

# WEATHER or NOT

A REVIEW OF SEASONAL AND CROP OUTLOOKS FOR THE FARMLINK REGION

Issue 2 - August 2012

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## The season so far....

The month of August has seen reasonable rainfalls at most of the FarmLink Yield Prophet sites. Ardlethan received 42.4mm, Dirnaseer 37.6mm, Greenethorpe 33mm and Lockhart 24.8mm

Total rainfall since the 1st of April (GSR) ranges from 102mm, Decile 1, at Ardlethan to 174mm, Decile 2.5, at Greenethorpe. (Deciles describe the percentage of average rainfalls from 110 years of weather data. Decile 5 = 50%, 1 = 10%)

Bureau of Meteorology predictions for rainfall over our region have not changed from the July predictions of 45% chance of above average rainfalls across most of our region.

Median predicted Wheat yields\* currently range from 2.7t/ha at Ardlethan to 4.3t/ha at Lockhart and Temora. Median predicted yields for Canola are good and range from 2.3t/ha at Ardlethan to 3.3t/ha at Greenethorpe which demonstrates Canola's ability to finish earlier. (Remember these yield predictions are based on median rainfall for the rest of the year and no impacts from disease, pests, frost or heat stress)

The July model predictions were considered low and we have made adjustments to the model inputs to better represent actual soil conditions in the lower profile below 100cm. This has resulted in an increase in this month's predicted yields compared to July.

Total plant available moisture in profiles now range from 66mm at Ardlethan to 144mm at Temora which is 75% of total profile PAW. We have again included soil moisture probe graphs that show total soil moisture to depth of 118cm. Ardlethan and Lockhart profiles are significantly less than the same time in 2011 which points to the potential for moisture stress later this year. The other probes show similar or higher readings than the same time last season. This indicates these sites have good yield potential with current PAW. Soil moisture probe graphs can be viewed on the FarmLink website.

Nitrogen applications were essential to most crops this season as low N levels were wide spread throughout the district. Some crops have had up to 300kg of Urea (138kg N) applied during the growing season to maximise yield potential. The importance of legume pastures and crops to a cropping system N has been highlighted by high yields in 2010 and 2011.

(\*Please use the results as a guide only and discuss potential outcomes of your own paddocks with your adviser).

Principal Sponsor

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# ARDLETHAN ~ CANOLA

VARIETY GEM TT SOWING DATE 23/4/2012

SOWING N APPLIED 43 kg/ha

SOIL TYPE Sandy clay over a medium clay

PLANT DENSITY 30 plants/m<sup>2</sup>

GROWING SEASON RAINFALL TO DATE 102.4mm

CURRENT ROOTING DEPTH 1800mm

PREDICTED FINAL ROOTING DEPTH 1800mm

CURRENT CROP PAW 66mm

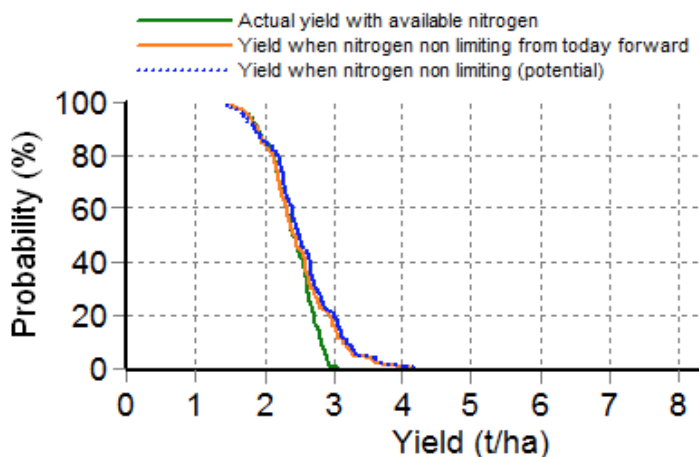
SOIL PAW 66mm

PAWC 216mm

DAILY WATER USE 2.2mm

DEEP N 149

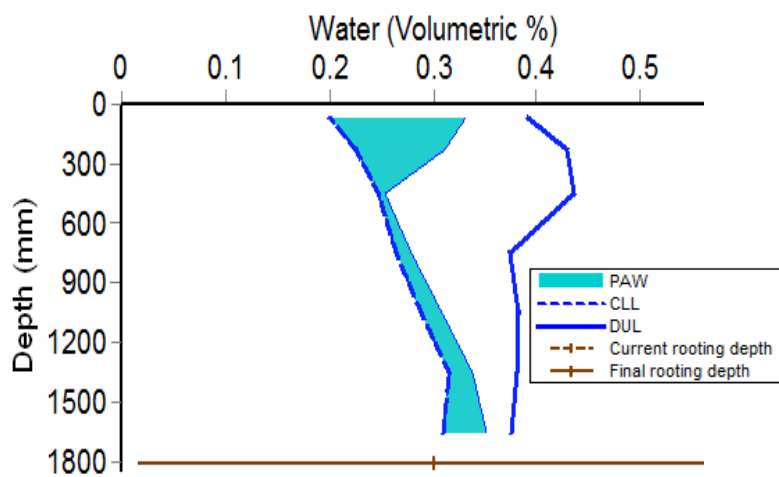
## Grain Yield Probabilities \*



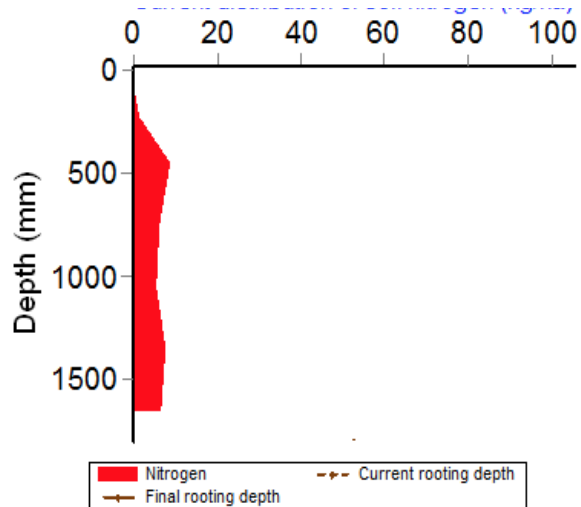
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

## Water Availability \*\*



## Soil Nitrogen



# DIRNASEER ~ CANOLA

VARIETY GEM TT SOWING DATE 23/4/2012

SOWING N APPLIED 8kg/ha

SOIL TYPE Red Kandosol

SOWING DENSITY 52 plants/m<sup>2</sup>

GROWING SEASON RAINFALL TO DATE 169mm

CURRENT ROOTING DEPTH 1650mm

PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 116mm

SOIL PAW 116mm

PAWC 216mm

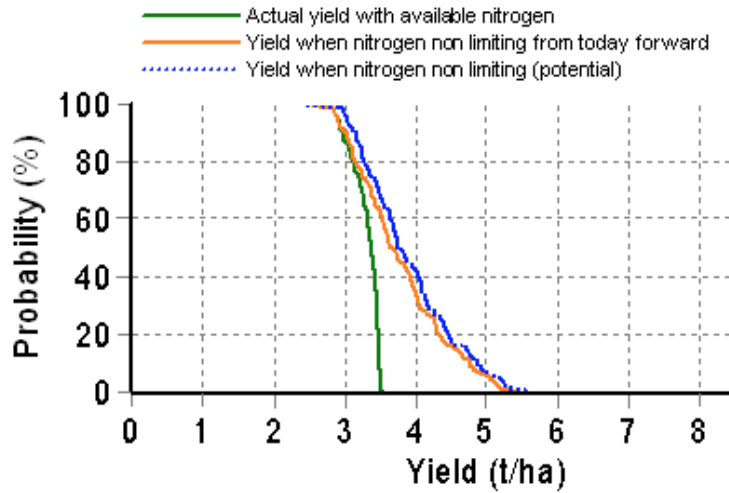
DAILY WATER USE 3.1mm

DEEP N 162kg/ha N PROFILE 7kg/ha

N AVAILABLE TO ROOTS 4.5kg/ha

CURRENTLY USING 0.9kg of N/ha/day

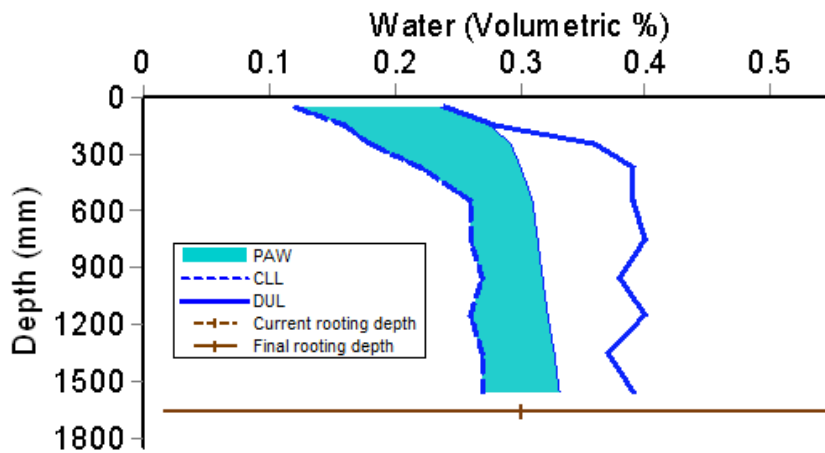
## Grain Yield Probabilities \*



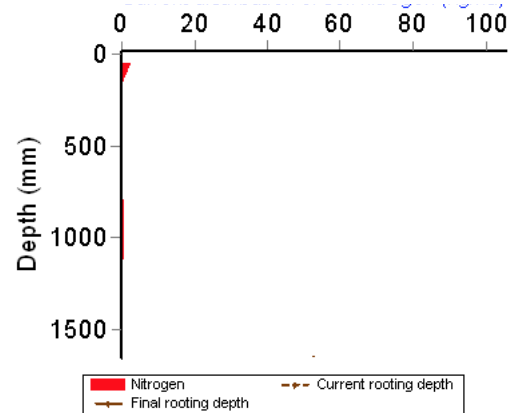
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

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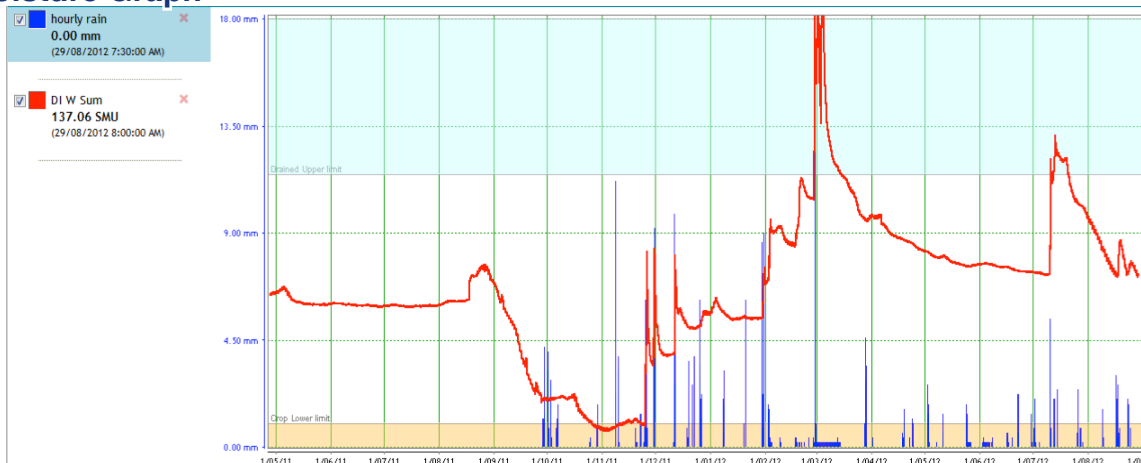
## Water Availability \*\*



## Soil Nitrogen



## Soil Moisture Graph

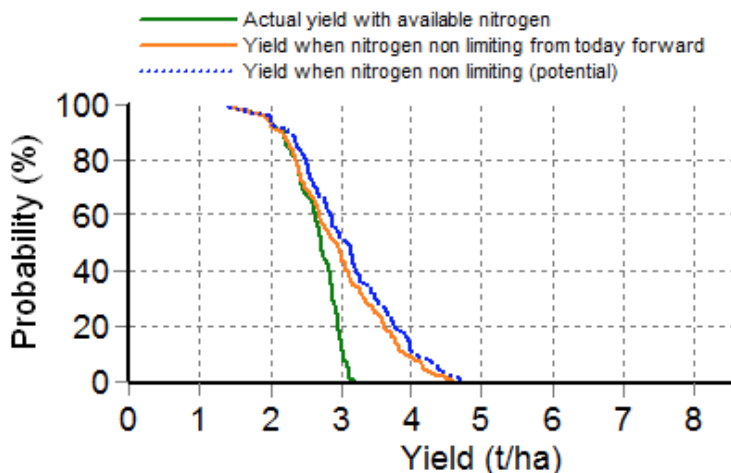


# GREENETHORPE ~ CANOLA

VARIETY GEM TT SOWING DATE 7/5/2012  
 SOWING N APPLIED 10 kg/ha  
 SOIL TYPE Sandy loam over a sandy clay and heavy clay  
 SOWING DENSITY 46 plants/m<sup>2</sup>  
 GROWING SEASON RAINFALL TO DATE 174mm  
 CURRENT ROOTING DEPTH 1500mm  
 PREDICTED FINAL ROOTING DEPTH 1500mm

CURRENT CROP PAW 107mm  
 SOIL PAW 107mm  
 PAWC 107 mm  
 DAILY WATER USE 0.2mm  
 DEEP N 135kg/ha N PROFILE 101kg/ha  
 N AVAILABLE TO ROOTS 79.1kg/ha  
 CURRENTLY USING 0.7 kg of N/ha/day

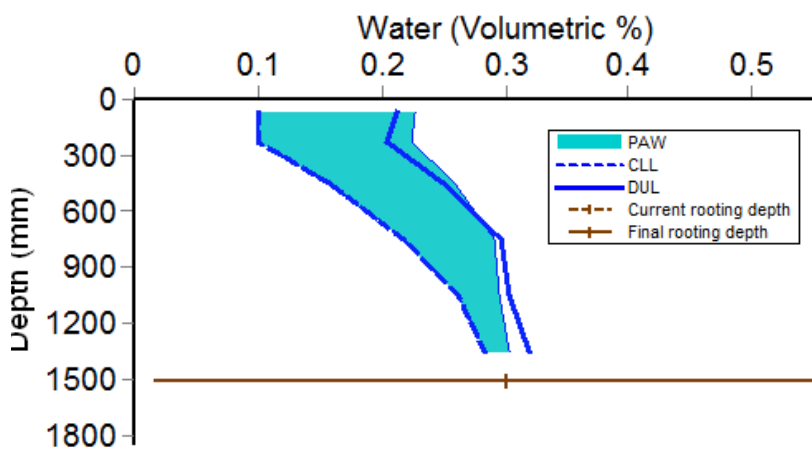
## Grain Yield Probabilities \*



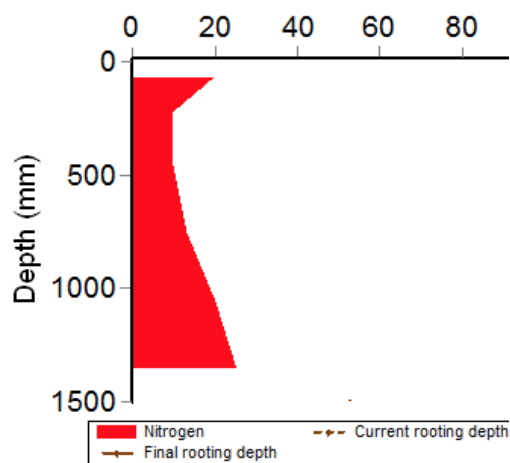
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

## Water Availability \*\*



## Soil Nitrogen

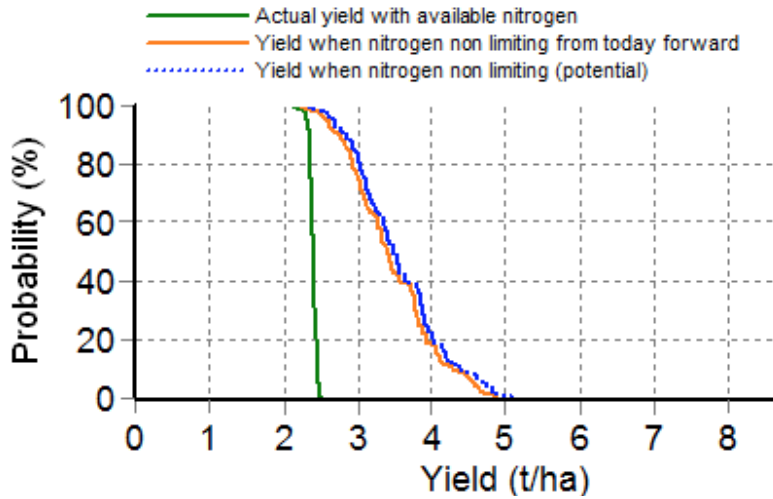


# LOCKHART ~ CANOLA

VARIETY Stingray TT SOWING DATE 25/4/2012  
 SOWING N APPLIED 8 kg/ha  
 SOIL TYPE Brown Sodosol  
 SOWING DENSITY 24 plants/m<sup>2</sup>  
 GROWING SEASON RAINFALL TO DATE 117mm  
 CURRENT ROOTING DEPTH 1650mm  
 PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 123mm  
 SOIL PAW 123mm  
 PAWC 173mm  
 DAILY WATER USE 2.7mm  
 DEEP N 76kg/ha N PROFILE 3kg/ha  
 N AVAILABLE TO ROOTS 2.6kg/ha  
 CURRENTLY USING 0.2kg of N/ha/day

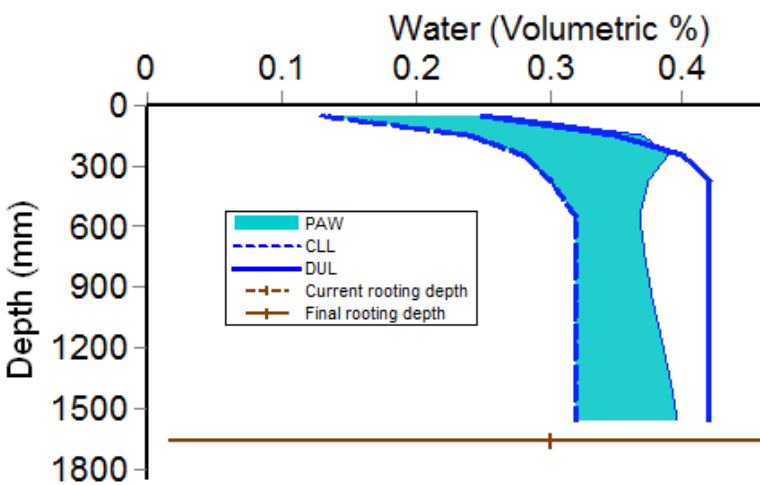
## Grain Yield Probabilities \*



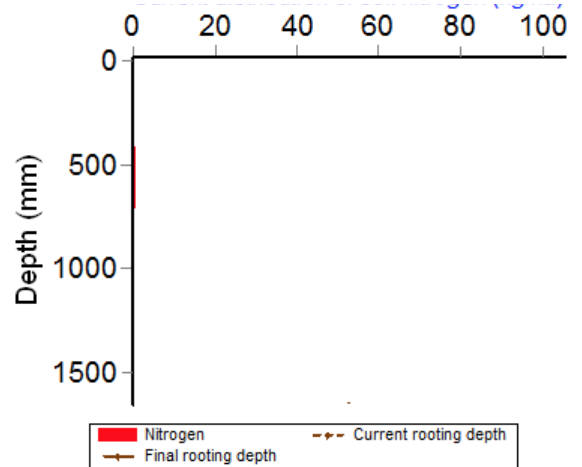
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

## Water Availability \*\*



## Soil Nitrogen

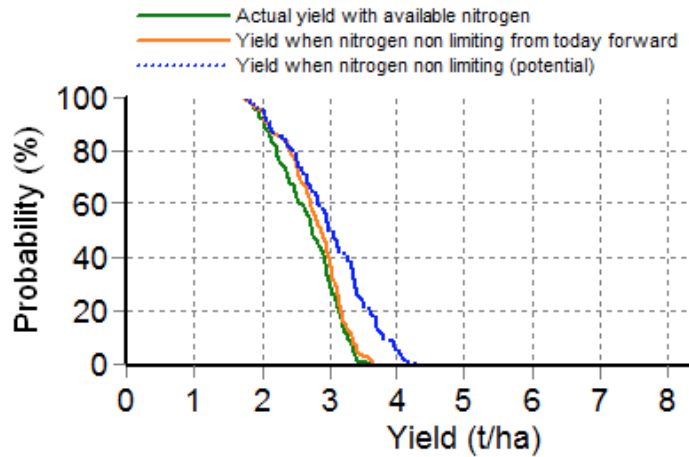


# ARDLETHAN ~ WHEAT

VARIETY Gregory SOWING DATE 3/5/2012  
 SOWING N APPLIED 9 kg/ha  
 SOIL TYPE Sandy clay over a medium clay  
 SOWING DENSITY 80 plants/m<sup>2</sup>  
 GROWING SEASON RAINFALL TO DATE 103mm  
 CURRENT ROOTING DEPTH 583mm  
 PREDICTED FINAL ROOTING DEPTH 1284mm

CURRENT CROP PAW 44mm  
 SOIL PAW 108mm  
 PAWC 216 mm  
 DAILY WATER USE 1.2mm  
 DEEP N 103kg/ha N PROFILE 122kg/ha  
 N AVAILABLE TO ROOTS 53kg/ha  
 CURRENTLY USING 2.1kg of N/ha/day

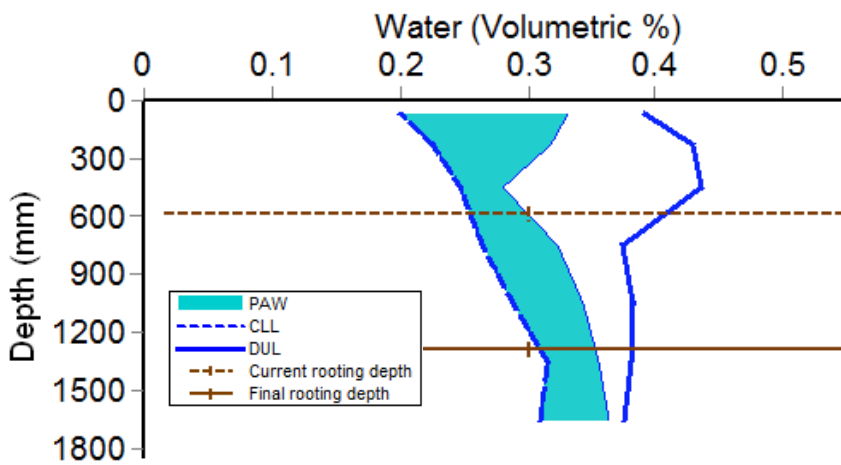
## Grain Yield Probabilities \*



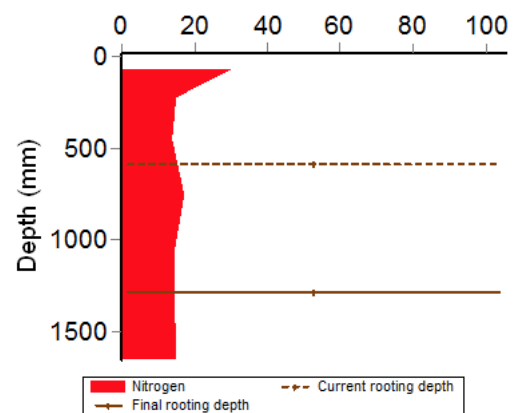
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

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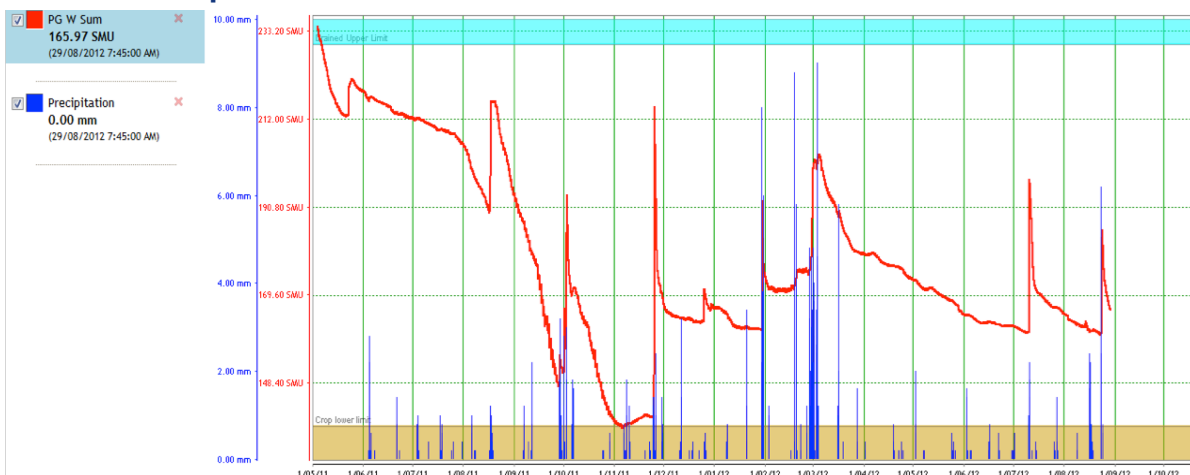
## Water Availability \*\*



## Soil Nitrogen



## Soil Moisture Graph

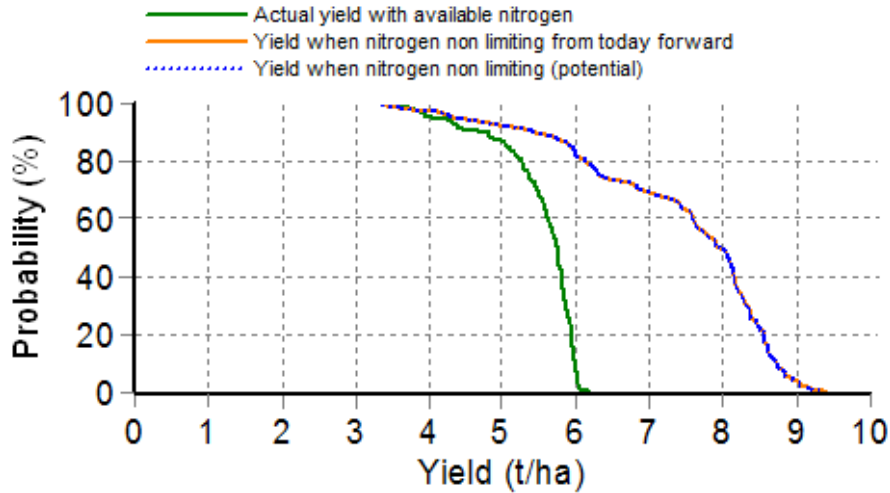


# EH GRAHAM CENTRE ~ WHEAT

VARIETY Wedgetail SOWING DATE 27/4/2012  
 SOWING N APPLIED 6kg/ha  
 SOIL TYPE Red Kandosol  
 SOWING DENSITY 150 plants/m<sup>2</sup>  
 RAINFALL FROM 1ST JAN 522mm  
 CURRENT ROOTING DEPTH 898mm  
 PREDICTED FINAL ROOTING DEPTH 1050mm

CURRENT CROP PAW 137mm  
 SOIL PAW 226mm  
 PAWC 216mm  
 DAILY WATER USE 0.5mm  
 DEEP N 190kg/ha N PROFILE 88kg/ha  
 N AVAILABLE TO ROOTS 60.3kg/ha  
 CURRENTLY USING 3.2kg of N/ha/day

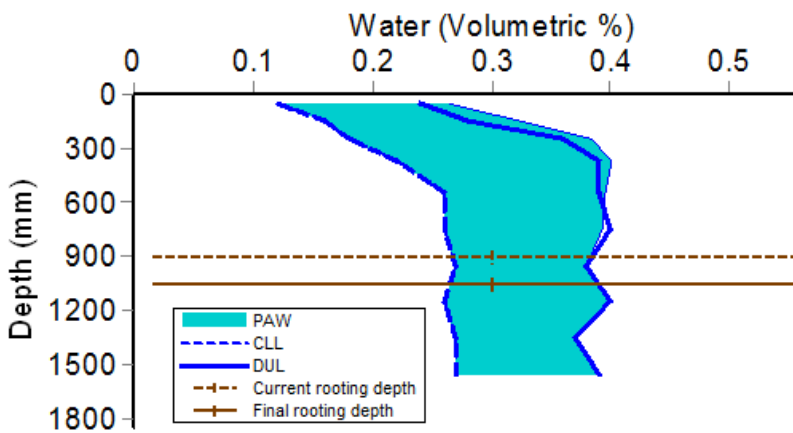
## Grain Yield Probabilities \*



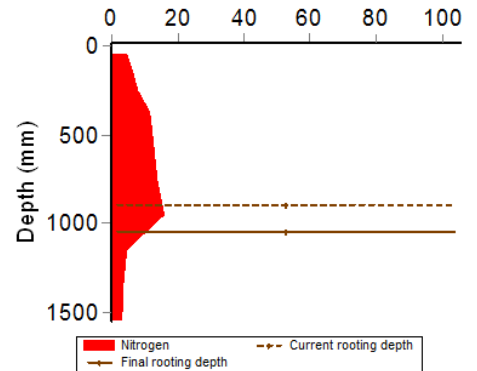
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

## Water Availability \*\*



## Soil Nitrogen

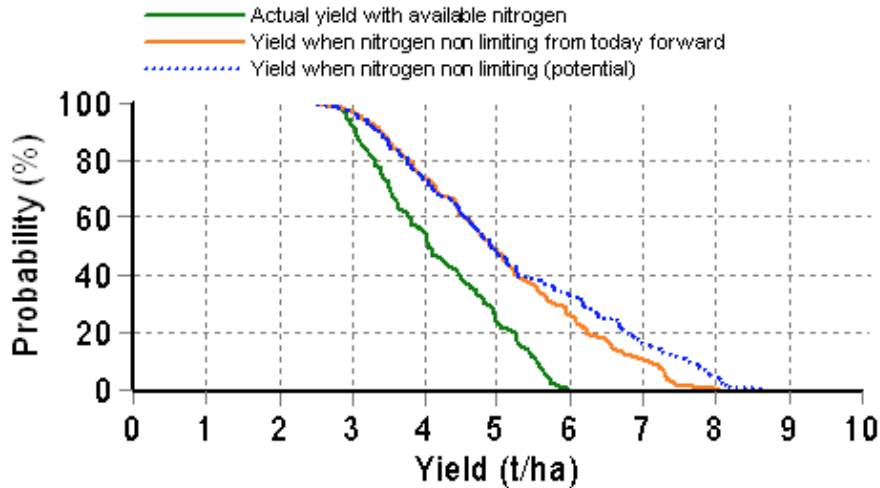


# DIRNASEER ~ WHEAT

VARIETY Sunvale SOWING DATE 12/5/2012  
 SOWING N APPLIED 8kg/ha  
 SOIL TYPE Red Kandosol  
 SOWING DENSITY 86 plants/m<sup>2</sup>  
 GROWING SEASON RAINFALL TO DATE 169mm  
 CURRENT ROOTING DEPTH 988mm  
 PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 988mm  
 SOIL PAW 130mm  
 PAWC 216mm  
 DAILY WATER USE 1.2mm  
 DEEP N 117kg/ha N PROFILE 105kg/ha  
 N AVAILABLE TO ROOTS 66.2kg/ha  
 CURRENTLY USING 3.1kg of N/ha/day

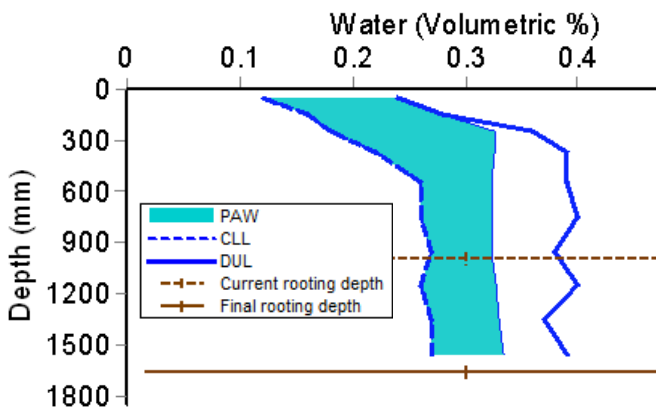
## Grain Yield Probabilities \*



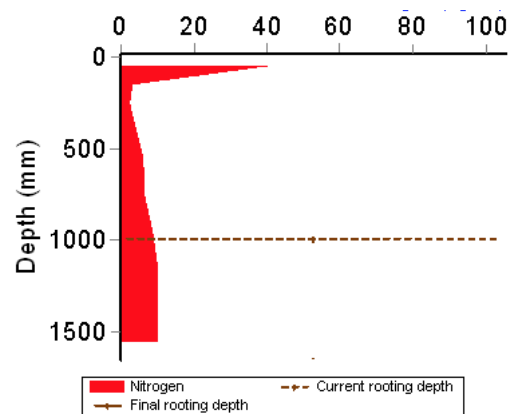
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

## Water Availability \*\*



## Soil Nitrogen



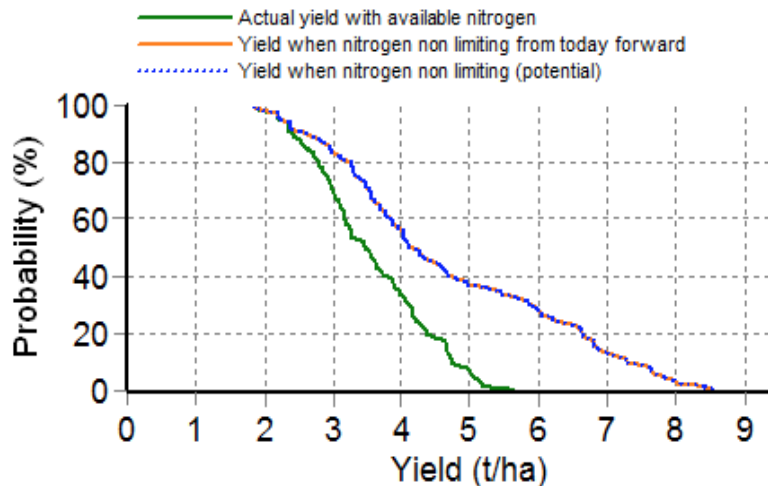


# GREENETHORPE ~ WHEAT

VARIETY SPITFIRE SOWING DATE 24/5/2012  
 SOWING N APPLIED 10kg/ha  
 SOIL TYPE Sandy loam over a sandy clay and heavy clay  
 SOWING DENSITY 115 plants/m<sup>2</sup>  
 GROWING SEASON RAINFALL TO DATE 174mm  
 CURRENT ROOTING DEPTH 751mm  
 PREDICTED FINAL ROOTING DEPTH 1500mm

CURRENT CROP PAW 79mm  
 SOIL PAW 107mm  
 PAWC 107mm  
 DAILY WATER USE 1.6mm  
 DEEP N 110kg/ha N PROFILE 91kg/ha  
 N AVAILABLE TO ROOTS 31kg/ha  
 CURRENTLY USING 2.1kg of N/ha/day

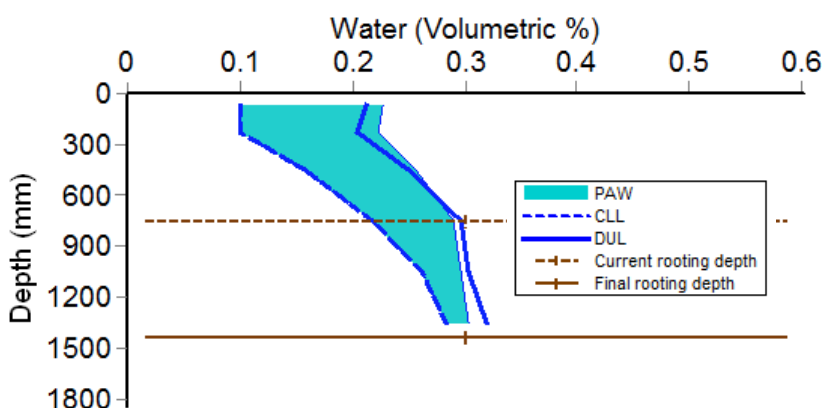
## Grain Yield Probabilities \*



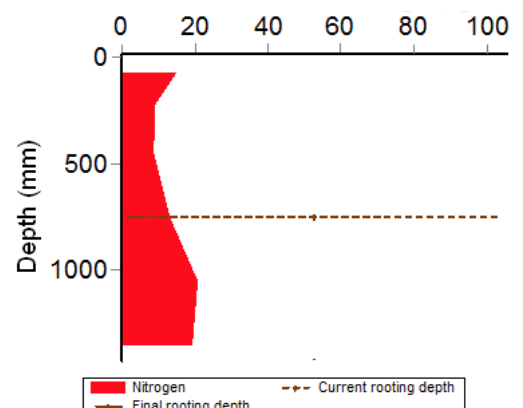
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

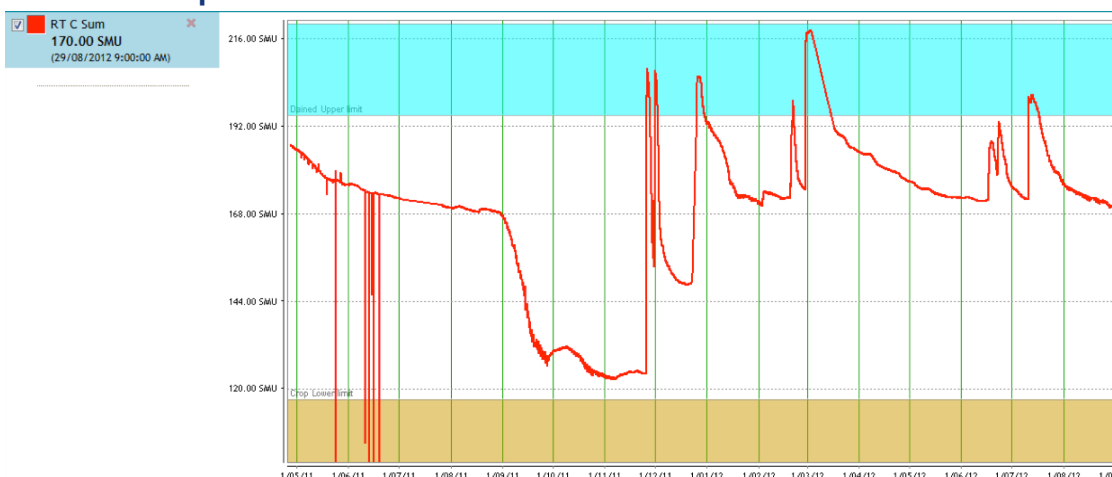
## Water Availability \*\*



## Soil Nitrogen



## Soil Moisture Graph



# LOCKHART ~ WHEAT

VARIETY Lincoln SOWING DATE 9/5/2012

SOWING N APPLIED 6kg/ha

SOIL TYPE Brown Sodosol

SOWING DENSITY 87 plants/m<sup>2</sup>

GROWING SEASON RAINFALL TO DATE 117mm

CURRENT ROOTING DEPTH 1118mm

PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 77mm

SOIL PAW 118mm

PAWC 173mm

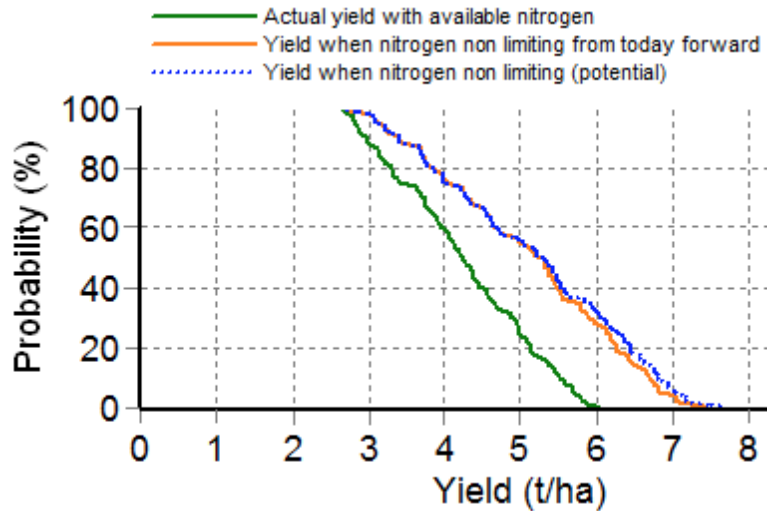
DAILY WATER USE 1.8mm

DEEP N 84 kg/ha N PROFILE 72 kg/ha

N AVAILABLE TO ROOTS 30kg/ha

CURRENTLY USING 0.7kg of N/ha/day

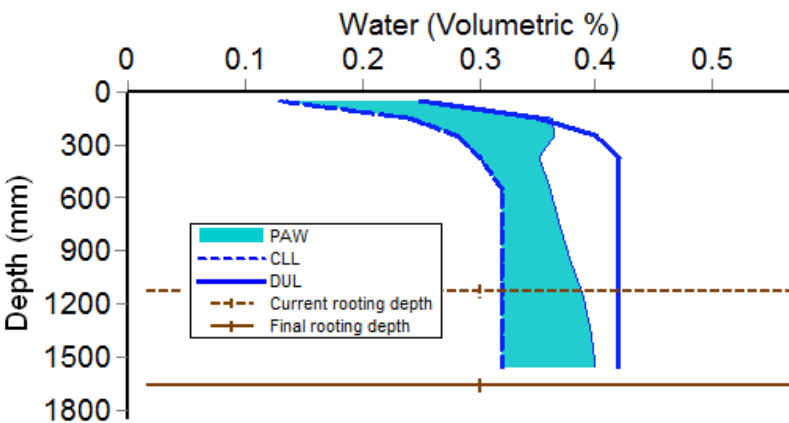
## Grain Yield Probabilities \*



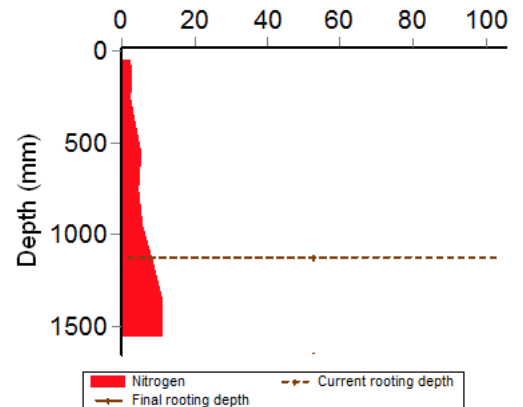
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

\*\* PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. Note: Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies occur.

## Water Availability \*\*



## Soil Nitrogen



## Soil Moisture Graph



# TEMORA ~ WHEAT

VARIETY Bolac SOWING DATE 18/4/2012

SOWING N APPLIED 5kg/ha

SOIL TYPE Red Chromosol

SOWING DENSITY 60 plants/m<sup>2</sup>

GROWING SEASON RAINFALL TO DATE 82.4mm

CURRENT ROOTING DEPTH 1506mm

PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 140mm

SOIL PAW 144mm

PAWC 204mm

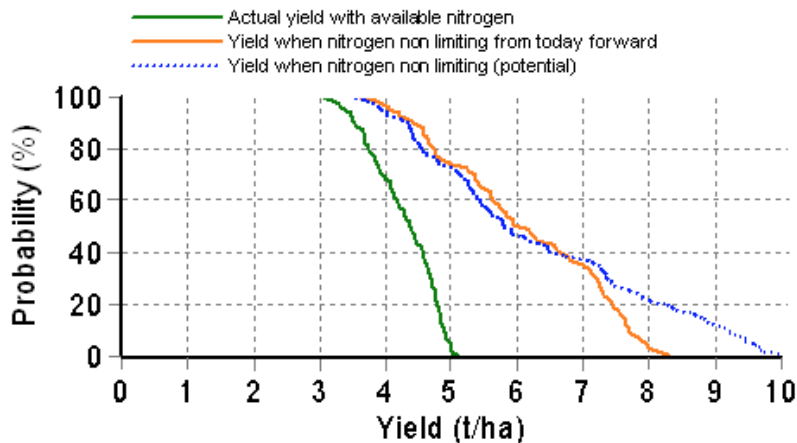
DAILY WATER USE 1.4mm

DEEP N 79kg/ha N PROFILE 26kg/ha

N AVAILABLE TO ROOTS 23kg/ha

CURRENTLY USING 0.3kg of N/ha/day

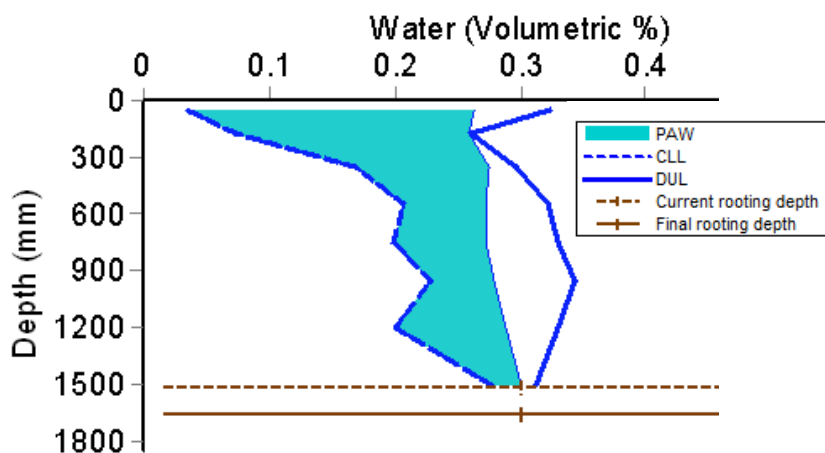
## Grain Yield Probabilities \*



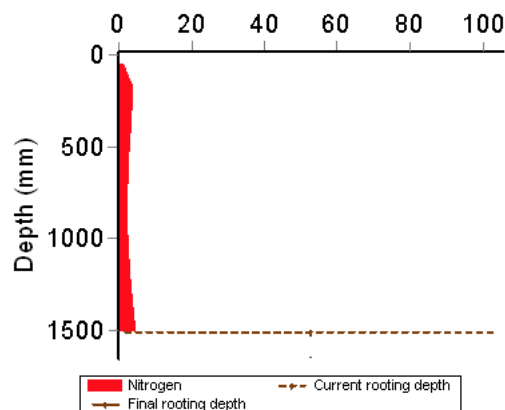
\* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

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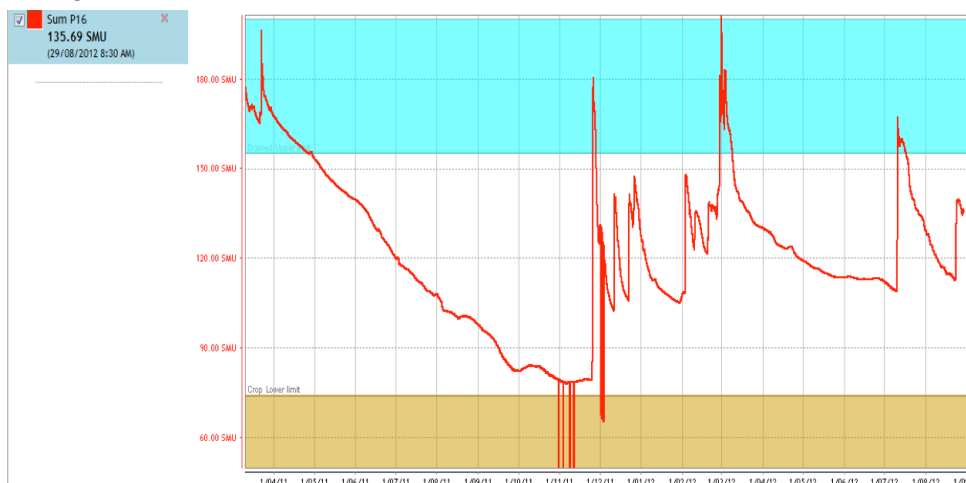
## Water Availability \*\*



## Soil Nitrogen

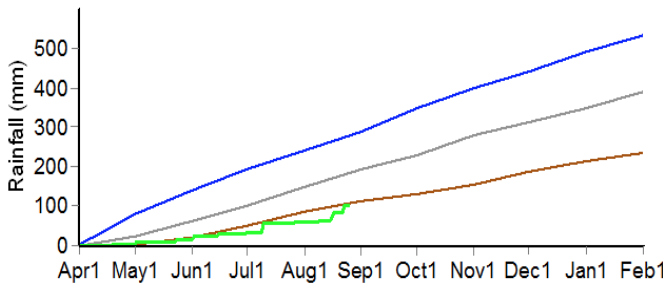


## Soil Moisture Graph

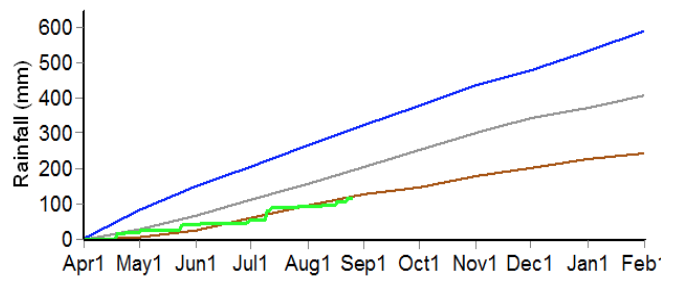


# GROWING SEASON RAINFALL DECILES

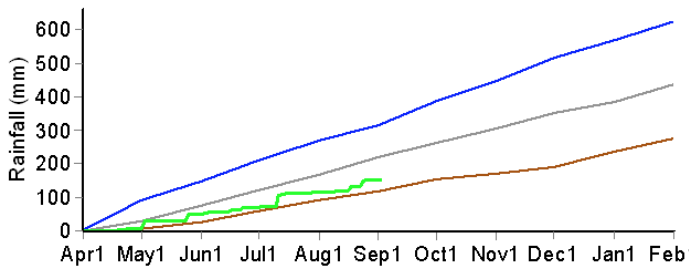
## ARDLETHAN



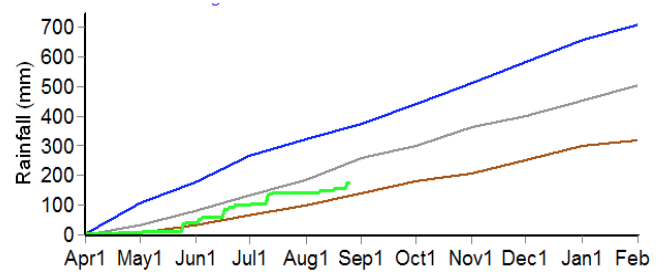
## LOCKHART



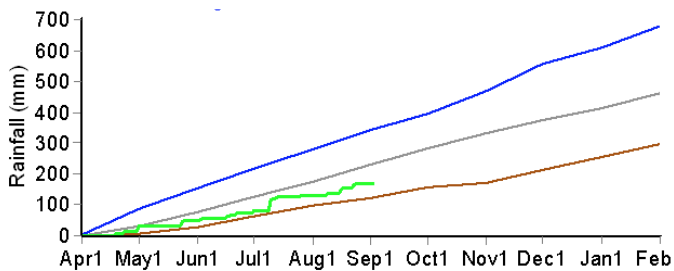
## TEMORA



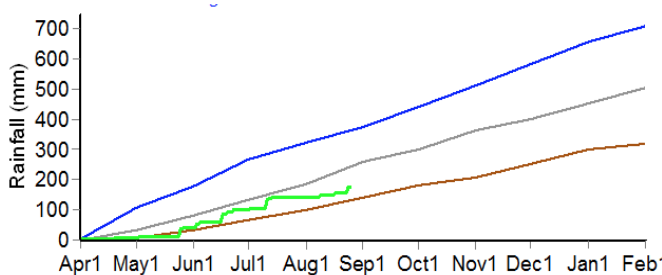
## WAGGA WAGGA



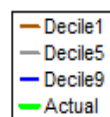
## DIRNASEER



## GREENTHORPE



## KEY



Decile 1 = rainfall received 90% of years (dry season).  
 Decile 5 = rainfall received in 50% of years (median).  
 Decile 9 = rainfall received in 10% of years (wet season).



**ARDLETHAN Wheat** 28 Aug 2012



**ARDLETHAN Canola** 28 Aug 2012



**DIRNASEER Wheat** 28 Aug 2012



**DIRNASEER Canola** 28 Aug 2012



**GREENETHORPE Wheat** 28 Aug 2012



**GREENETHORPE Canola** 28 Aug 2012



**LOCKHART Wheat** 28 Aug 2012



**LOCKHART Canola** 28 Aug 2012

## ***FarmLink Research***



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