WEATHER or NOT

A REVIEW OF SEASONAL AND CROP OUTLOOKS FOR THE FARMLINK REGION

ISSUE August 2011

this issue

Change to Grain Yield Charts

An extra curve to the Grain Yield Probability chart has been added. The chart now shows the grain yield potential assuming no additional nitrogen (green line), grain yield potential assuming unlimited nitrogen from now on (red line) and grain yield potential assuming unlimited nitrogen since the start of the season (dotted blue line).

The extra line enables us to recognise crop potential yield from now on. If you find that the orange line and dotted blue lines are not over-lapping then this is an indication that your crop has suffered some nitrogen stress to date.

The season so far ...

The 2011 season began with a wetter than average summer and autumn period allowing for good levels of stored subsoil moisture. Late autumn rain meant crops were sown into good surface moisture, and had the added security of excellent subsoil moisture underneath. Conditions were good for crop emergence, but mouse damage has been significant in areas. Winter has been drier than usual, with most areas tracking at rainfall deciles of 3 or lower.

Since the July issue of Weather or Not we have seen significant late August rainfalls of between 52mm to 88.5mm across all sites. This has certainly added confidence across the district and has seen changes to the yield profit yield estimates.

Yield predictions for wheat have firmed and increased ranging from 4.5 -5t/ha. Yield predictions for canola have followed the same trend ranging from 2.1-2.7t/ha.

Late August rain has linked up profile moisture and has crops setting up with good potential. Crops are now progressing into periods of peak moisture demand and while far from being moisture limited; rain in early to mid September will have a large effect on crop yields.

A new feature to Weather or Not is the predicted Zadok's growth stages for wheat. This has proven to be accurate and can be used as a guide to track flowering times, and for estimating fungicide application timings at as important leaves emerge at Z32 and Z39.

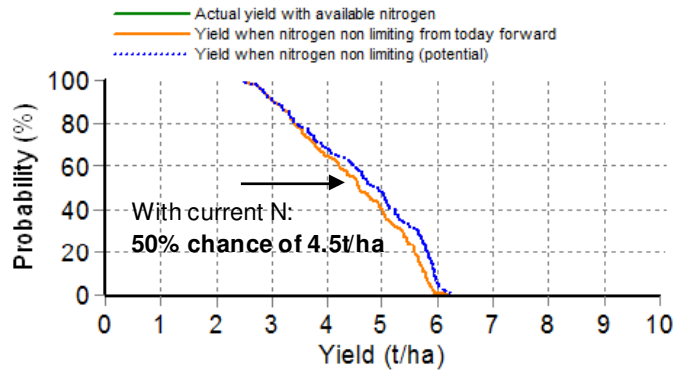
WHEAT

Grain Yield Probabilities

LOCKHART » » » »

variety Lincoln **sown** 11th May
N applied 7kg/ha
soil type Lockhart brown sodosol
growing season rainfall to date 150 mm
plant density 54 plants/m^2
current rooting depth 1255 mm
predicted final rooting depth 1650 mm

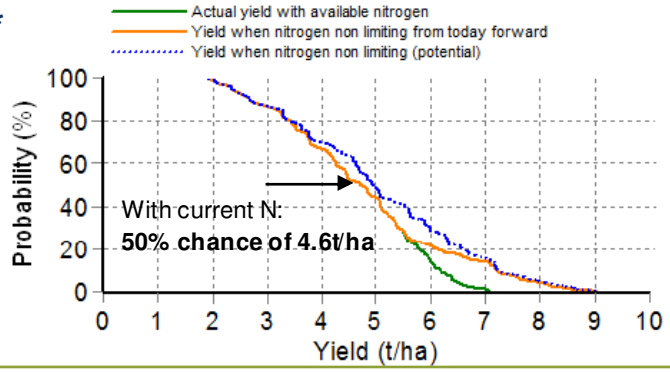
*



DIRNASEER » » » »

variety Crusader **sown** 2nd June
N applied 9kg/ha
soil type Dirnaseer red kandosol
growing season rainfall to date 154 mm
plant density 144 plants/m^2
current rooting depth 608 mm
predicted final rooting depth 1650 mm

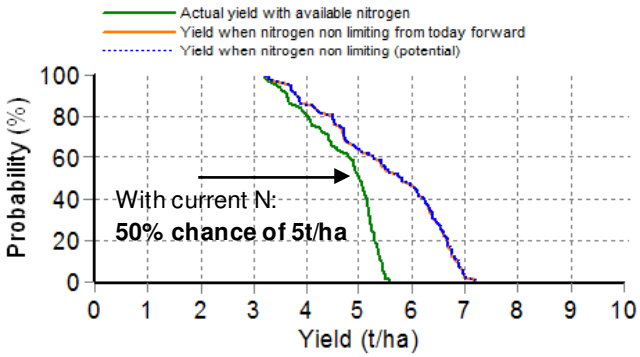
*



ARDLETHAN » » » »

variety Ventura **sown** 18th May
N applied 8kg/ha
soil type Griffith No697
growing season rainfall to date 132 mm
plant density 56 plants/m^2
current rooting depth 1200 mm
predicted final rooting depth 1500 mm

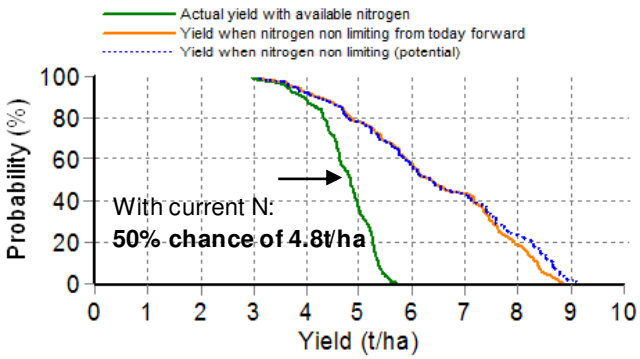
*



GREENETHORPE » » » »

variety Gregory **sown** 12th May
N applied 10kg/ha
soil type Forbes clay over sandy day
growing season rainfall to date 147 mm
plant density 150 plants/m^2
current rooting depth 1042 mm
predicted final rooting depth 1800 mm

*



Please note Yield Prophet is a tool to help guide decision-making only.

* 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.

Water Availability

Soil Nitrogen

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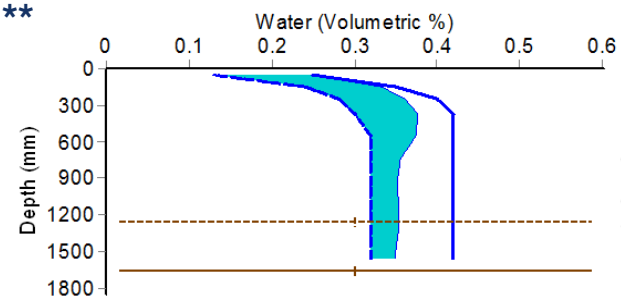
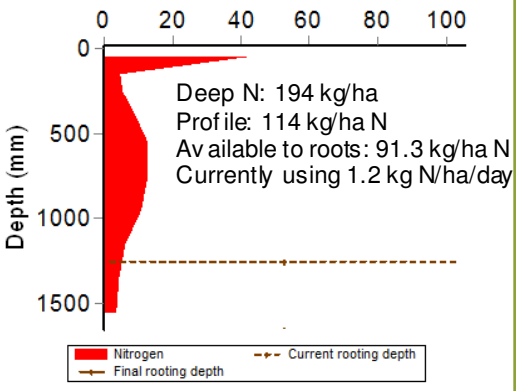


Current root depth = 1255 mm
Median final root depth = 1650 mm
Current crop PAW = 74 mm
Soil PAW = 87 mm
PAWC = 173 mm



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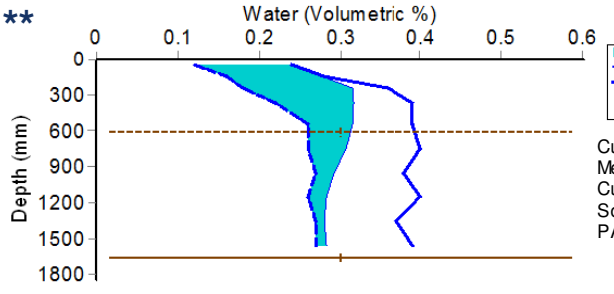
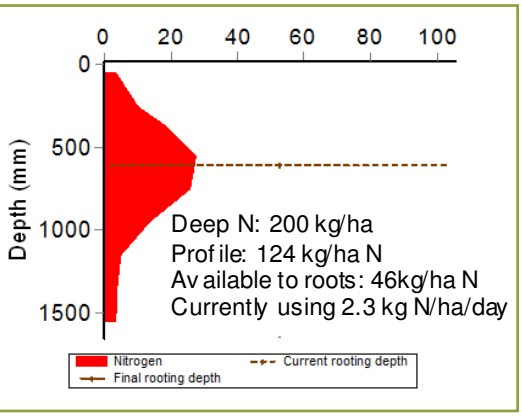


Current root depth = 608 mm
Median final root depth = 1650 mm
Current crop PAW = 62 mm
Soil PAW = 88 mm
PAWC = 216 mm



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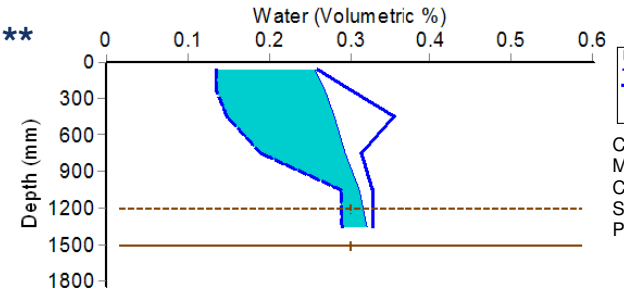
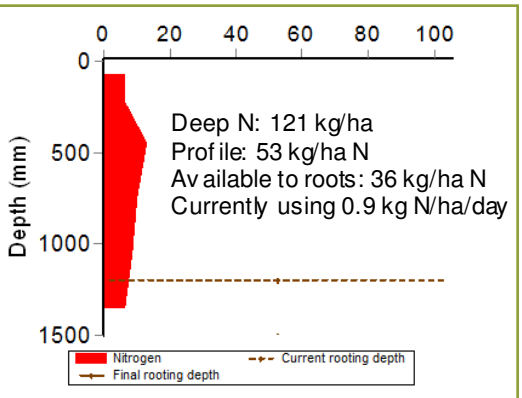


Current root depth = 1200 mm
Median final root depth = 1500 mm
Current crop PAW = 117 mm
Soil PAW = 127 mm
PAWC = 165 mm



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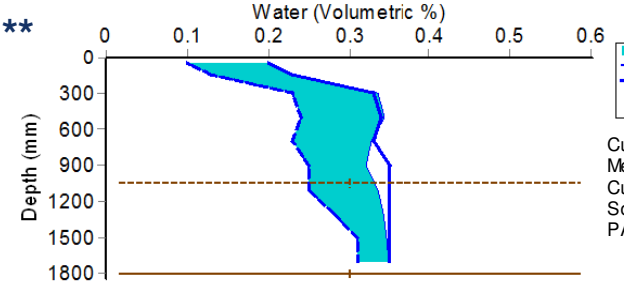
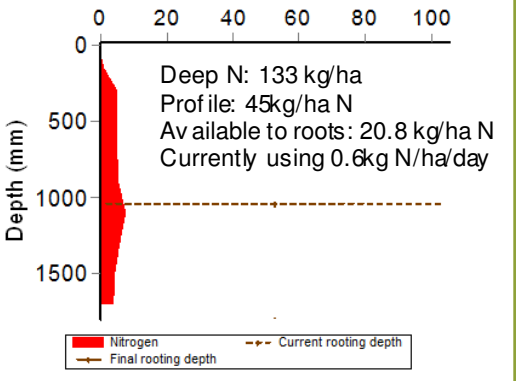


Current root depth = 1042 mm
Median final root depth = 1800 mm
Current crop PAW = 99 mm
Soil PAW = 141 mm
PAWC = 150 mm



** 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 may occur.

CANOLA

LOCKHART » » » »

variety Crusher
sown 25 April
N applied 7kg/ha
soil type Lockhart brown kandosol
growing season rainfall to date 150 mm
plant density 15 plants/m^2
current rooting depth 1029 mm
predicted final rooting depth 1021 mm

DIRNASEER » » » »

variety Jardee
sown 4th May
N applied 9kg/ha
soil type Dirnaseer red kandosol
growing season rainfall to date 154 mm
plant density 51 plants/m^2
current rooting depth 1491 mm
predicted final rooting depth 1650mm

ARDLETHAN » » » »

variety Fighter tt
sown 28th April
N applied 11.5kg/ha
soil type Griffith No697
growing season rainfall to date 132 mm
plant density 40 plants/m^2
current rooting depth 1500 mm
predicted final rooting depth 1500 mm

GREENETHORPE » » » »

variety Hyola 555tt
sown 4th May
N applied 10kg/ha
soil type Forbes clay over sandy clay
growing season rainfall to date 147 mm
plant density 40 plants/m^2
current rooting depth 1327 mm
predicted final rooting depth 1363 mm

Please note Yield Prophet is a tool to help guide decision-making only.

Grain Yield Probabilities

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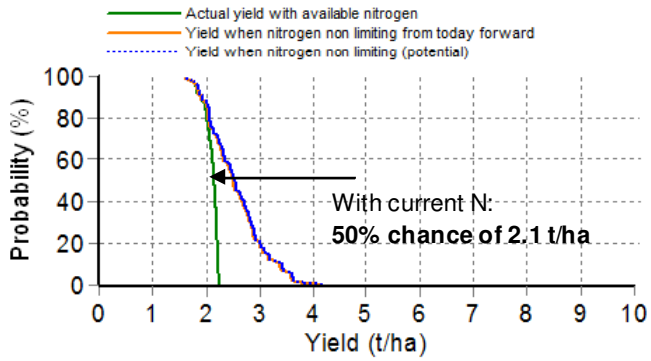

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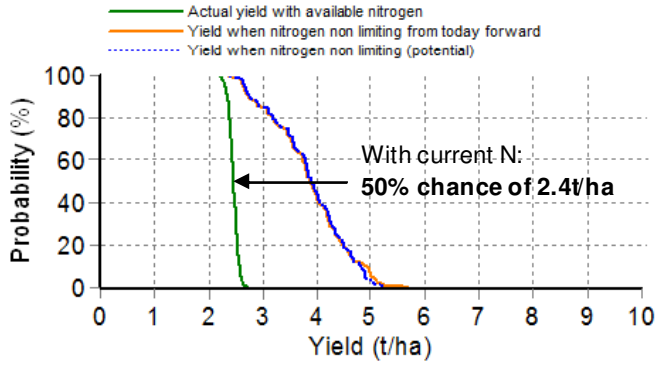

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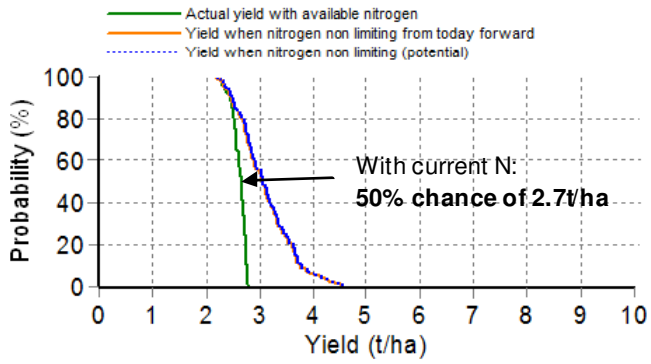

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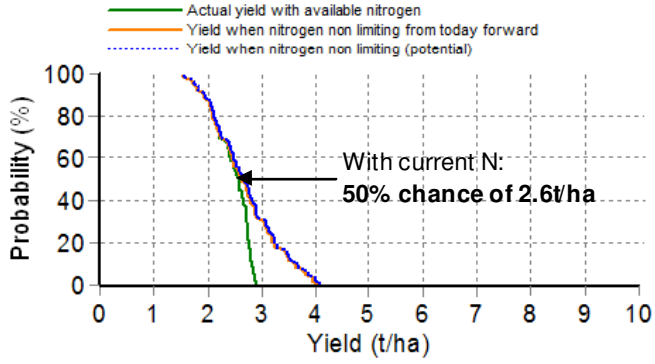

* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

Water Availability

Soil Nitrogen

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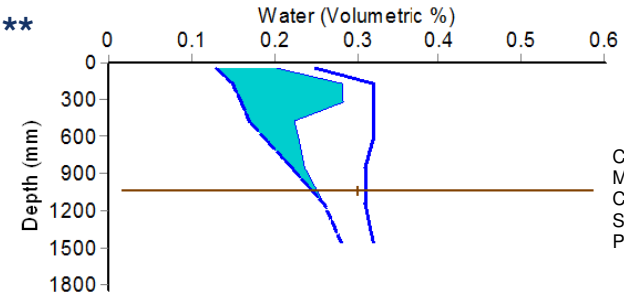
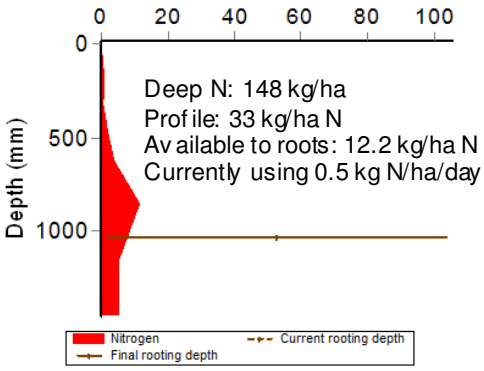


Current root depth = 1029 mm
Median final root depth = 1033 mm
Current crop PAW = 67 mm
Soil PAW = 66 mm
PAWC = 158 mm



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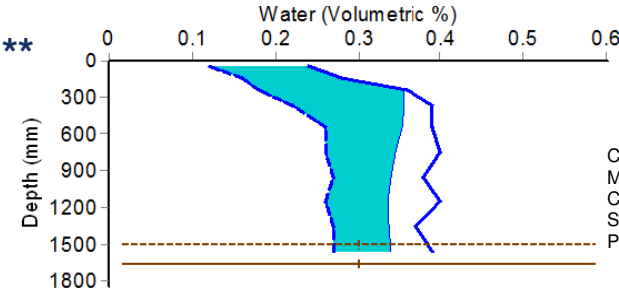
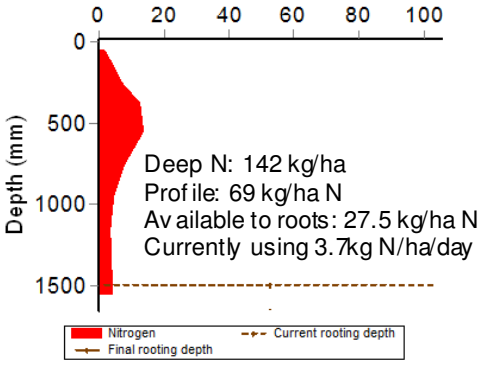


Current root depth = 1491 mm
Median final root depth = 1650 mm
Current crop PAW = 143 mm
Soil PAW = 155 mm
PAWC = 216 mm



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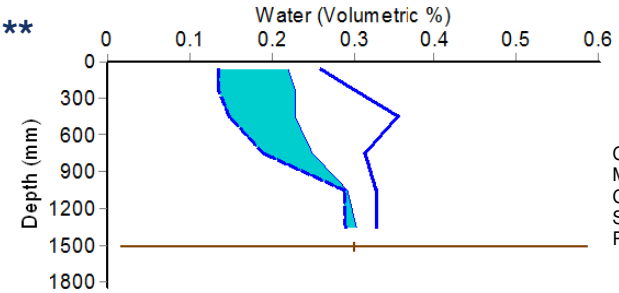
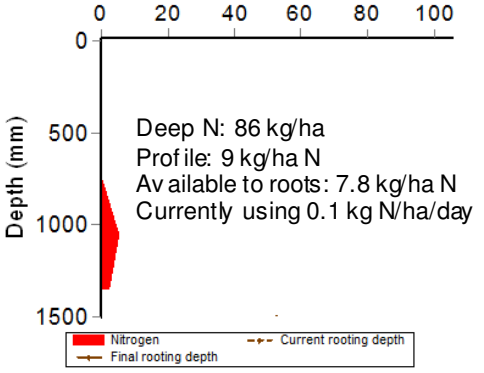


Current root depth = 1500 mm
Median final root depth = 1500 mm
Current crop PAW = 77 mm
Soil PAW = 77 mm
PAWC = 165 mm



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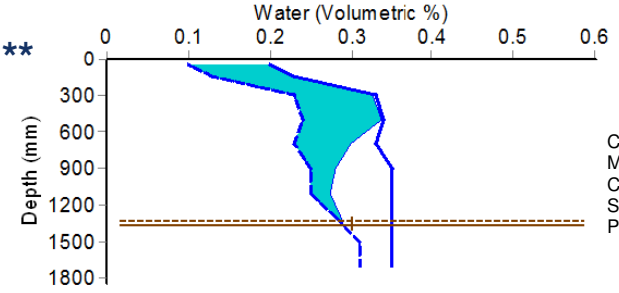
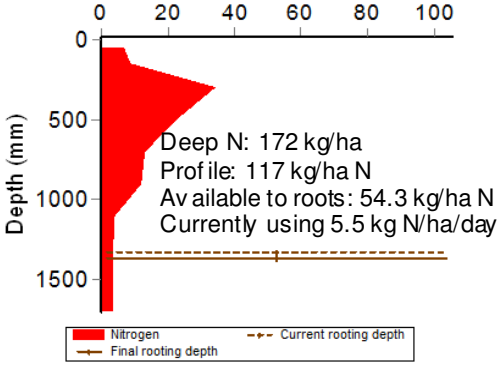


Current root depth = 1327 mm
Median final root depth = 1363 mm
Current crop PAW = 85 mm
Soil PAW = 82 mm
PAWC = 150 mm



** 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 may occur.

Growing Season Rainfall Deciles

Figure 1: LOCKHART growing season rainfall deciles

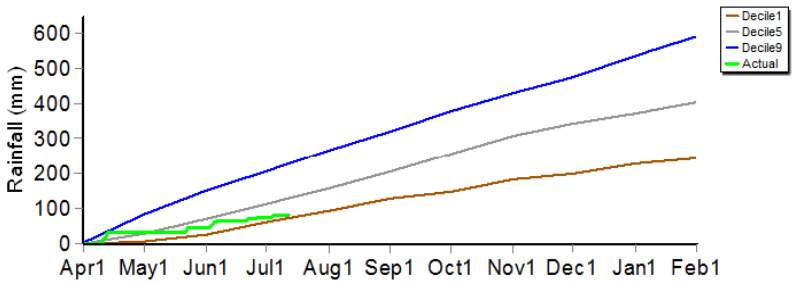


Figure 2: DIRNASEER growing season rainfall deciles

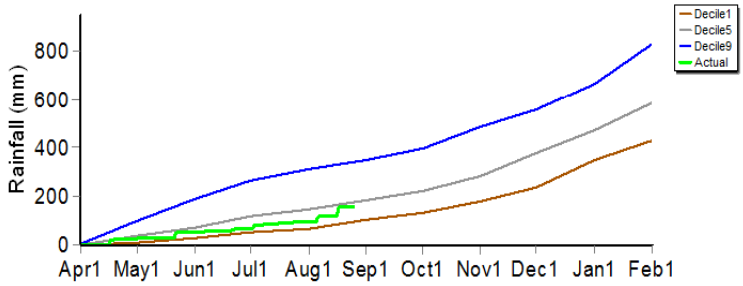


Figure 3: ARDLETHAN growing season rainfall deciles

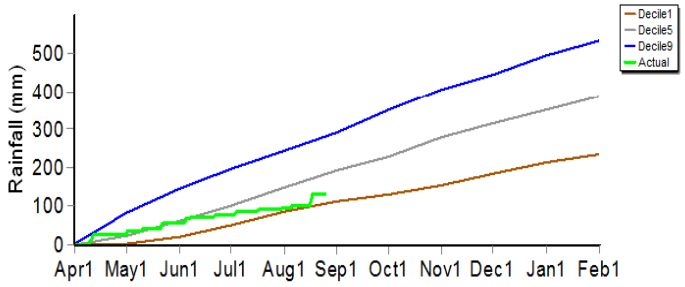
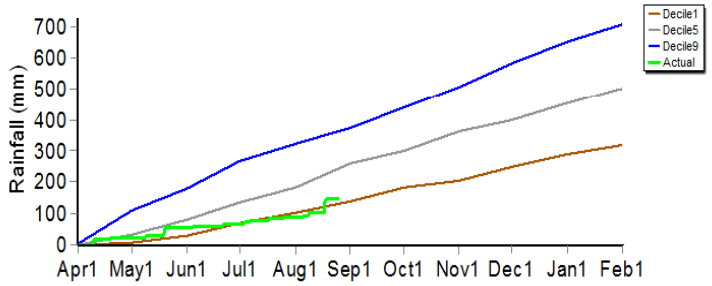


Figure 4: GREENETHORPE growing season rainfall deciles



Growing Season Rainfall Decile Explanations

Figures 1 to 4 show how growing season rainfall (green line) is tracking in the Yield Prophet paddocks compared to deciles:

- 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)
- In the yield probability graphs on the previous pages, '50% chance' takes into account rainfall to date and decile 5 (median) rainfall for the rest of the season.

LOCKHART » wheat Lincoln » 26 Aug 2011

LOCKHART » canola Crusher » 26 Aug 2011

DIRNASEER » wheat Crusader » 23 Aug 2011

DIRNASEER » canola Jardee » 23 Aug 2011

ARDLETHAN » wheat Ventura » 26 Aug 2011

ARDLETHAN » canola Fighter tt » 26 Aug 2011

GREENETHORPE » wheat Gregory » 23 Aug 2011

GREENETHORPE » canola Hyola 555tt » 23 Aug 2011

WHEAT

Grain Yield Probabilities

EH GRAHAM CENTRE Wagga »

variety Wedgetail **sown** 14th May
N applied 62kg/ha
soil type Dirnaseer red kandosol
growing season rainfall to date 159 mm
plant density 89 plants/m^2
current rooting depth 1051 mm
predicted final rooting depth 1650 mm

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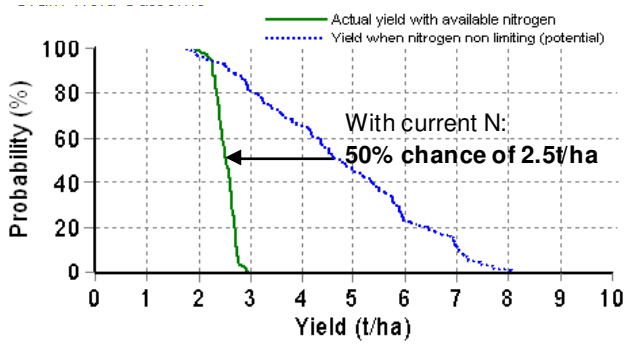
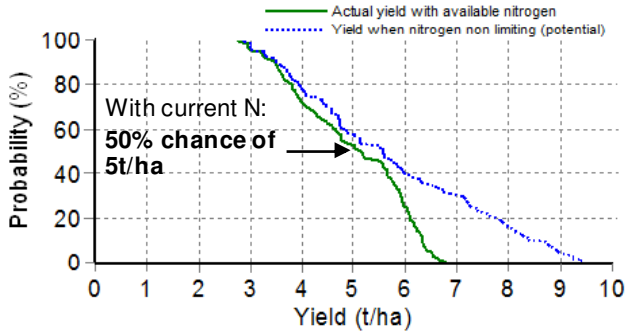


TEMORA » » » »

variety Bolac **sown** 15th May
N applied 54kg/ha
soil type Red chromosol Temora
growing season rainfall to date 126 mm
plant density 104 plants/m^2
current rooting depth 1333 mm
predicted final rooting depth 1350mm

*



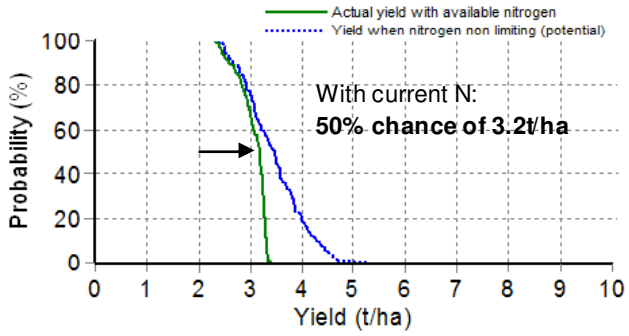
CANOLA

Grain Yield Probabilities

TEMORA » » » »

variety 45Y82 **sown** 15th April
N applied 74kg/ha
soil type red chromosol Temora
growing season rainfall to date 126 mm
plant density 40 plants/m^2
current rooting depth 1650mm
predicted final rooting depth 1650mm

*



Please note Yield Prophet is a tool to help guide decision-making only.

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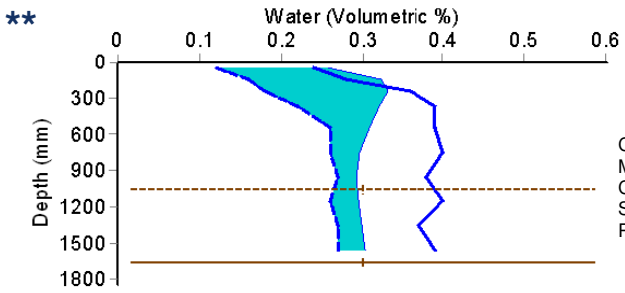
Minimising Crop Damage by Mice

Mouse numbers can build and decline rapidly depending on localised conditions. Constant vigilance and timely monitoring and control are required to minimise crop loss.

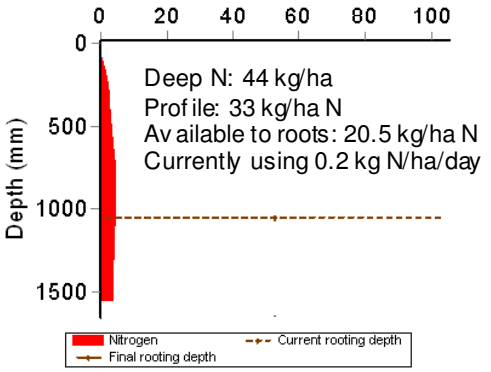
GRDC has released a new 'Mouse Control' fact sheet that addresses crop damage, observation and monitoring, management and control, economic impacts on treatment and yield as well as how to limit mouse population build-up. If you would like to view a copy online visit www.grdc.com.au and click on events and publications and then factsheets.

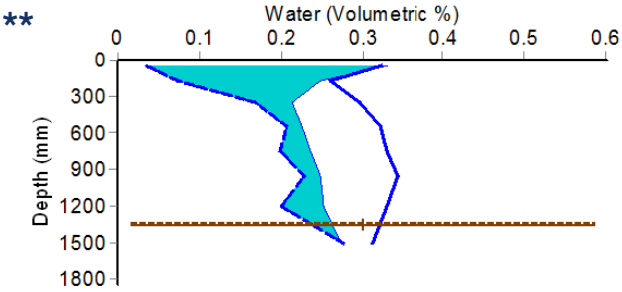
Water Availability

Soil Nitrogen

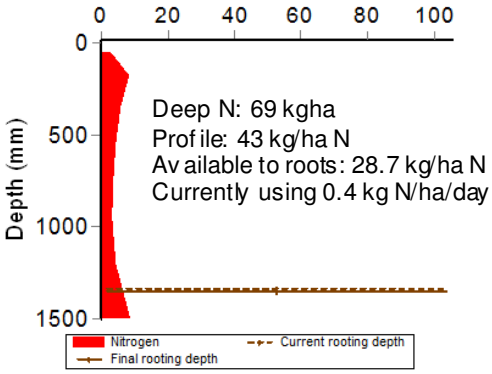


Current root depth = 1051 mm
Median final root depth = 1650 mm
Current crop PAW = 83 mm
Soil PAW = 102 mm
PAWC = 216 mm



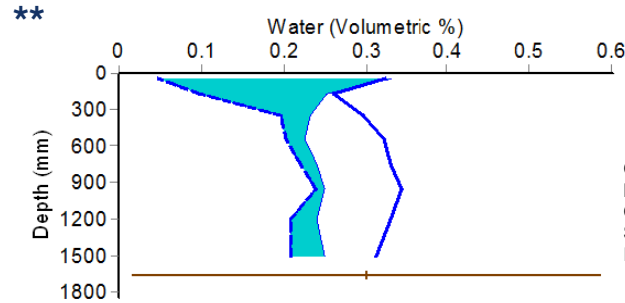


Current root depth = 1333 mm
Median final root depth = 1350 mm
Current crop PAW = 70 mm
Soil PAW = 70 mm
PAWC = 204 mm

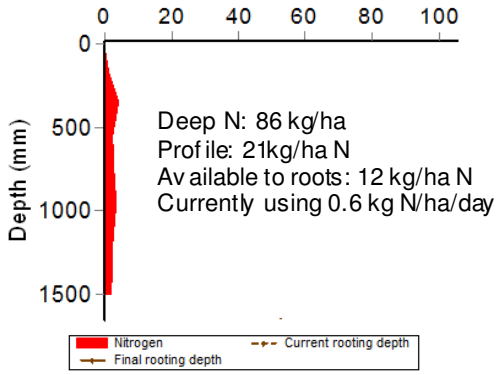


Water Availability

Soil Nitrogen



Current root depth = 1650 mm
Median final root depth = 1650 mm
Current crop PAW = 66 mm
Soil PAW = 66 mm
PAWC = 206 mm



** 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 may occur.

Australian Government's Carbon Farming Initiative

Legislation was passed by Parliament on August 23, 2011 to establish a regulated carbon offsets market in Australia.

Farmers and other landholders will be able to access international and domestic carbon markets.

Increasing carbon in soils or vegetation, or lowering emissions from livestock or fertiliser use creates the potential to generate carbon credits for landholders that can be sold to companies who wish to offset their carbon pollution.

Scientists, industry and rural communities are working with the government to find more carbon farming possibilities, such as manure management, fertiliser management, savanna burning and managing methane from livestock.

Later this year the Administrator for the Carbon Farming Initiative will begin operating and eligible projects can backdate credits to 1 July 2010.

More information on the carbon farming initiative can be found at www.daff.gov.au/climatechange/cfi

This information is the latest from the Bureau of Meteorology in Australia. The southern outlook for September to November shows that neutral conditions are likely to continue, while no models suggest EL Nino conditions are likely.

BUREAU OF METEOROLOGY

Mixed rainfall odds for spring

www.bom.gov.au/climate

The national outlook for spring (September to November) shows a moderate shift in the odds favouring a wetter than normal season over southwestern WA and southwest Queensland. Conversely, drier conditions are favoured through parts of southern Australia.

The chances of receiving above normal rainfall during spring period is between 35 and 40% over central and southeastern SA and a small region on the border with Victoria and NSW.

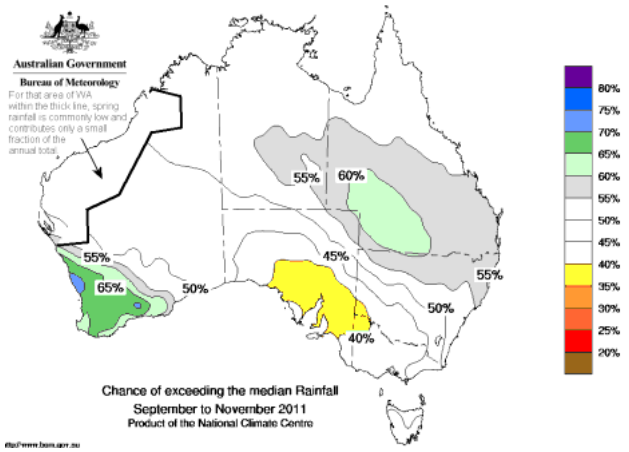


Figure 5—Chance of exceeding median rainfall September—November 2011 (Bureau of Meteorology)

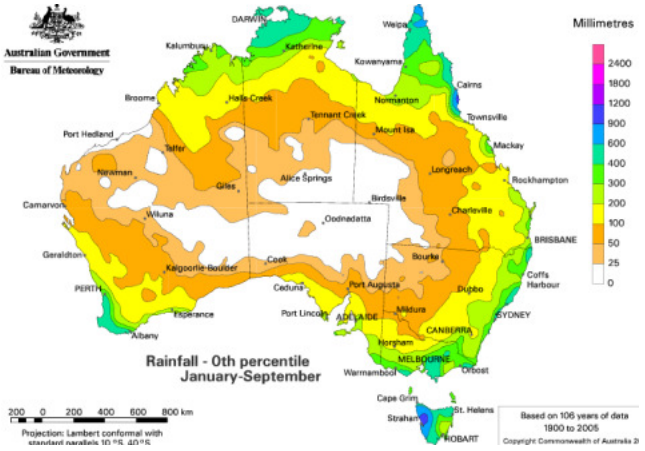


Figure 6—Rainfall 0th percentile January—September 2011 (Bureau of Meteorology)

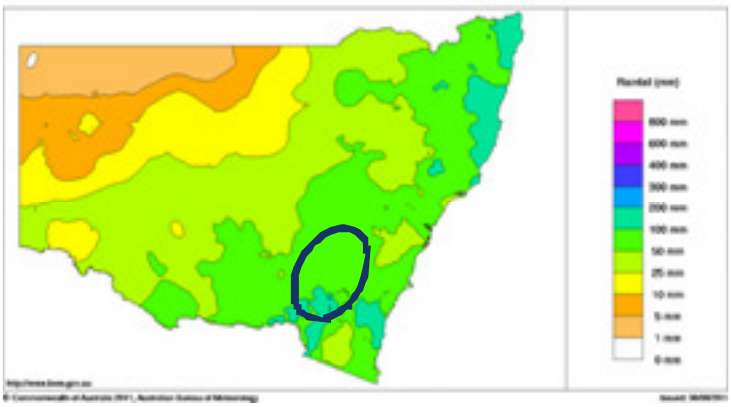
BUREAU OF METEOROLOGY

NSW rainfall totals (mm)

August 1– August 30

www.bom.gov.au/climate

Right: Figure 7 —NSW rainfall totals (mm) August 1—August 30, 2011
(Bureau of Meteorology)



ZADOK'S GROWTH STAGES

Predicted growth stages for wheat at the yield prophet sites

	GS30	GS31	GS32	GS37	GS39	GS45	GS55	GS65	GS75
		1st node	2nd node		Full flag leaf	Booting	Ear emergence	Flowering	Ripening
LOCKHART WHEAT									
Earliest	3-Aug	5-Aug	8-Aug	21-Aug	27-Aug	1-Sep	11-Sep	19-Sep	7-Oct
Median	3-Aug	5-Aug	8-Aug	22-Aug	27-Aug	5-Sep	16-Sep	26-Sep	14-Oct
Latest	3-Aug	5-Aug	8-Aug	22-Aug	27-Aug	7-Sep	20-Sep	3-Oct	22-Oct
DIRNASEER WHEAT									
Earliest	28-Aug	29-Aug	31-Aug	14-Sep	18-Sep	25-Sep	6-Oct	14-Oct	1-Nov
Median	28-Aug	30-Aug	2-Sep	17-Sep	22-Sep	1-Oct	11-Oct	22-Oct	9-Nov
Latest	28-Aug	1-Sep	4-Sep	21-Sep	28-Sep	7-Oct	19-Oct	1-Nov	19-Nov
ARDLETHAN WHEAT									
Earliest	6-Aug	9-Aug	13-Aug	26-Aug	30-Aug	4-Sep	14-Sep	22-Sep	10-Oct
Median	6-Aug	9-Aug	13-Aug	26-Aug	31-Aug	9-Sep	19-Sep	29-Sep	16-Oct
Latest	6-Aug	9-Aug	13-Aug	26-Aug	2-Sep	11-Sep	24-Sep	7-Oct	25-Oct
GREENETHORPE WHEAT									
Earliest	17-Aug	21-Aug	24-Aug	3-Sep	8-Sep	15-Sep	24-Sep	6-Oct	22-Oct
Median	17-Aug	21-Aug	24-Aug	7-Sep	13-Sep	21-Sep	2-Oct	11-Oct	29-Oct
Latest	17-Aug	21-Aug	24-Aug	10-Sep	16-Sep	27-Sep	10-Oct	20-Oct	9-Nov

Would you like to see the predicted Zakok's growth stages for wheat yield prophet sites in the next edition of Weather or Not ?

Email your comments to Karen Giddings

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FarmLink's **WEATHER or NOT** is partly funded by The National Climate Adaptation and Mitigation Initiative

Australian Government

Department of Agriculture, Fisheries and Forestry