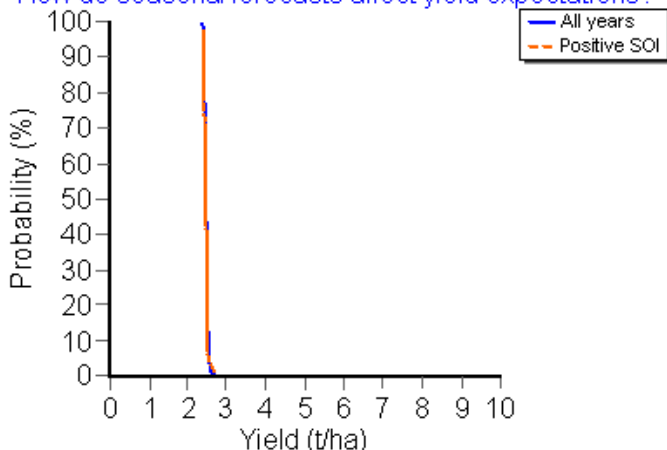
The SOI seasonal forecast for the next 3 months.



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 28 mm
Drier	28 to 46 mm
Average	46 to 64 mm
Wetter	64 to 87 mm
Wettest	87 to 323 mm

How do seasonal forecasts affect yield expectations?



The 30 day mean SOI for September was 25.8, in August it was 17.0.

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=0.775)

Disclaimer: Yield Prophet information is used entirely at your own risk. You accept all risks and responsibility for losses, damages, costs and other consequences of using Yield Prophet information and reports. To the maximum extent permitted by law, Agricultural Production Systems Research Unit and Birchip Cropping Group excludes all responsibility and liability to any person arising directly or indirectly from using the information generated by Yield Prophet."