

WEATHER or NOT

A REVIEW OF SEASONAL AND CROP OUTLOOKS FOR THE FARMLINK REGION

Issue 1 - SEPTEMBER 2012

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The season so far....

The month of September has not been favourable in regards to rainfall. Rainfall received at the FarmLink Yield Prophet sites until September 27, 2012 was;

- Ardlethan 1.2mm,
- Dirnaseer 11.6mm,
- Greenethorpe 10.2mm and
- Lockhart 3mm.

Total rainfall since the 1st of April (GSR) ranges from 105mm Decile 1 at Ardlethan to 184mm Decile 2 at Greenethorpe. Crops appear to be standing up well (see photos) and this is a direct result of stored summer rainfall. Some canola crops are dropping flowers as a consequence of maturity and wind but do not appear to be moisture stressed as yet.

Daily total water use from evaporation and transpiration are between 0.6mm to 1.7mm per day. PAW levels are in the range of 17mm at the Ardlethan canola site, to 58mm at Dirnaseer wheat, see table below. As crops mature they require less water.

Median predicted Wheat yields* currently range from 2.3t/ha at Ardlethan to 3.3t/ha at Lockhart and Dirnaseer. Median predicted yields for Canola range from 1.9t/ha at Ardlethan to 3.1t/ha at Dirnaseer. The model has reduced yields at Greenethorpe especially in the wheat. (Remember: yield predictions are based on median rainfall for the rest of the year and no impacts from disease, pests, frost or heat stress).

Site and Crop	Soil PAW	Daily Water use
Ardlethan - Canola	17	0.6
Ardlethan - Wheat	56	1.1
Dirnaseer - Canola	31	1.4
Dirnaseer - Wheat	58	1.7
Greenethorpe - Canola	30	1.5
Greenethorpe - Wheat	35	1.6
Lockhart - Canola	30	1.3
Lockhart - Wheat	49	1.4
Temora - Wheat	71	2.1

The moisture graphs for the crops that have a probe on-site are included in this issue. They give an indication of what moisture is left available to the crops compared to 2011, see pages 13-15.

Paul Breust

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

Principal Sponsor

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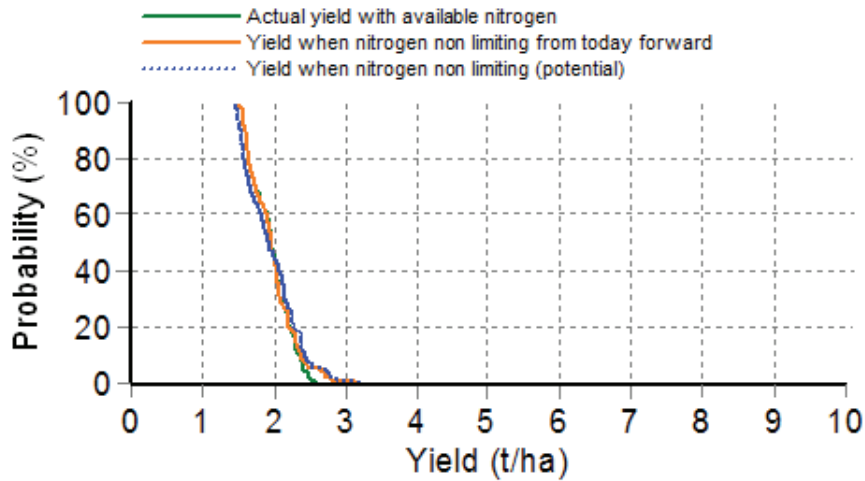


ARDLETHAN ~ CANOLA

VARIETY GEM TT SOWING DATE 23/4/2012
 N APPLIED 89 kg/ha
 SOIL TYPE Sandy clay over a medium clay
 PLANT DENSITY 30 plants/m²
 GROWING SEASON RAINFALL TO DATE 105mm
 CURRENT ROOTING DEPTH 1800mm
 PREDICTED FINAL ROOTING DEPTH 1800mm

CURRENT CROP PAW 16mm
 SOIL PAW 17mm
 PAWC 216mm
 DAILY WATER USE 0.4mm
 DEEP N 149kg/ha N PROFILE 17kg/ha
 N AVAILABLE TO ROOTS 15.3kg/ha
 CURRENTLY USING 0.1kg of N/ha/day

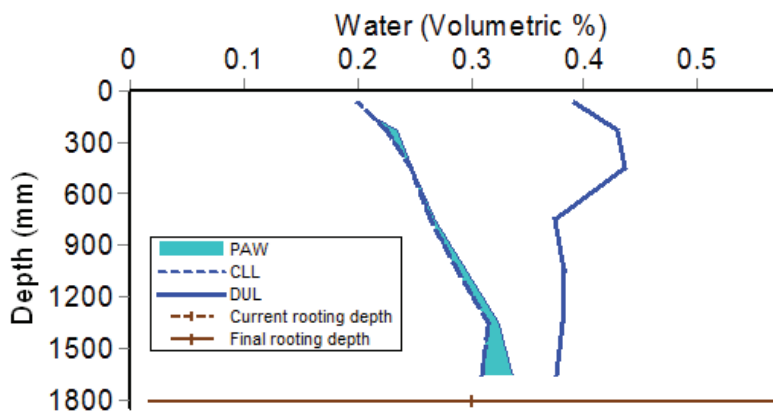
Grain Yield Probabilities *



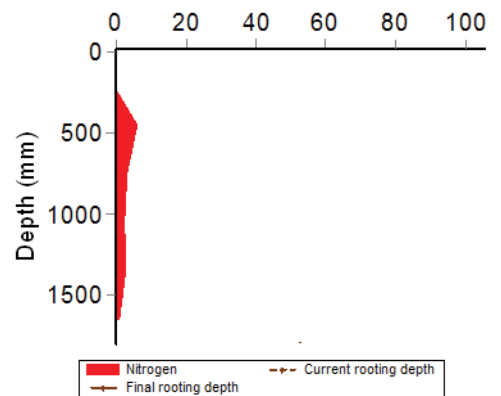
* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

** 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.

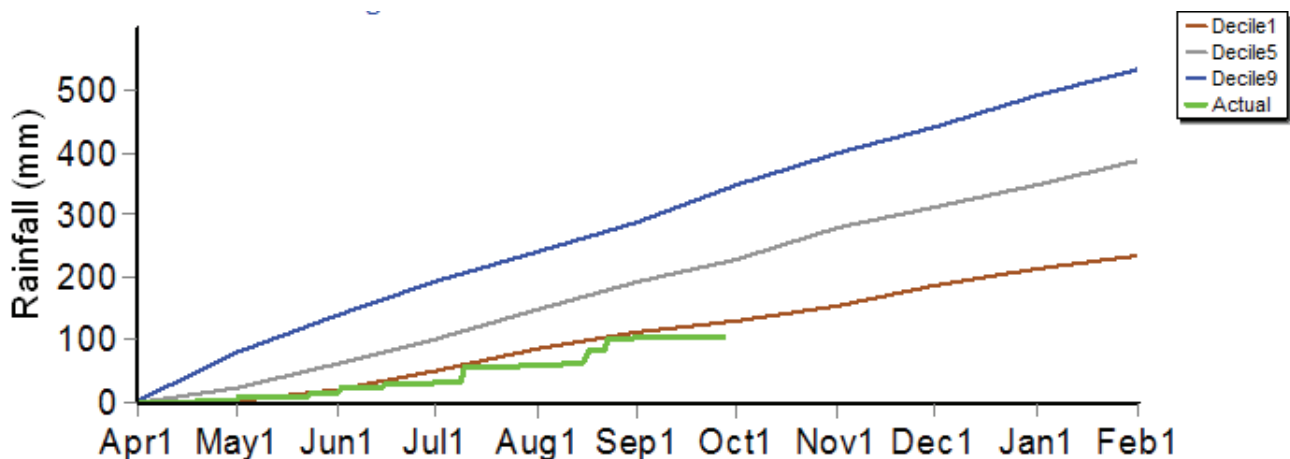
Water Availability **



Soil Nitrogen



Growing Season Rainfall



DIRNASEER ~ CANOLA

VARIETY GEM TT SOWING DATE 23/4/2012

N APPLIED 58kg/ha

SOIL TYPE Red Kandosol

SOWING DENSITY 52 plants/m²

GROWING SEASON RAINFALL TO DATE 176mm

CURRENT ROOTING DEPTH 1650mm

PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 31mm

SOIL PAW 31mm

PAWC 216mm

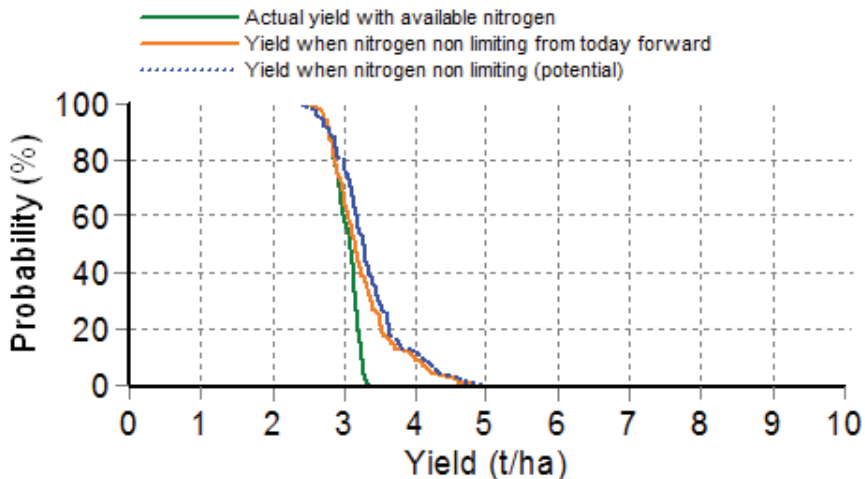
DAILY WATER USE 1.1mm

DEEP N 162 kg/ha N PROFILE 1 kg/ha

N AVAILABLE TO ROOTS 0.7kg/ha

CURRENTLY USING 0.0kg of N/ha/day

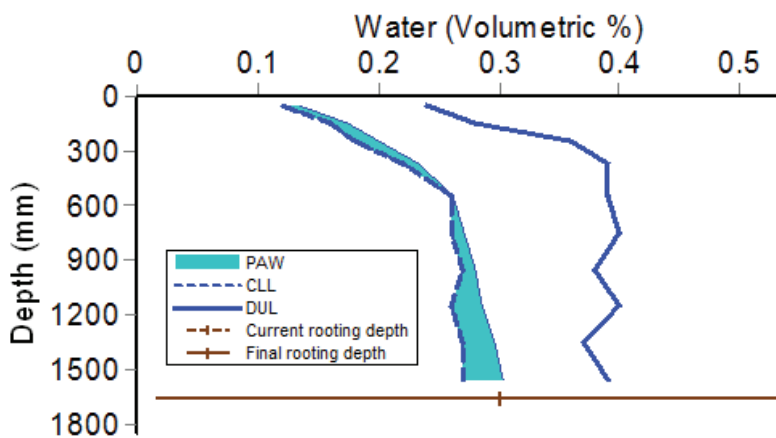
Grain Yield Probabilities *



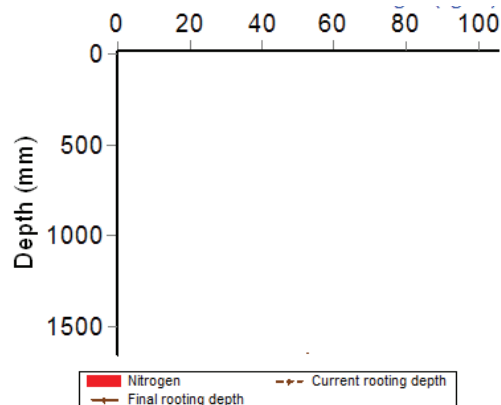
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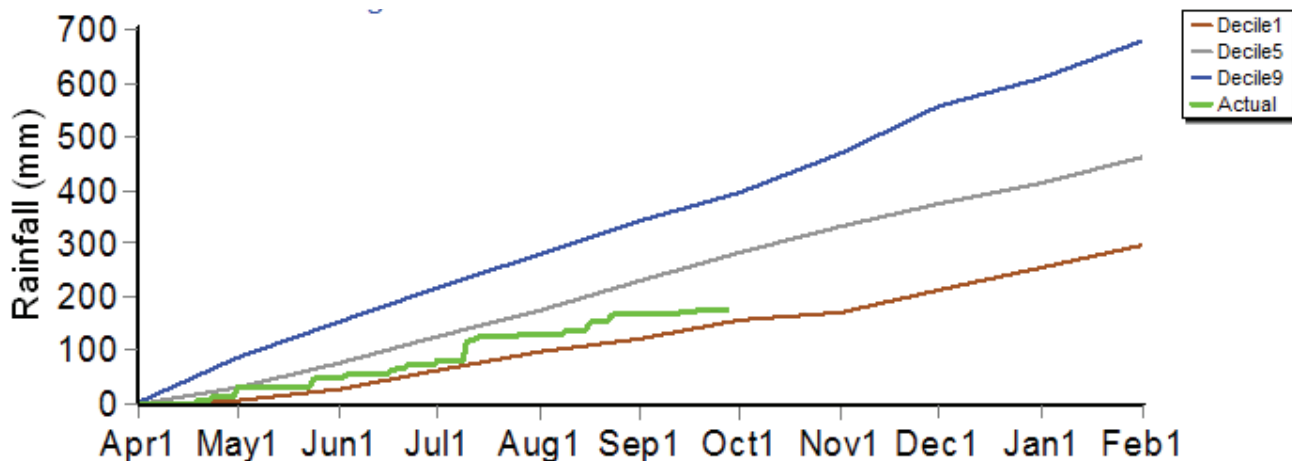
Water Availability **



Soil Nitrogen



Growing Season Rainfall



GREENETHORPE ~ CANOLA

VARIETY GEM TT SOWING DATE 7/5/2012

N APPLIED 86 kg/ha

SOIL TYPE Sandy loam over a sandy clay and heavy clay

SOWING DENSITY 46 plants/m²

GROWING SEASON RAINFALL TO DATE 184mm

CURRENT ROOTING DEPTH 1500mm

PREDICTED FINAL ROOTING DEPTH 1500mm

CURRENT CROP PAW 30mm

SOIL PAW 30mm

PAWC 107 mm

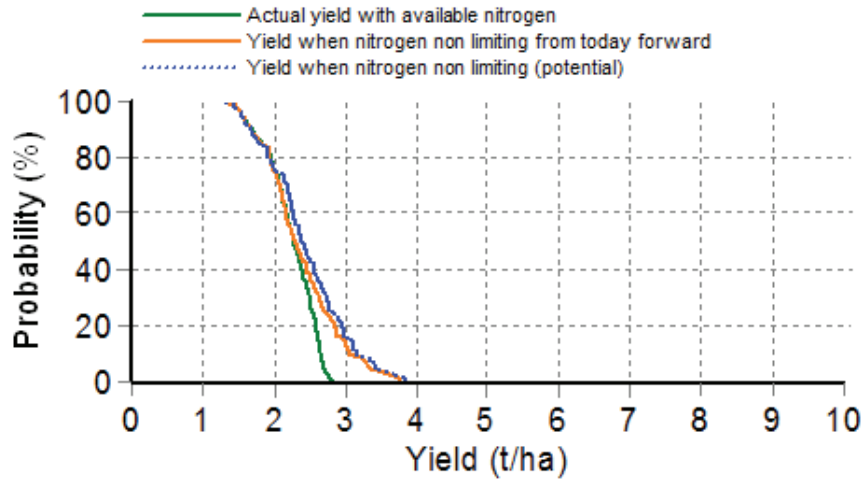
DAILY WATER USE 1.3 mm

DEEP N 135 kg/ha N PROFILE 22kg/ha

N AVAILABLE TO ROOTS 20.2 kg/ha

CURRENTLY USING 0.1 kg of N/ha/day

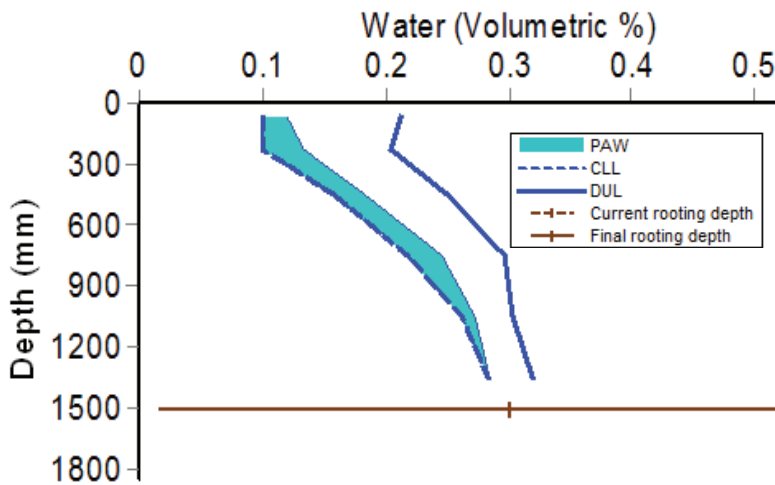
Grain Yield Probabilities *



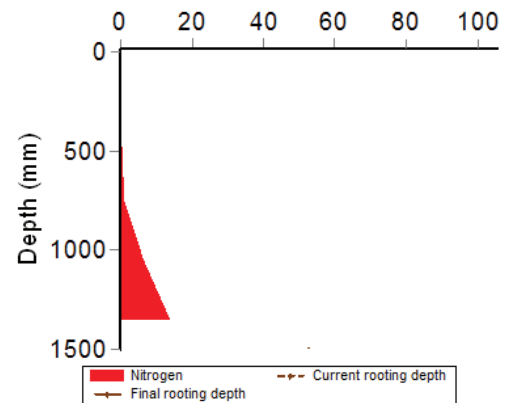
* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

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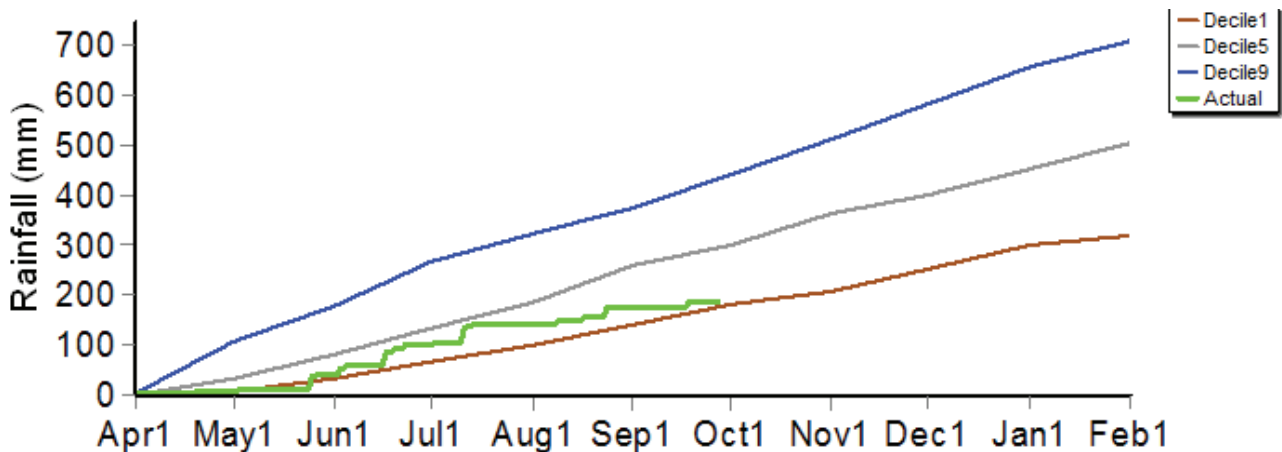
Water Availability **



Soil Nitrogen



Growing Season Rainfall

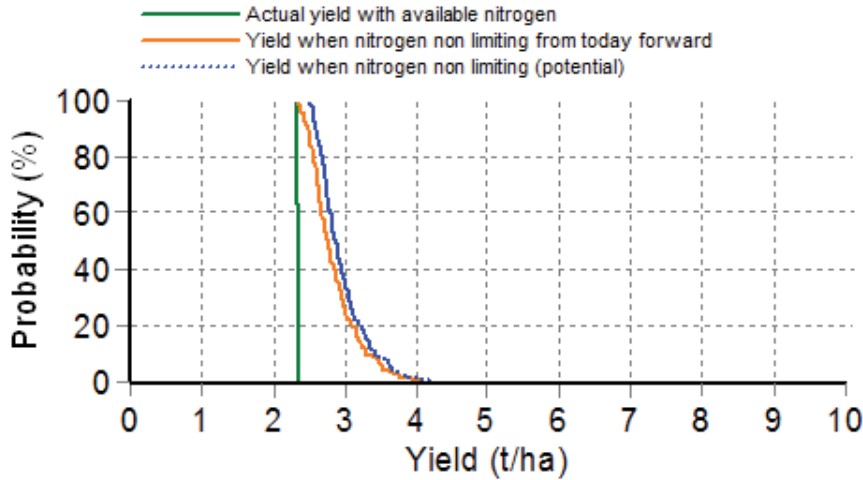


LOCKHART ~ CANOLA

VARIETY Stingray TT SOWING DATE 25/4/2012
 N APPLIED 68 kg/ha
 SOIL TYPE Brown Sodosol
 SOWING DENSITY 24 plants/m²
 GROWING SEASON RAINFALL TO DATE 119.8mm
 CURRENT ROOTING DEPTH 1650mm
 PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 30mm
 SOIL PAW 30mm
 PAWC 173mm
 DAILY WATER USE 0.0mm
 DEEP N 76 kg/ha N PROFILE 1 kg/ha
 N AVAILABLE TO ROOTS 1.5 kg/ha
 CURRENTLY USING 0.0 kg of N/ha/day

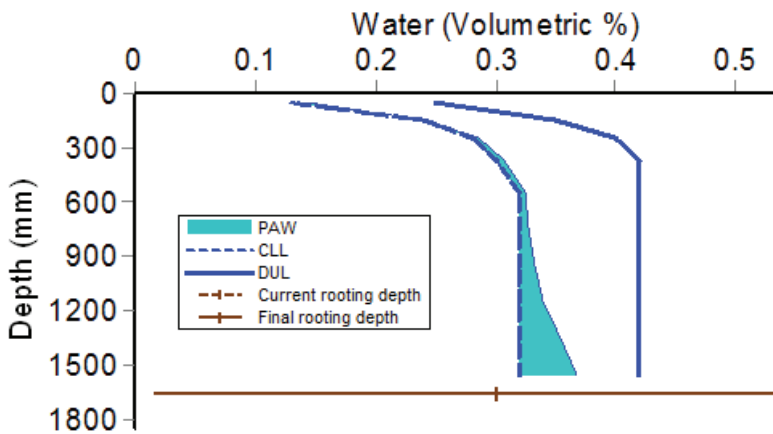
Grain Yield Probabilities *



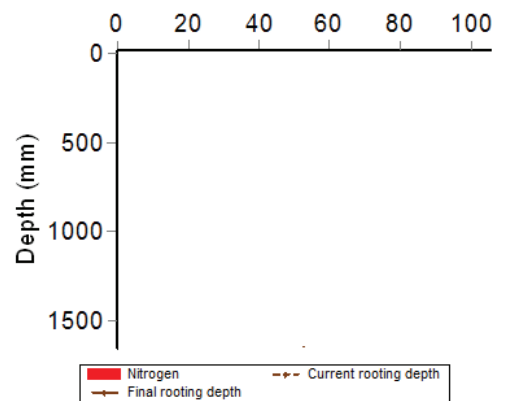
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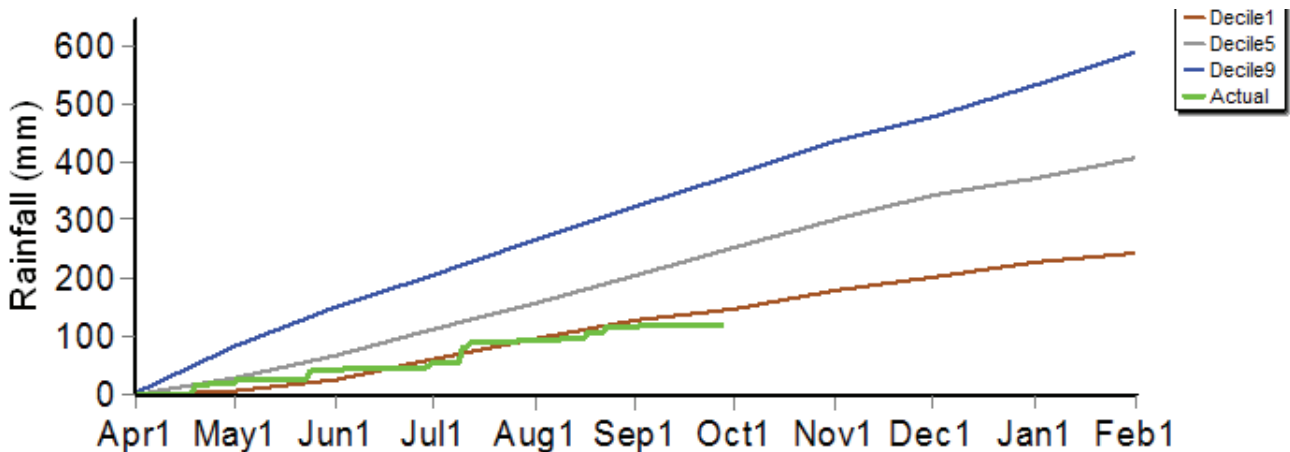
Water Availability **



Soil Nitrogen



Growing Season Rainfall



ARDLETHAN ~ WHEAT

VARIETY Gregory SOWING DATE 3/5/2012

N APPLIED 54 kg/ha

SOIL TYPE Sandy clay over a medium clay

SOWING DENSITY 80 plants/m²

GROWING SEASON RAINFALL TO DATE 105.4mm

CURRENT ROOTING DEPTH 1036mm

PREDICTED FINAL ROOTING DEPTH 1279mm

CURRENT CROP PAW 20mm

SOIL PAW 56mm

PAWC 216 mm

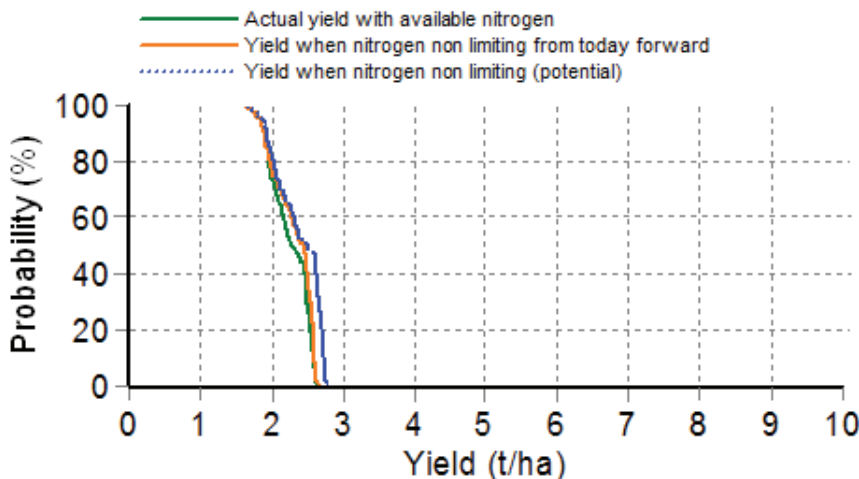
DAILY WATER USE 0.7mm

DEEP N 103 kg/ha N PROFILE 88 kg/ha

N AVAILABLE TO ROOTS 54.6 kg/ha

CURRENTLY USING 0.7 kg of N/ha/day

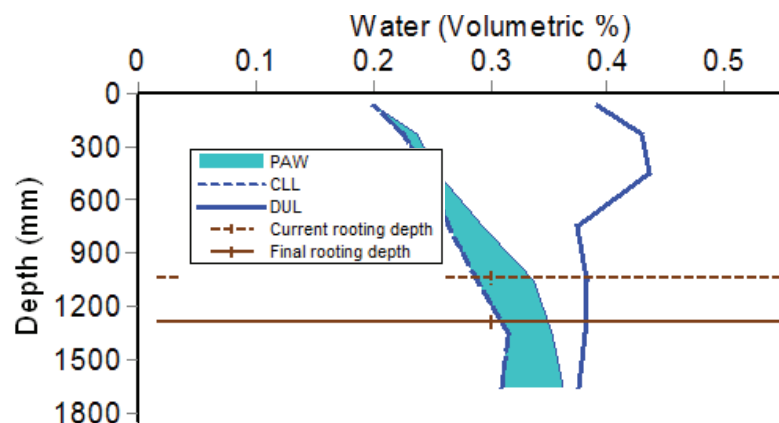
Grain Yield Probabilities *



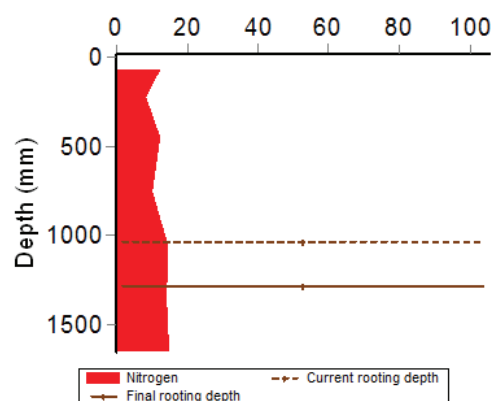
* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

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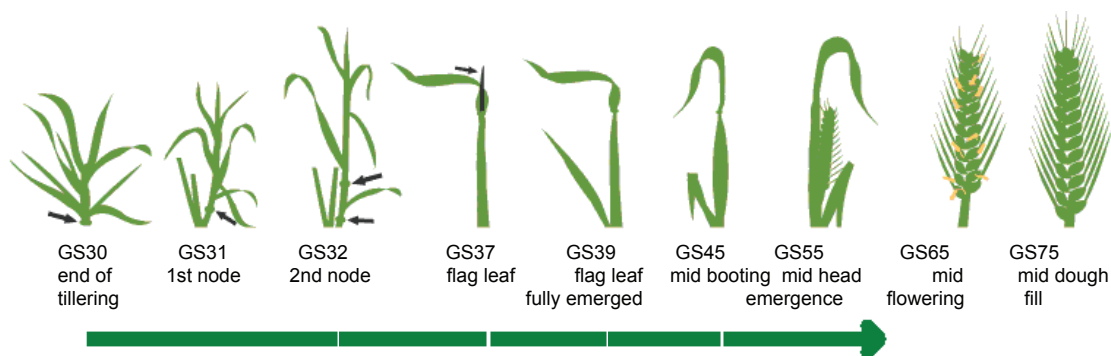
Water Availability **



Soil Nitrogen



Zadok's Growth Stage



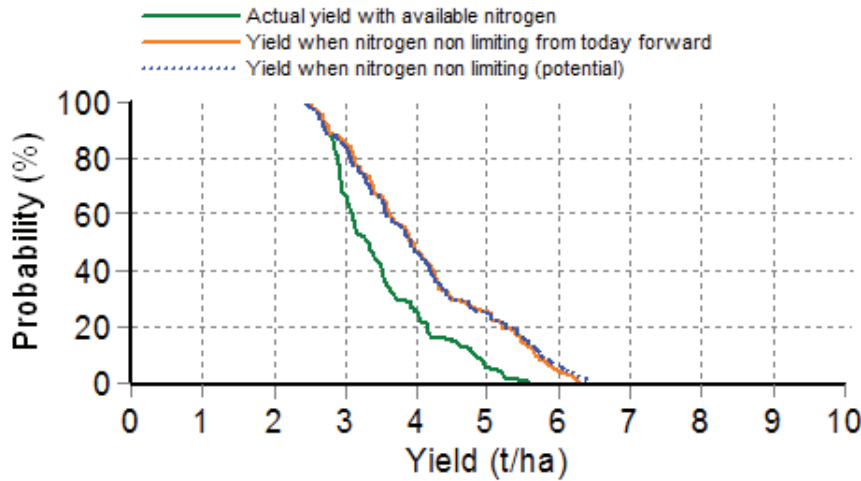
Predicted	10-Aug	13-Aug	17-Aug	31-Aug	5-Sep	13-Sep	24-Sep	2-Oct	16-Oct
Earliest	10-Aug	13-Aug	17-Aug	31-Aug	5-Sep	13-Sep	24-Sep	2-Oct	16-Oct
Median	10-Aug	13-Aug	17-Aug	31-Aug	6-Sep	13-Sep	24-Sep	4-Oct	20-Oct
Latest	10-Aug	13-Aug	17-Aug	31-Aug	6-Sep	13-Sep	24-Sep	6-Oct	23-Oct

DIRNASEER ~ WHEAT

VARIETY Sunvale SOWING DATE 12/5/2012
 N APPLIED 58kg/ha
 SOIL TYPE Red Kandosol
 SOWING DENSITY 86 plants/m²
 GROWING SEASON RAINFALL TO DATE 176.1mm
 CURRENT ROOTING DEPTH 1356mm
 PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 43mm
 SOIL PAW 58mm
 PAWC 216 mm
 DAILY WATER USE 1.4mm
 DEEP N 117 kg/ha N PROFILE 51 kg/ha
 N AVAILABLE TO ROOTS 40.3 kg/ha
 CURRENTLY USING 0.4 kg of N/ha/day

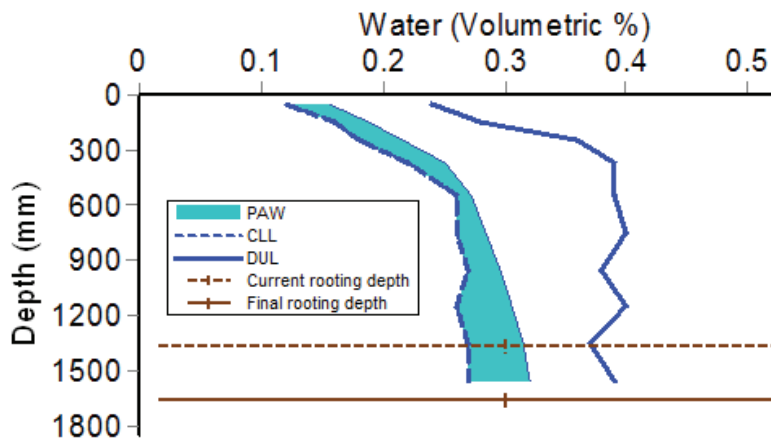
Grain Yield Probabilities *



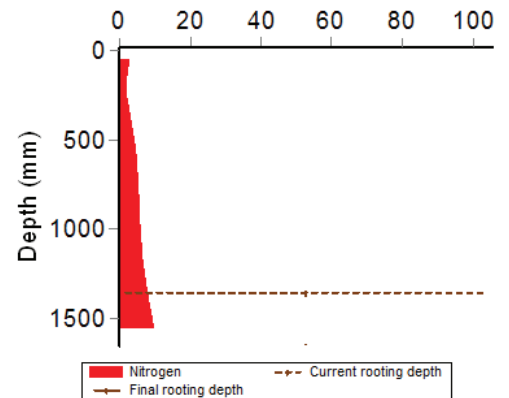
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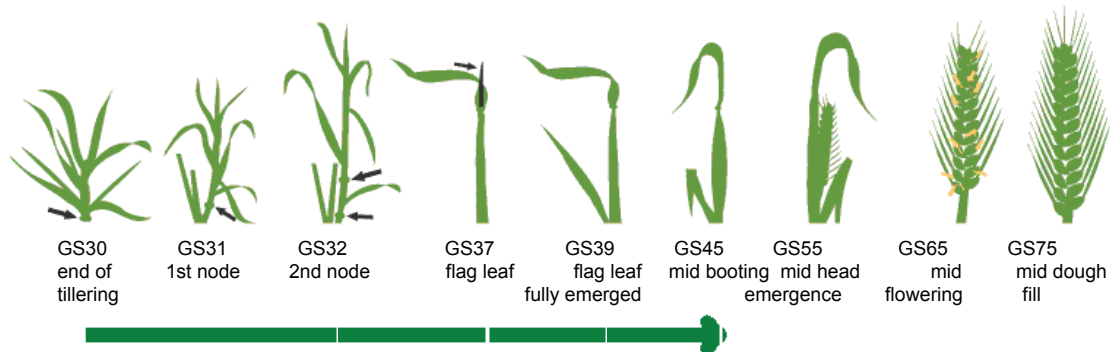
Water Availability **



Soil Nitrogen



Zadok's Growth Stage



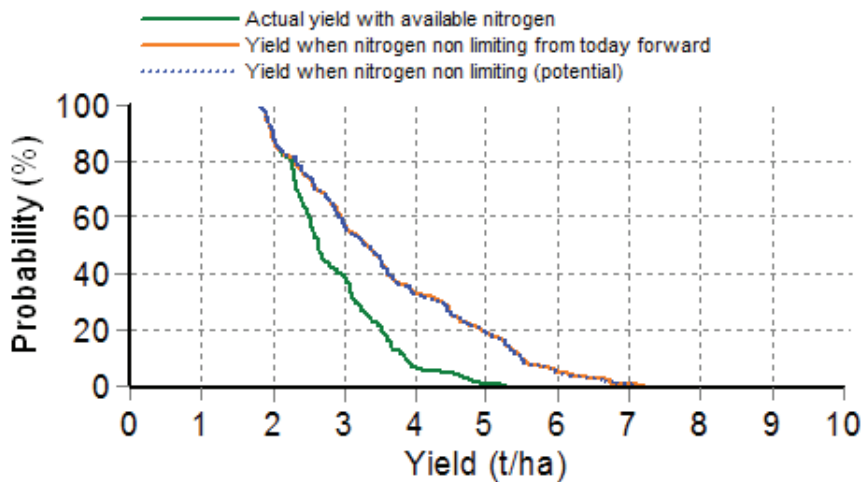
Predicted	GS30 end of tillering	GS31 1st node	GS32 2nd node	GS37 flag leaf	GS39 flag leaf fully emerged	GS45 mid booting	GS55 mid head emergence	GS65 mid flowering	GS75 mid dough fill
Earliest	24-Aug	28-Aug	1-Sep	14-Sep	20-Sep	28-Sep	5-Oct	13-Oct	28-Oct
Median	24-Aug	28-Aug	1-Sep	14-Sep	20-Sep	28-Sep	8-Oct	17-Oct	2-Nov
Latest	24-Aug	28-Aug	1-Sep	14-Sep	20-Sep	28-Sep	10-Oct	20-Oct	9-Nov

GREENETHORPE ~ WHEAT

VARIETY SPITFIRE SOWING DATE 24/5/2012
 SOWING N APPLIED 70kg/ha
 SOIL TYPE Sandy loam over a sandy clay and heavy clay
 SOWING DENSITY 115 plants/m²
 GROWING SEASON RAINFALL TO DATE 184.2mm
 CURRENT ROOTING DEPTH 1119mm
 PREDICTED FINAL ROOTING DEPTH 1233mm

CURRENT CROP PAW 31mm
 SOIL PAW 35mm
 PAWC 107mm
 DAILY WATER USE 1.3mm
 DEEP N 110kg/ha N PROFILE 47kg/ha
 N AVAILABLE TO ROOTS 25.4 kg/ha
 CURRENTLY USING 0.3 kg of N/ha/day

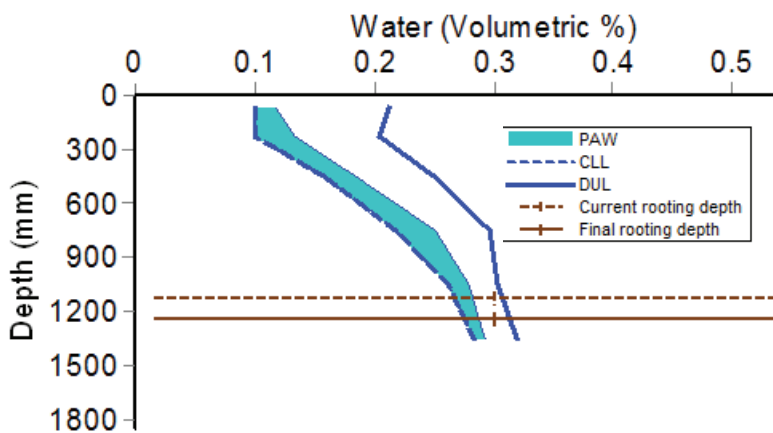
Grain Yield Probabilities *



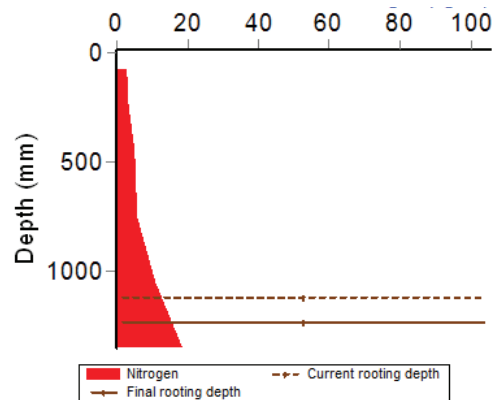
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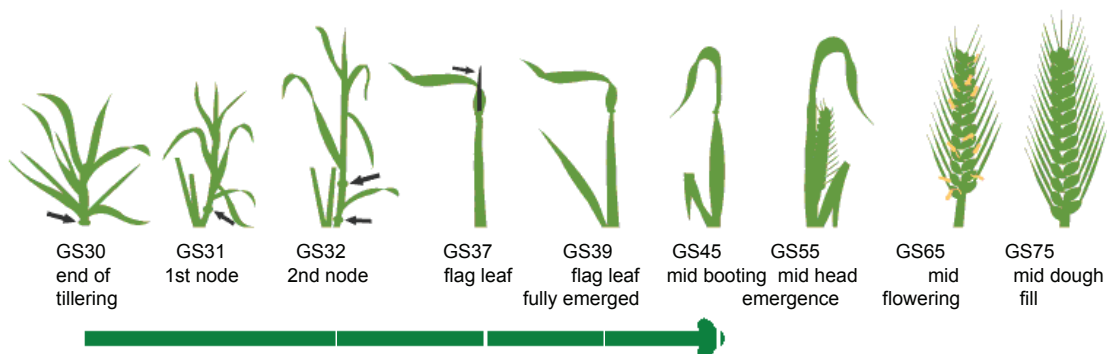
Water Availability **



Soil Nitrogen



Zadok's Growth Stage



Predicted

Earliest	24-Aug	28-Aug	1-Sep	14-Sep	20-Sep	28-Sep	5-Oct	13-Oct	28-Oct
Median	24-Aug	28-Aug	1-Sep	14-Sep	20-Sep	28-Sep	8-Oct	17-Oct	2-Nov
Latest	24-Aug	28-Aug	1-Sep	14-Sep	20-Sep	28-Sep	10-Oct	20-Oct	9-Nov

FarmLink Research 'Weather or Not' September 2012

LOCKHART ~ WHEAT

VARIETY Lincoln SOWING DATE 9/5/2012

N APPLIED 33kg/ha

SOIL TYPE Brown Sodosol

SOWING DENSITY 87 plants/m²

GROWING SEASON RAINFALL TO DATE 119.8mm

CURRENT ROOTING DEPTH 1564mm

PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 42mm

SOIL PAW 49mm

PAWC 173 mm

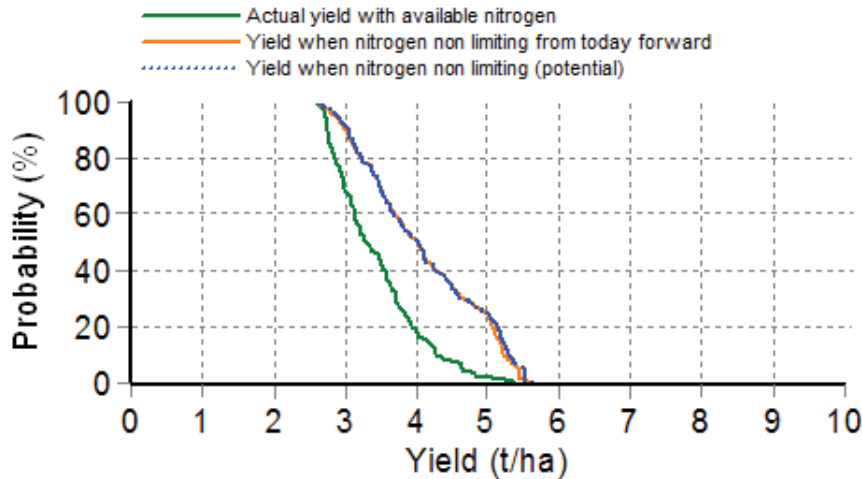
DAILY WATER USE 1.2mm

DEEP N 111 kg/ha N PROFILE 41 kg/ha

N AVAILABLE TO ROOTS 38.2 kg/ha

CURRENTLY USING 0.4 kg of N/ha/day

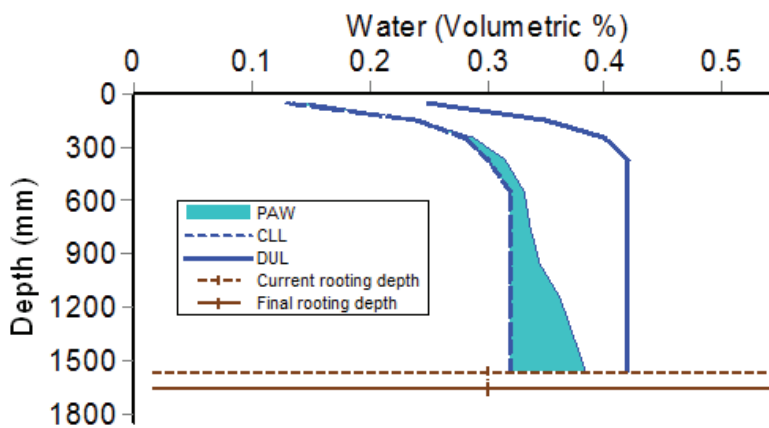
Grain Yield Probabilities *



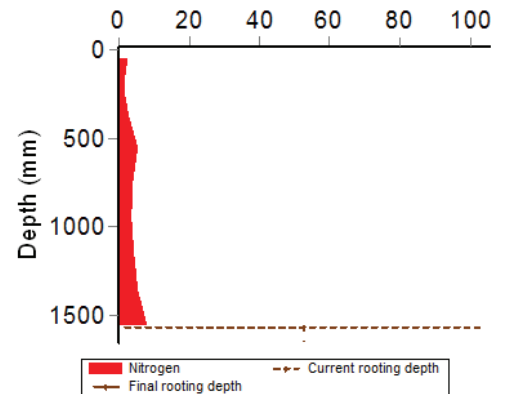
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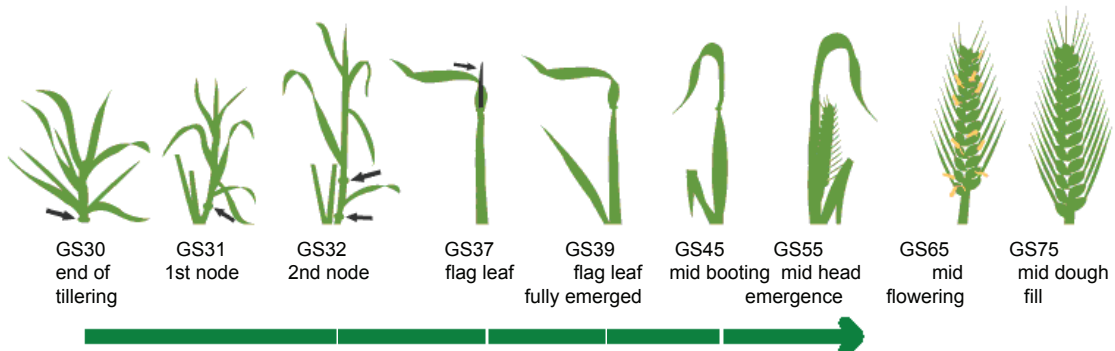
Water Availability **



Soil Nitrogen



Zadok's Growth Stage



Predicted

Earliest	11-Aug	15-Aug	19-Aug	2-Sep	7-Sep	15-Sep	26-Sep	4-Oct	18-Oct
Median	11-Aug	15-Aug	20-Aug	2-Sep	7-Sep	15-Sep	26-Sep	6-Oct	22-Oct
Latest	11-Aug	15-Aug	20-Aug	2-Sep	7-Sep	15-Sep	26-Sep	8-Oct	27-Oct

FarmLink Research 'Weather or Not' September 2012

TEMORA INNOVATION CENTRE ~ WHEAT

VARIETY Spitfire SOWING DATE 17/5/2012

N APPLIED 54 kg/ha

SOIL TYPE Red Chromosol

SOWING DENSITY 155 plants/m²

GROWING SEASON RAINFALL TO DATE 117.7mm

CURRENT ROOTING DEPTH 1300mm

PREDICTED FINAL ROOTING DEPTH 1497mm

CURRENT CROP PAW 39mm

SOIL PAW 49mm

PAWC 147mm

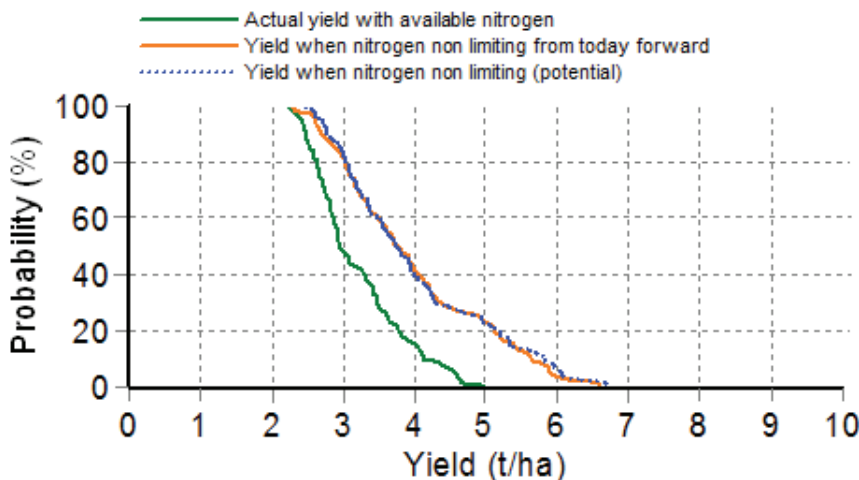
DAILY WATER USE 1.4 mm

DEEP N 77kg/ha N PROFILE 33 kg/ha

N AVAILABLE TO ROOTS 25.8 kg/ha

CURRENTLY USING 0.2 kg of N/ha/day

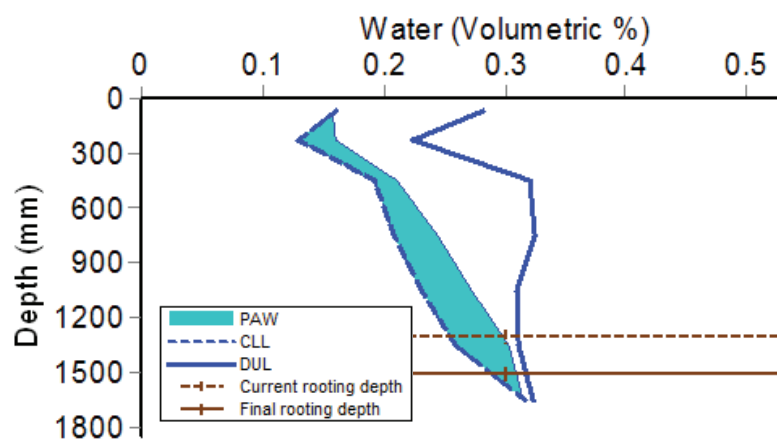
Grain Yield Probabilities *



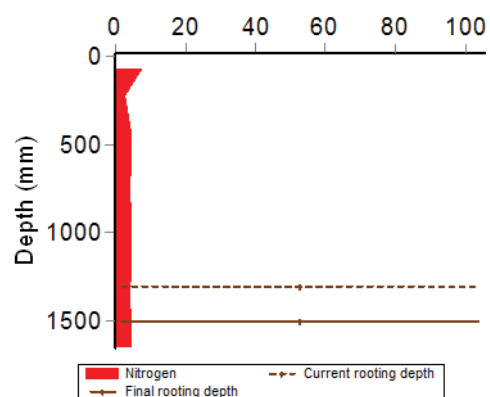
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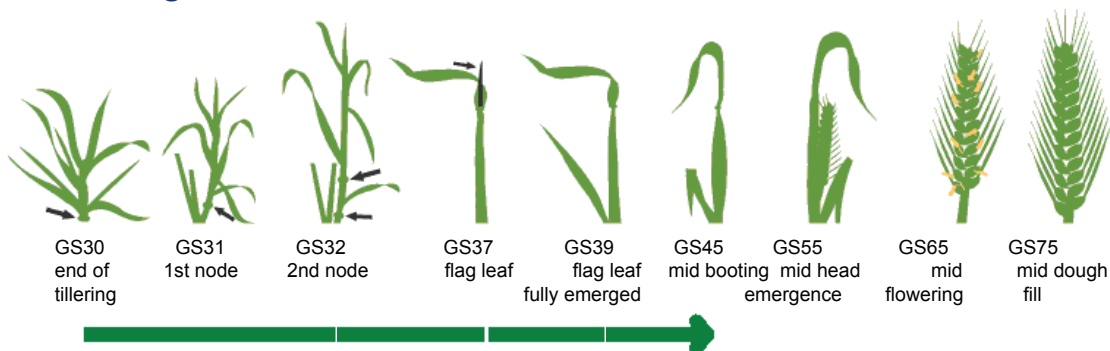
Water Availability **



Soil Nitrogen



Zadok's Growth Stage



Predicted

Earliest	25-Aug	29-Aug	3-Sep	15-Sep	21-Sep	28-Sep	6-Oct	13-Oct	28-Oct
Median	26-Aug	30-Aug	3-Sep	15-Sep	21-Sep	28-Sep	8-Oct	17-Oct	2-Nov
Latest	26-Aug	30-Aug	3-Sep	15-Sep	21-Sep	28-Sep	10-Oct	20-Oct	9-Nov

TEMORA ~ WHEAT

VARIETY Bolac SOWING DATE 18/4/2012

N APPLIED 53 kg/ha

SOIL TYPE Red Chromosol

SOWING DENSITY 60 plants/m²

GROWING SEASON RAINFALL TO DATE 160mm

CURRENT ROOTING DEPTH 1650mm

PREDICTED FINAL ROOTING DEPTH 1650mm

CURRENT CROP PAW 71mm

SOIL PAW 71mm

PAWC 204mm

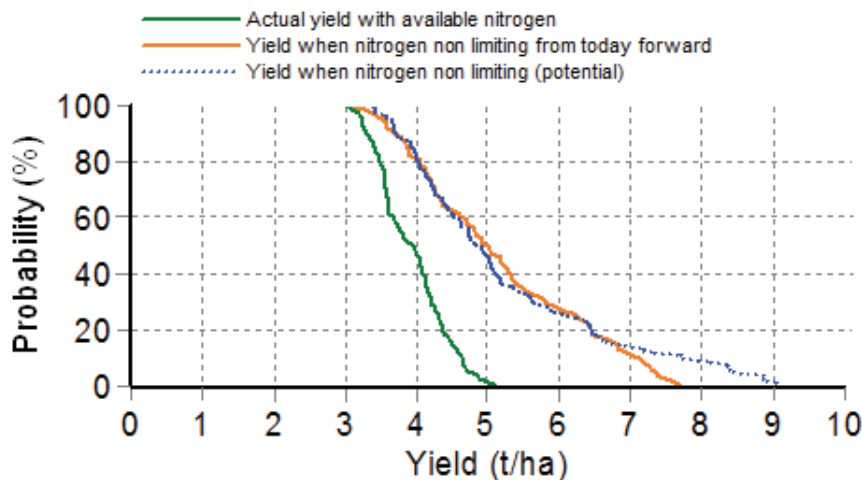
DAILY WATER USE 2.1 mm

DEEP N 79 kg/ha N PROFILE 25 kg/ha

N AVAILABLE TO ROOTS 24.7 kg/ha

CURRENTLY USING 0.1 kg of N/ha/day

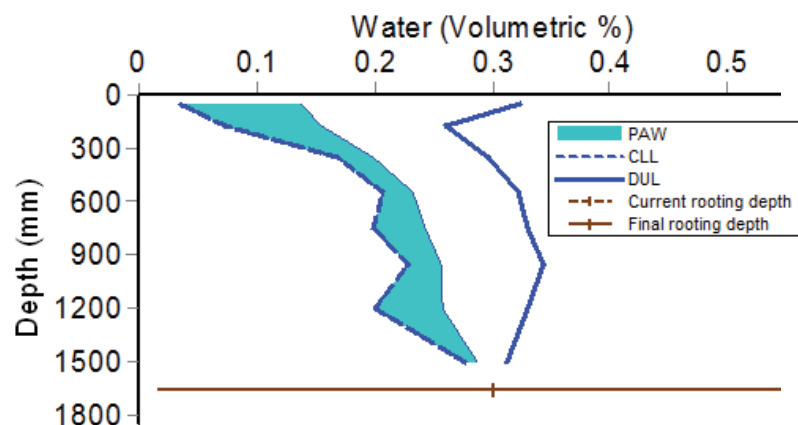
Grain Yield Probabilities *



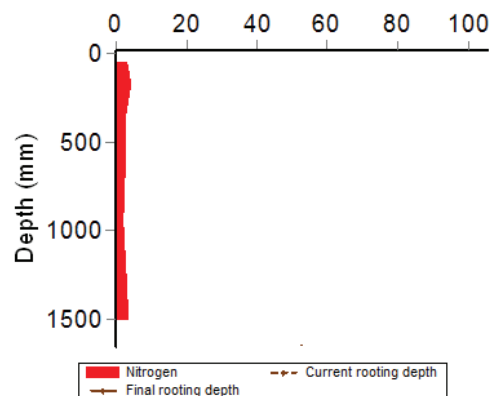
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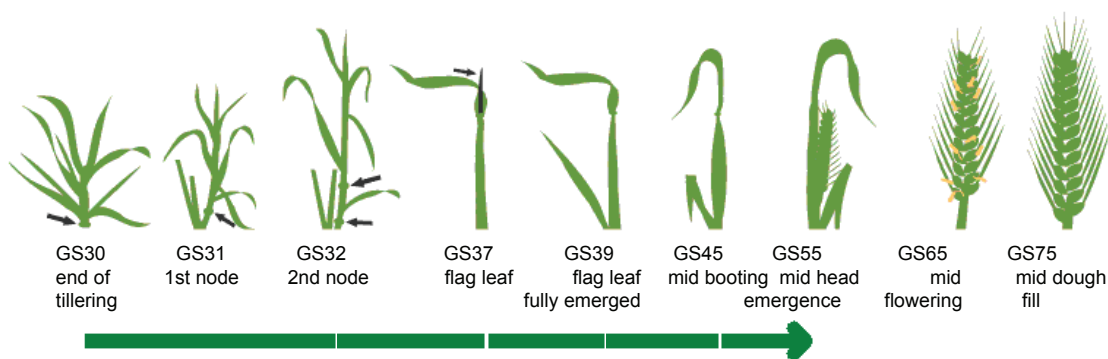
Water Availability **



Soil Nitrogen



Zadok's Growth Stage



Predicted

Earliest	11-Aug	16-Aug	22-Aug	5-Sep	10-Sep	20-Sep	30-Sep	7-Oct	21-Oct
Median	11-Aug	16-Aug	22-Aug	6-Sep	10-Sep	20-Sep	30-Sep	10-Oct	27-Oct
Latest	11-Aug	16-Aug	22-Aug	6-Sep	10-Sep	20-Sep	2-Oct	13-Oct	1-Nov

YIELD PROPHET PADDOCKS



ARDLETHAN Wheat 27 Sept 2012



ARDLETHAN Canola 27 Sept 2012



DIRNASEER Wheat 26 Sept 2012



DIRNASEER Canola 26 Sept 2012



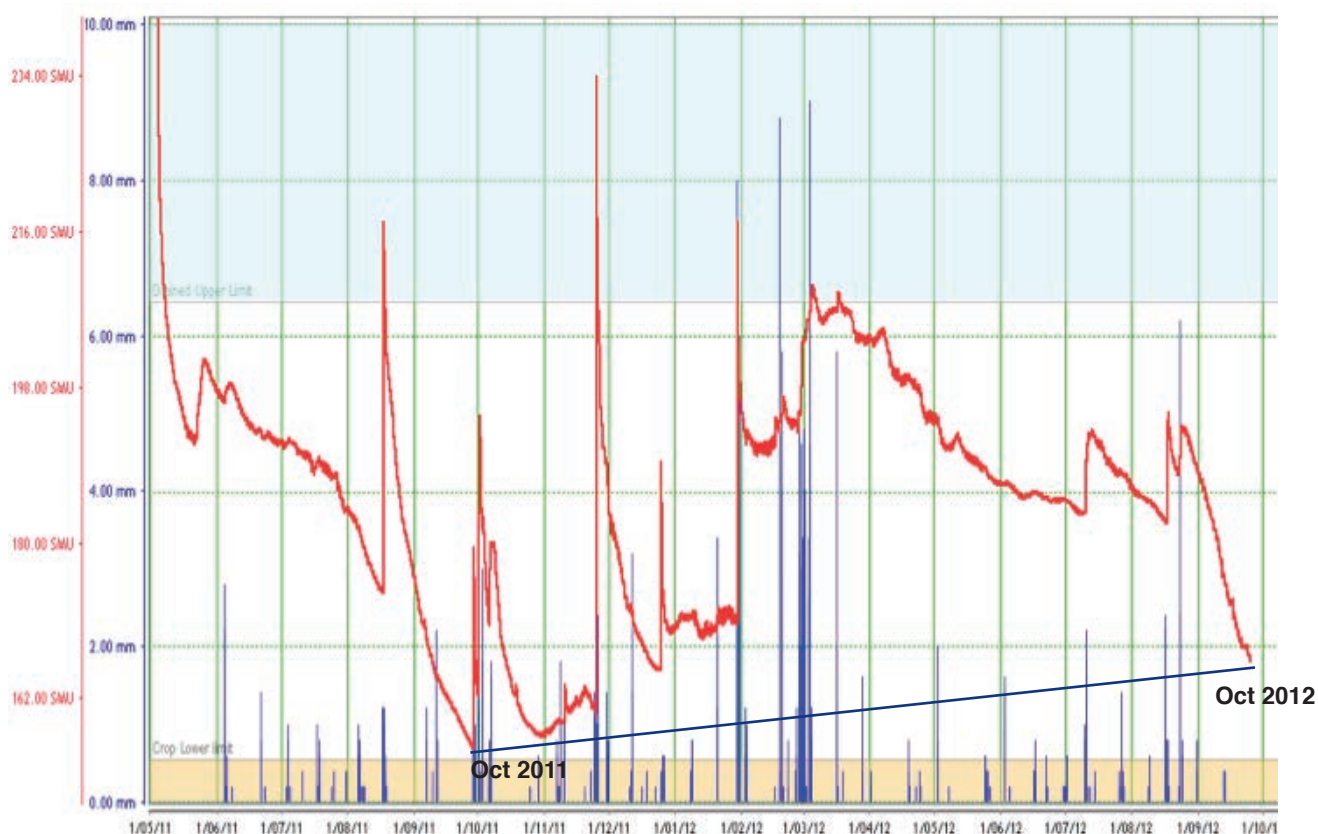
GREENETHORPE Wheat 27 Sept 2012



GREENETHORPE Canola 27 Sept 2012

SOIL MOISTURE PROBES

ARDLETHAN WHEAT



DIRNASEER CANOLA

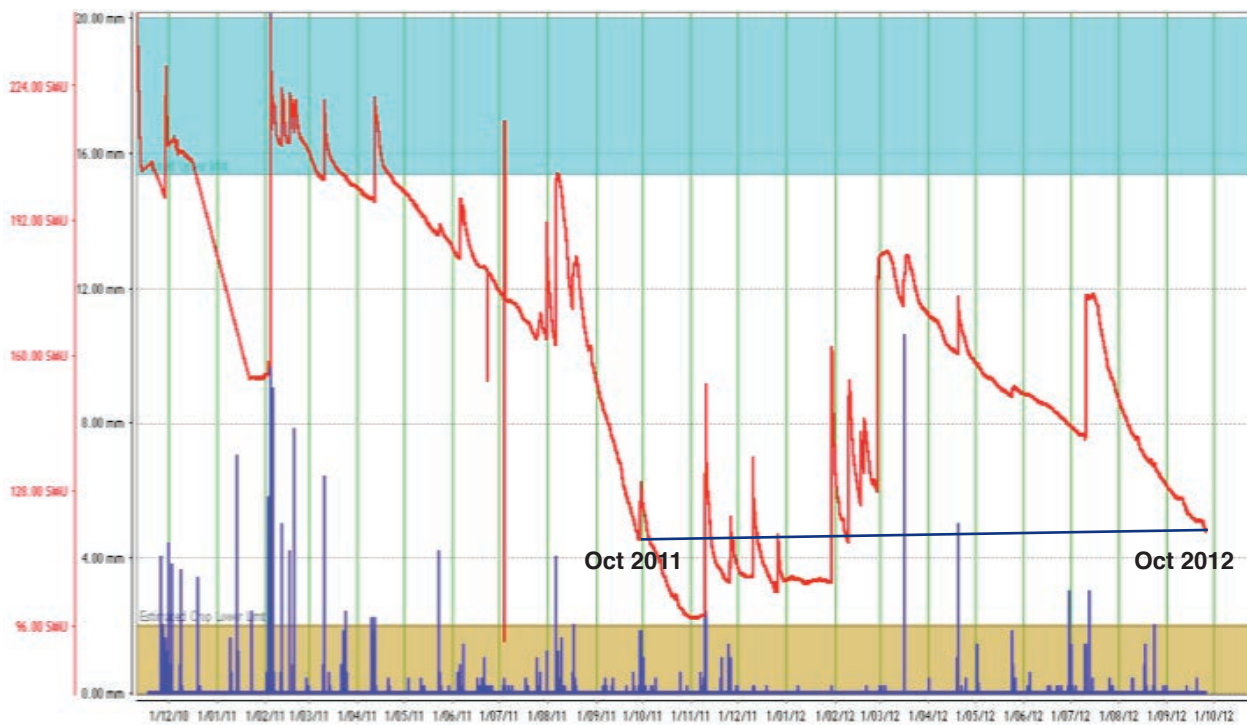


SOIL MOISTURE PROBES

GREENETHORPE WHEAT

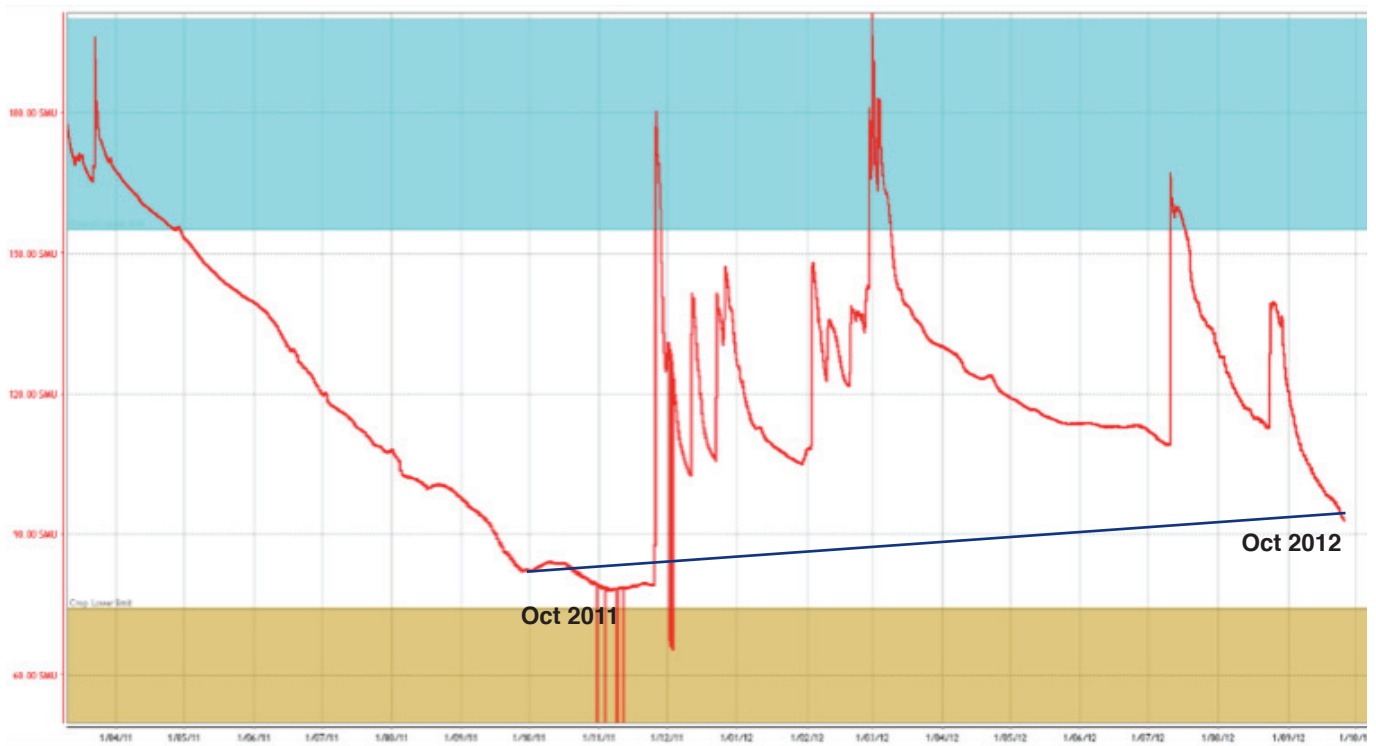


LOCKHART CANOLA



SOIL MOISTURE PROBES

TEMORA WHEAT on CANOLA STUBBLE



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