



# WEATHER or NOT

A REVIEW OF SEASONAL AND CROP OUTLOOKS FOR THE FARMLINK REGION

ISSUE July 2011

## Bureau of Meteorology predictions

BOM predictions for rainfall over our region are 45% chance of exceeding average rainfalls, 55% chance of below average rainfalls based on current SOI phases.

## Yield Prophet



FarmLink members can view the full report of each Yield Prophet copy by going online [www.yieldprophet.com.au](http://www.yieldprophet.com.au)  
**username:** farmlink  
**password:** farmlink

Click on 'My Reports', then 'View Reports'. Select the desired location then click on 'show selected report(s)'.



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## The season so far ...

The 2011 season began with excellent out-of-season rainfalls. A very wet harvest period and great follow-up rains in January, February and March saw profiles brimming. The downside was weather damaged grain, an extended harvest period and heavy summer weed germinations.

High stubble loads were the *burning* pre-sowing issue and most growers did just that. Many properties were unable to harvest sections of their crop and these areas became perfect mice harbours. Mice numbers exploded during the summer and became a serious threat to crops sown this year. Regular baiting has been carried out over a wide region.

Total rainfalls for early 2011 ranged from 225 mm at Greenethorpe to 348 mm at Ardlethan.

Since March, the rainfall patterns have settled

down and all sites are now running below decile 3 levels for the 2011 growing season, Greenethorpe and Lockhart currently sit at decile 1.

Median predicted wheat yields\* currently range from 2.7t/ha at Ardlethan to 4.5t/ha at Lockhart. Median predicted yields for Canola range from 1.7t/ha at Ardlethan to 2.6t/ha at Greenethorpe. Please note these yield predictions are based on median rainfall for the rest of the year and no disease, pest, frost or heat stress.

Soil moisture profiles for all crops are reasonable due to excellent out of season rainfall events. Total moisture in profiles ranges from 65.5mm at Dirnaseer to 78mm at Ardlethan.

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

Principal Sponsor

**CommonwealthBank**

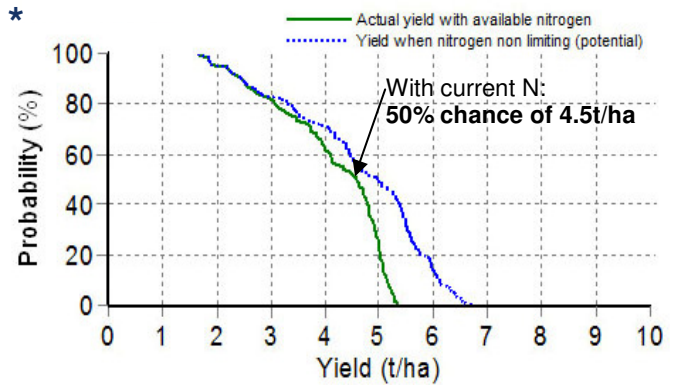


# WHEAT

## Grain Yield Probabilities

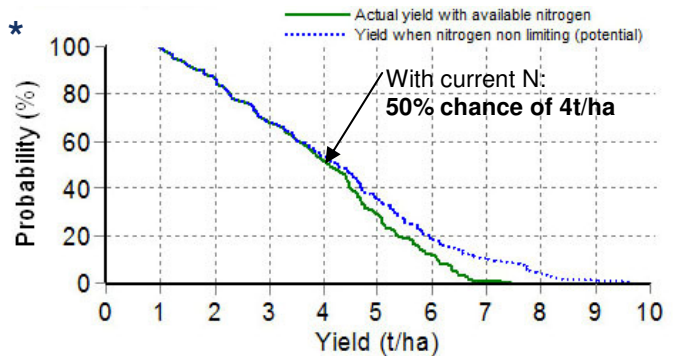
### LOCKHART » » » »

**variety** Lincoln **sown** 11th May  
**N applied** 7kg/ha  
**soil type** Lockhart brown sodosol  
**growing season rainfall to date** 72.3mm  
**plant density** 54 plants/m<sup>2</sup>  
**current rooting depth** 713 mm  
**predicted final rooting depth** 1650 mm



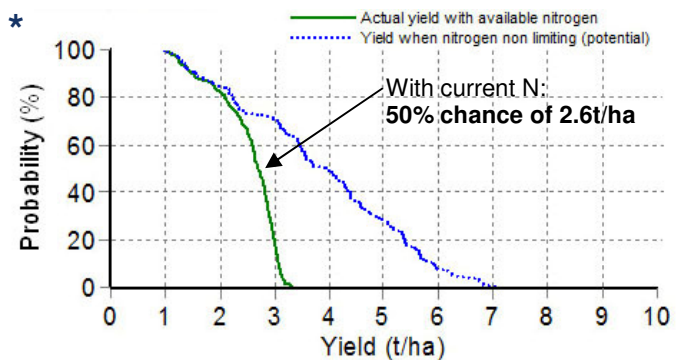
### DIRNASEER » » » »

**variety** Crusader **sown** 2nd June  
**N applied** 9kg/ha  
**soil type** Dirnaseer red kandosol  
**growing season rainfall to date** 65.5mm  
**plant density** 144 plants/m<sup>2</sup>  
**current rooting depth** 314mm  
**predicted final rooting depth** 1486mm



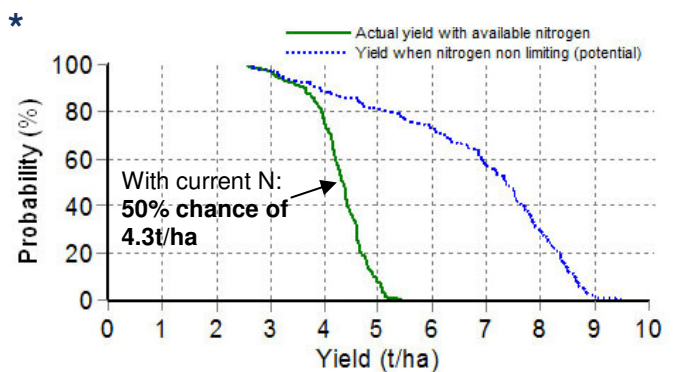
### ARDLETHAN » » » »

**variety** Ventura **sown** 18th May  
**N applied** 8kg/ha  
**soil type** Ardlethan red kandosol  
**growing season rainfall to date** 80mm  
**plant density** 56 plants/m<sup>2</sup>  
**current rooting depth** 613mm  
**predicted final rooting depth** 1441mm



### GREENETHORPE » » » »

**variety** Gregory **sown** 12th May  
**N applied** 10kg/ha  
**soil type** Forbes clay over sandy clay  
**growing season rainfall to date** 67.5mm  
**plant density** 150 plants/m<sup>2</sup>  
**current rooting depth** 604mm  
**predicted final rooting depth** 1740mm

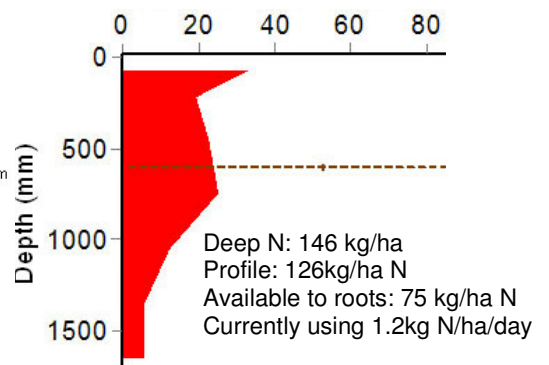
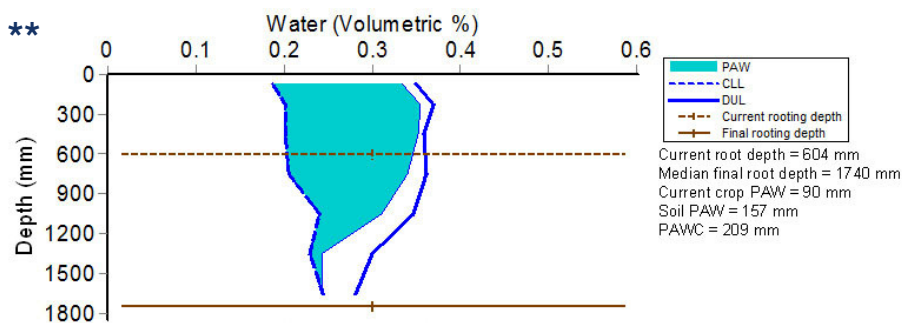
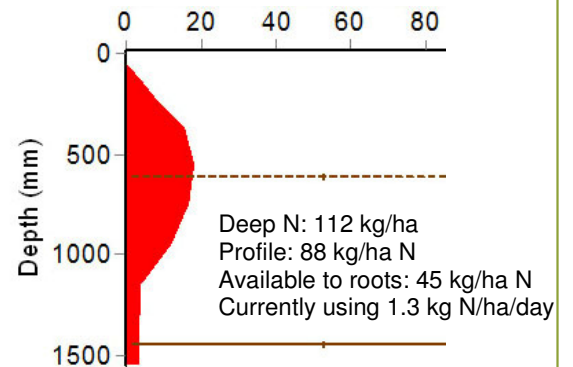
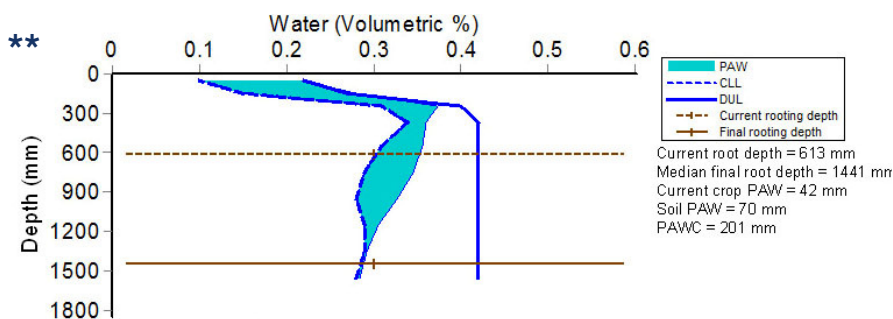
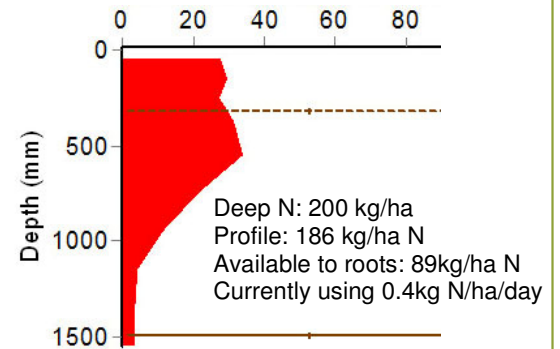
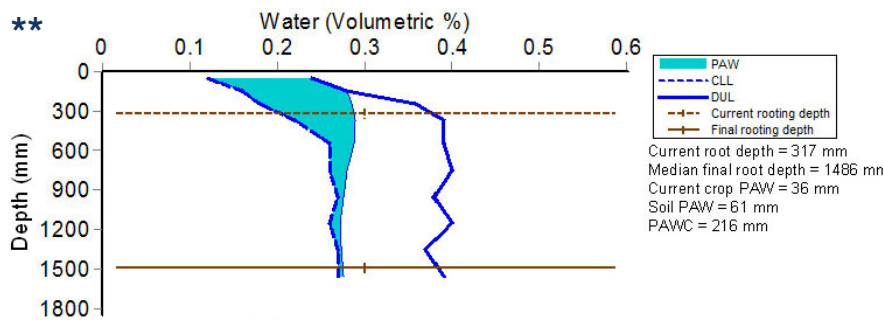
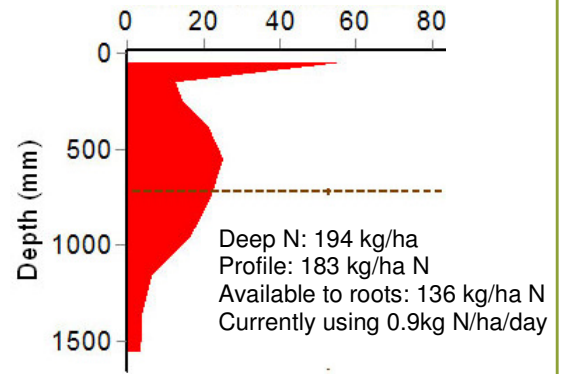
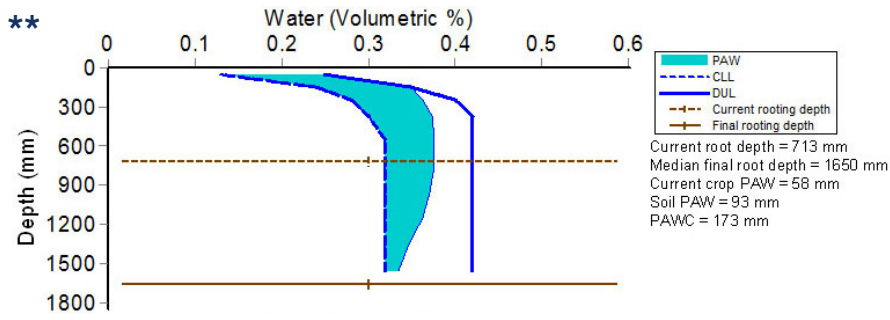


**Please note** Yield Prophet is a tool to help guide decision-making only.

\* 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



\*\* 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 11 May

N applied 7kg/ha

soil type Lockhart brown kandosol

growing season rainfall to date 72.3mm

plant density 15 plants/m<sup>2</sup>

current rooting depth 985 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 65.5mm

plant density 51 plants/m<sup>2</sup>

current rooting depth 851mm

predicted final rooting depth 1650mm

## ARDLETHAN » » » »

variety Fighter tt sown 28th April

N applied 11.5kg/ha

soil type Dirnaseer red kandosol

growing season rainfall to date 80mm

plant density 40 plants/m<sup>2</sup>

current rooting depth 1409mm

predicted final rooting depth 1500mm

## GREENETHORPE » » » »

variety Hyola 555tt sown 4th May

N applied 10kg/ha

soil type Forbes clay over sandy clay

growing season rainfall to date 67.5mm

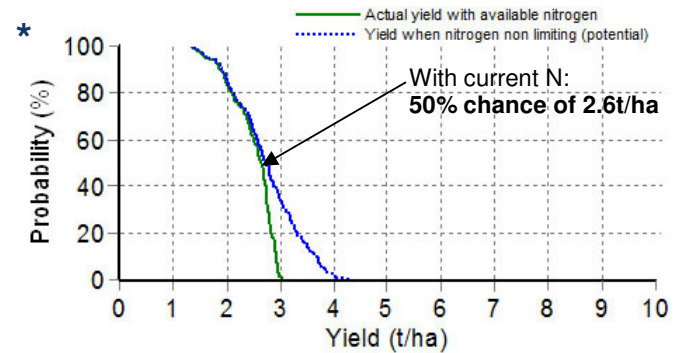
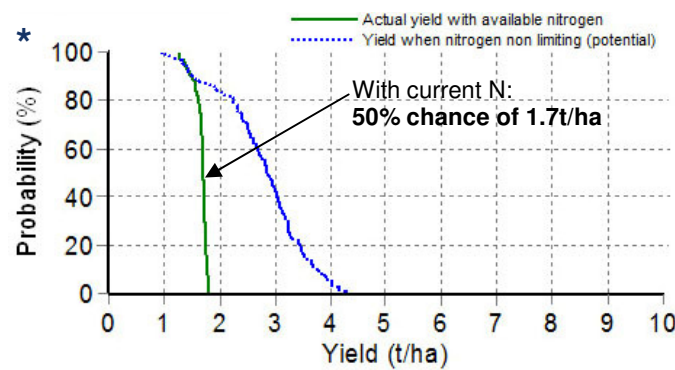
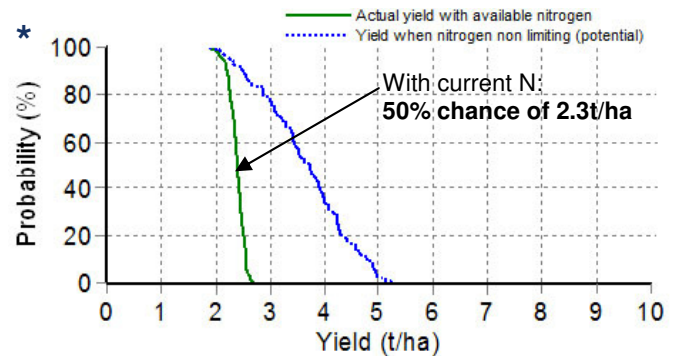
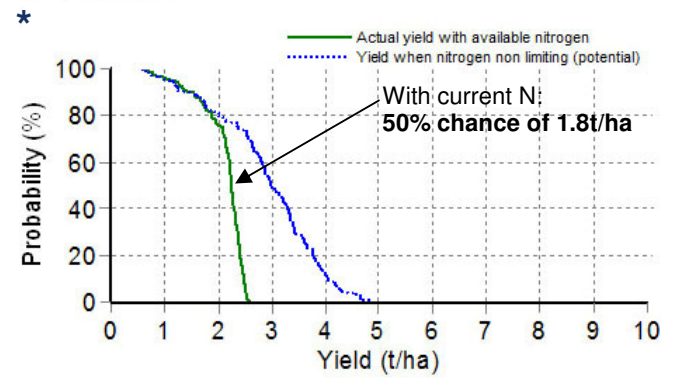
plant density 40 plants/m<sup>2</sup>

current rooting depth 900mm

predicted final rooting depth 1500mm

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

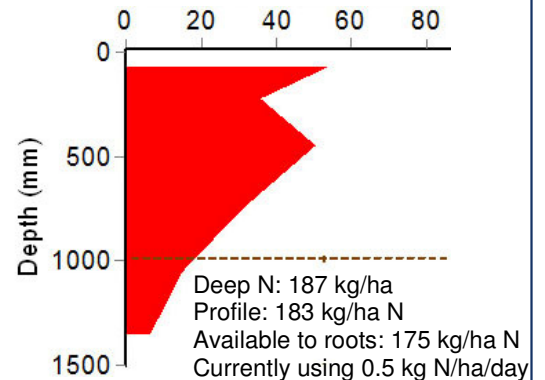
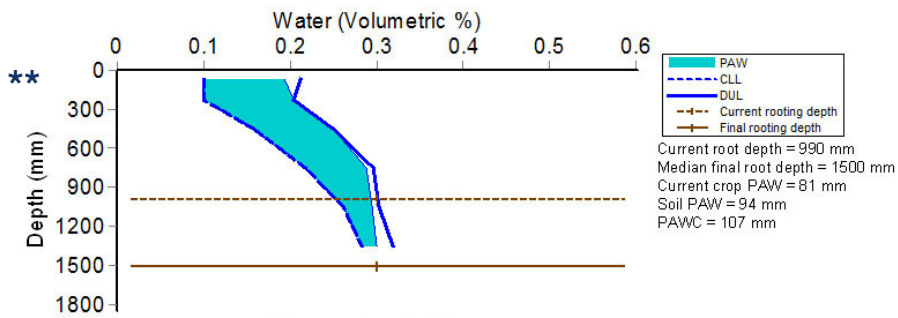
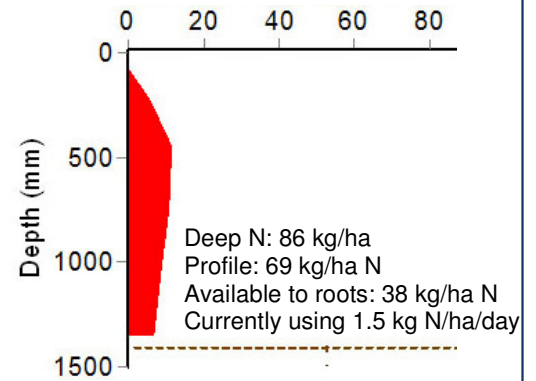
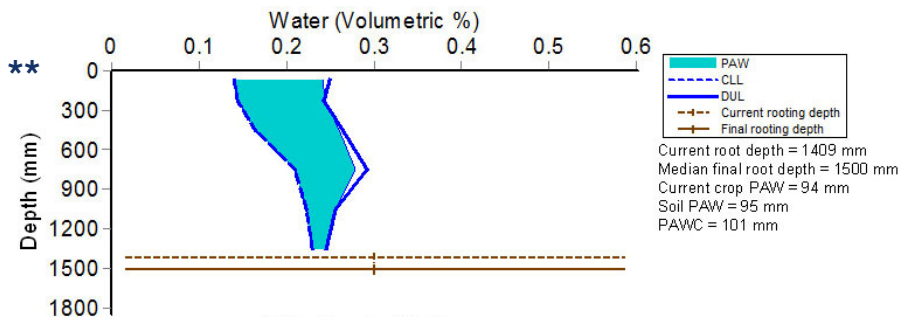
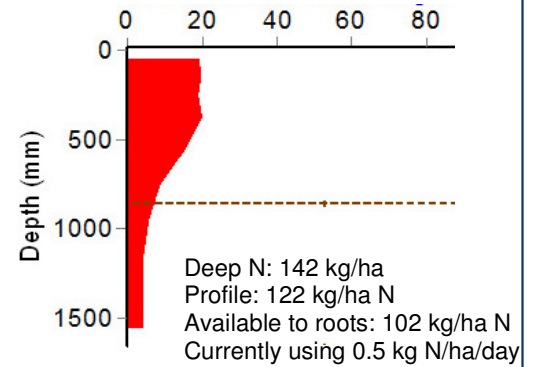
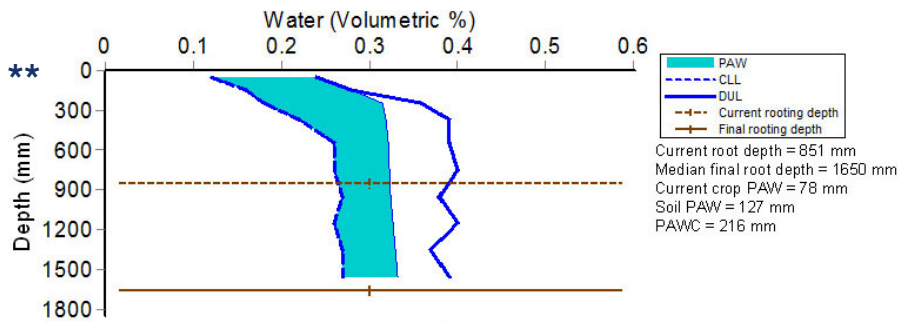
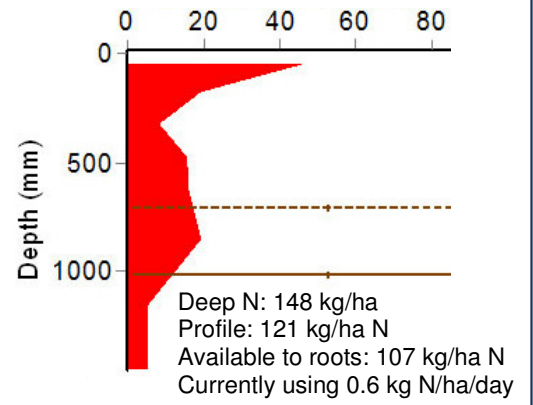
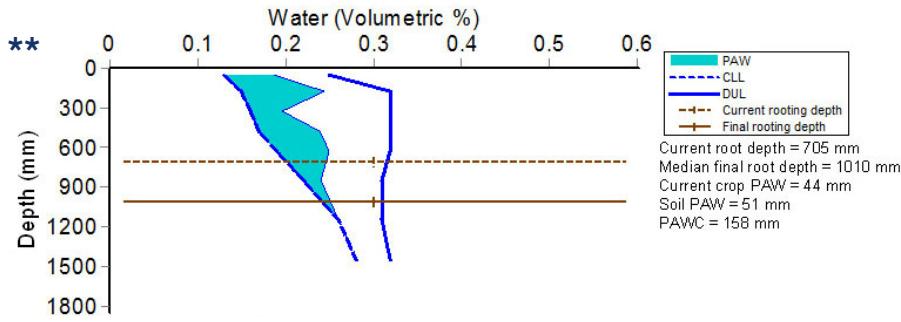
# Grain Yield Probabilities



\* 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.

# Water Availability

# Soil Nitrogen



\*\* 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

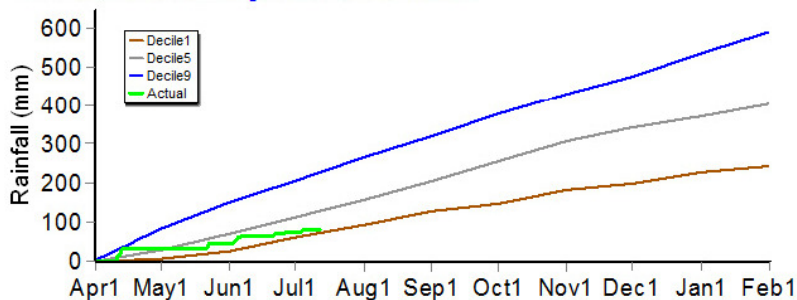


Figure 2: DIRNASEER growing season rainfall deciles

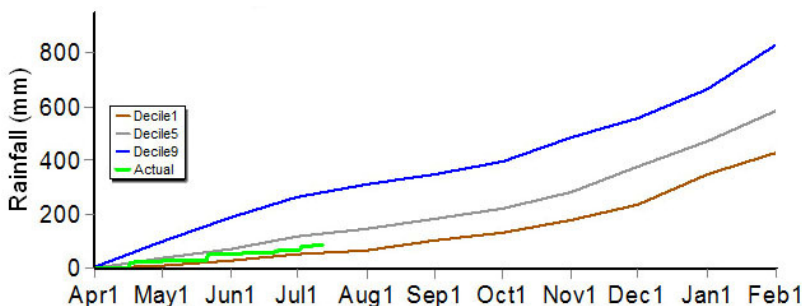


Figure 3: ARDLETHAN growing season rainfall deciles

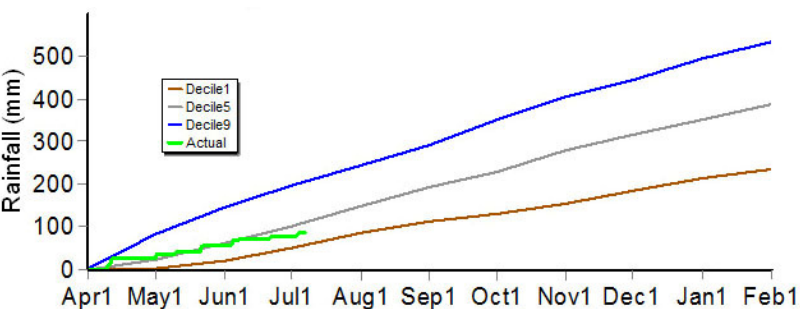
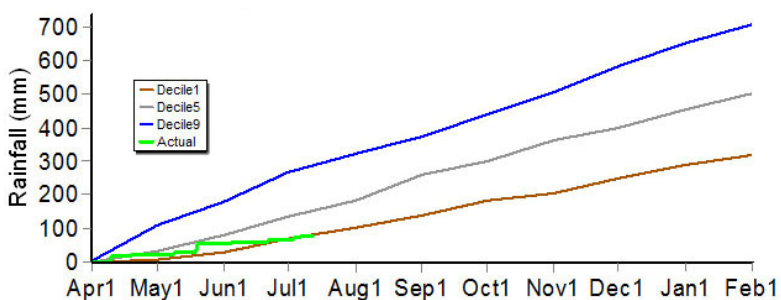


Figure 4: GREENETHORPE growing season rainfall deciles



## 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.

**DON'T LEAVE US**  
**hanging like a**  
**bird on a wire!**



**FarmLink Research**  
**would love to hear**  
**from you.**

**What do you like about**  
**Weather or Not?**

**What could we be doing better?**

**Please email your comments to**  
**Karen Giddings**  
**FarmLink Research**  
**Communications Coordinator**  
**karen@farmlink.com.au**



# Yield Prophet Paddocks June - July 2011



LOCKHART » wheat Lincoln » 10 June 2011



LOCKHART » canola Crusher » 10 June 2011



DIRNASEER » wheat Crusader » 13 July 2011



DIRNASEER » canola Jardee » 13 July 2011



ARDLETHAN » wheat Ventura » 10 June 2011



ARDLETHAN » canola Fighter tt » 10 June 2011



GREENETHORPE » wheat Gregory » 9 June 2011



GREENETHORPE » canola Hyola 555tt » 9 June 2011

# WHEAT

## EH GRAHAM CENTRE Wagga >> >>

>> >>

variety Wedgetail sown 14th May

N applied 62kg/ha

soil type Dirnaseer red kandosol

growing season rainfall to date 89mm

plant density 89 plants/m<sup>2</sup>

current rooting depth 612mm

## TEMORA >> >> >>

variety Bolac sown 15th May

N applied 54kg/ha

soil type red chromosol Temora

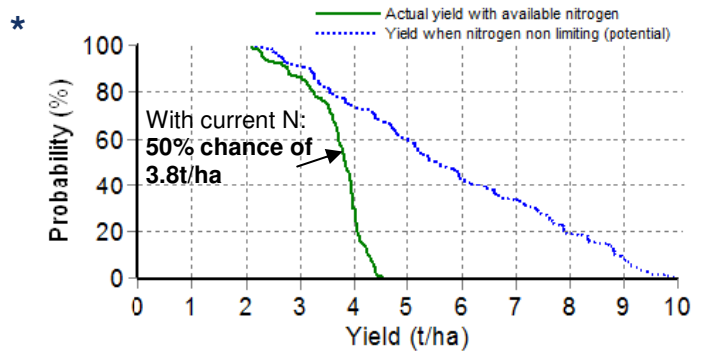
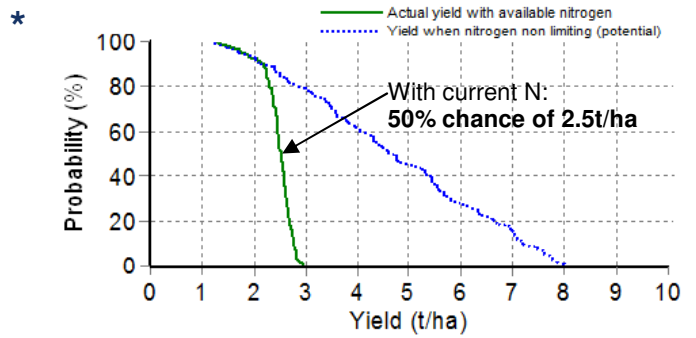
growing season rainfall to date 71.8mm

plant density 104 plants/m<sup>2</sup>

current rooting depth 1120mm

predicted final rooting depth 1350mm

## Grain Yield Probabilities



# CANOLA

## TEMORA >> >> >>

variety 45Y82 sown 15th May

N applied 74kg/ha

soil type red chromosol Temora

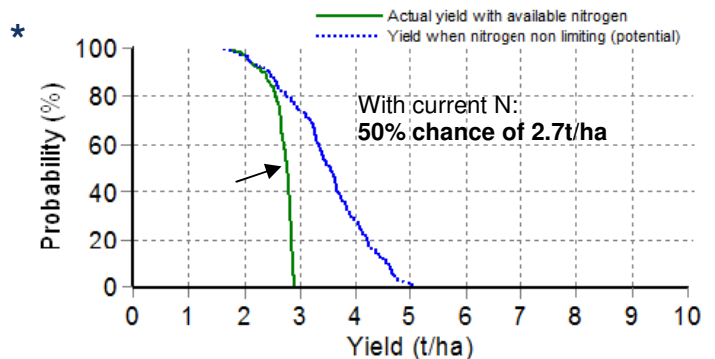
growing season rainfall to date 71.8mm

plant density 40 plants/m<sup>2</sup>

current rooting depth 1650mm

predicted final rooting depth 1650mm

## Grain Yield Probabilities



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

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## Moisture Knowledge Network Probes

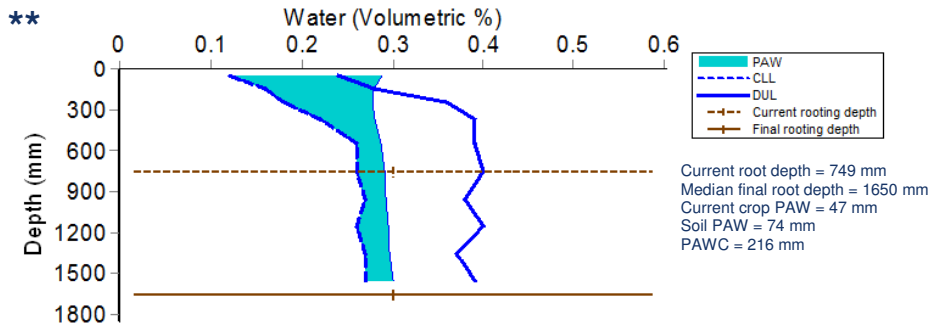
The FarmLink Soil Moisture Knowledge Network has installed a series of capacitance probes to measure soil moisture across the FarmLink region.

As part of the project, a pair of probes were installed in the FarmLink and GRDC Water Use Efficiency Trial site at Temora. This gave the opportunity to compare the accuracy of the new capacitance probes against a calibrated neutron moisture probe being used by CSIRO in the trial.

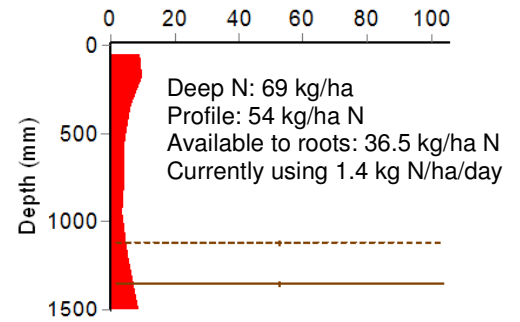
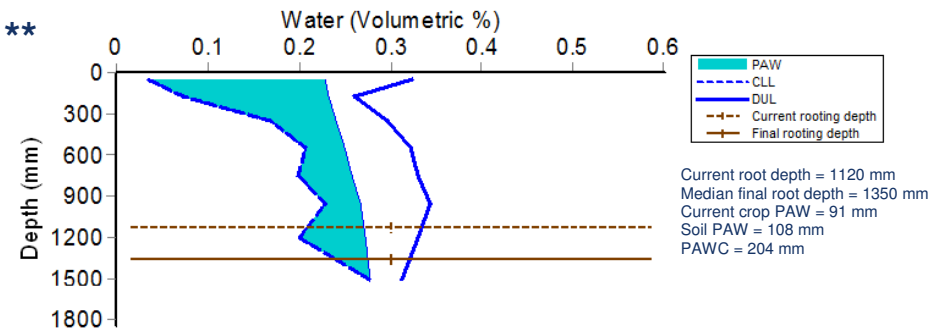
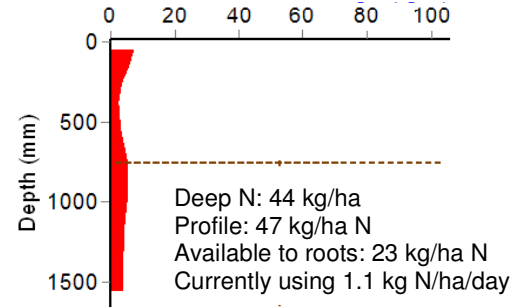
See the graph on the opposite page for results. For more information about the FarmLink Soil Moisture Knowledge Network go to [www.farmlink.com.au](http://www.farmlink.com.au)



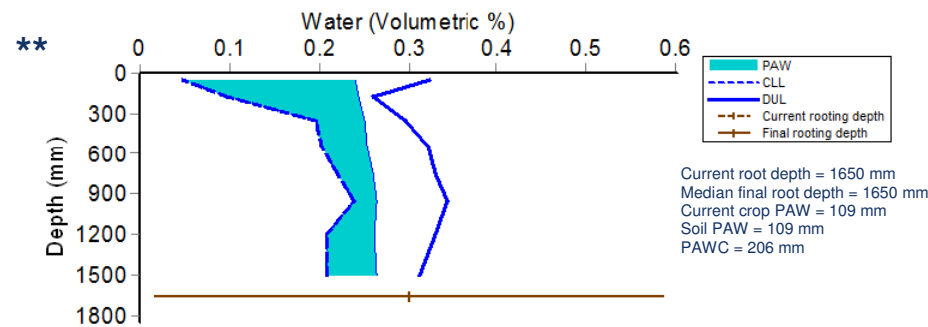
## Water Availability



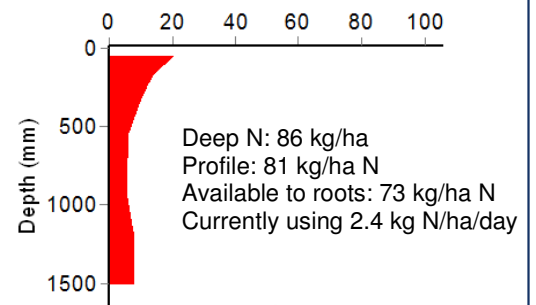
## Soil Nitrogen



## Water Availability



## Soil Nitrogen

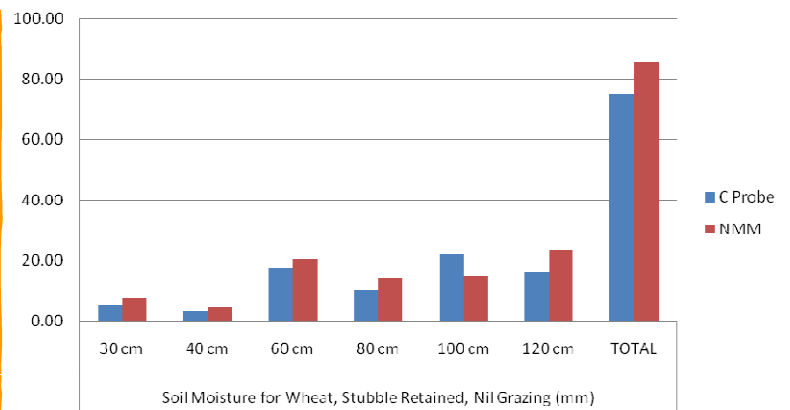


**\*\*** PAW = plant available water; CLL = crop lower limit; DUL = drained upper limit. **Note:** Soil water parameters are taken from paddocks previously characterised on the same farm. Although the data should be representative of the paddock, minor discrepancies may occur.

## Soil Water Measurement: Capacitance Probe v Neutron Moisture Probe

The blue bars represent the capacitance probe and the red bars the neutron moisture probes at the 'Catch more, store more, grow more' site in Temora.

Overall the capacitance probe returned a slightly lower reading, but allowing for sampling error we can conclude that the new capacitance probes are an accurate measure of soil moisture.



These seasonal outlooks are the latest from three of the major climate organisations in Australia. In summary, the national outlook for August to October shows a moderate shift in the odds favouring a drier than normal season over parts of the west and south of the country.

## BUREAU OF METEOROLOGY

### Drier conditions favoured for parts of south eastern Australia

[www.bom.gov.au/climate](http://www.bom.gov.au/climate)

The south eastern Australian outlook for August to October favours a drier than normal season over much of SA, western Victoria and western NSW. Across the remainder of the southeast there are no strong shifts in the odds towards drier or wetter than average conditions.

The pattern of seasonal rainfall odds across Australia has been produced using recent Pacific and Indian Ocean temperature patterns. The outlook factors in the decline of La Niña conditions across the Pacific during the previous season, as well as the persistence of above average temperatures over key parts of the Indian Ocean.

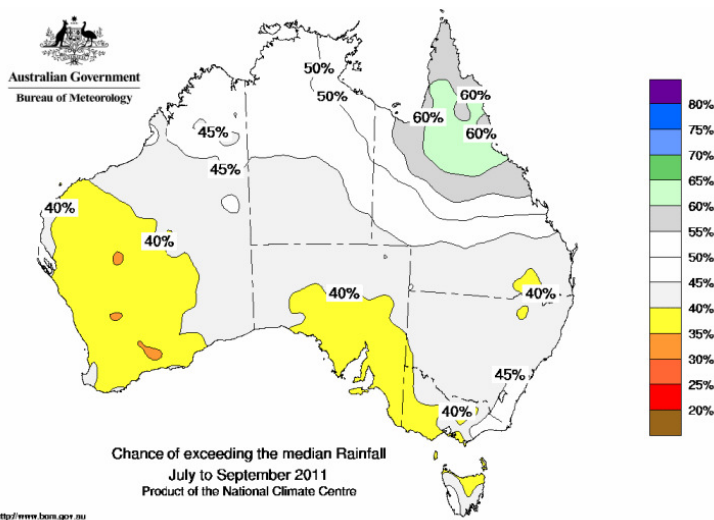


Figure 5—Chance of exceeding median rainfall July—September 2011 (Bureau of Meteorology)

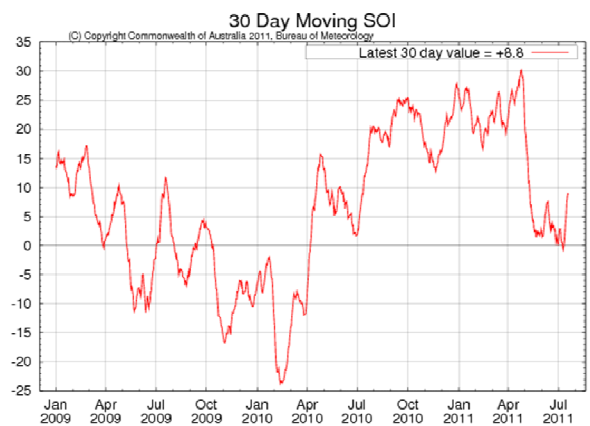


Figure 6—30 day moving SOI 21 July 2011 (Bureau of Meteorology)

## DEPARTMENT OF AGRICULTURE AND FOOD, WA

### Three month outlook for eastern Australia

[www.agric.wa.gov.au/climate](http://www.agric.wa.gov.au/climate)

Rainfall indicators for eastern Australia have become negative in the short term with strengthening high pressures and a negative SST gradient northwest of Australia. The Indian Ocean Dipole index is expected to become positive during spring, and is associated with drier than normal conditions in south-eastern Australia.

## LONG PADDOCK

### Seasonal climate outlook

[www.longpaddock.qld.gov.au](http://www.longpaddock.qld.gov.au)

As at 1 June 2011, the Queensland Climate Change Centre of Excellence notes that the strong La Niña climate pattern which prevailed since last spring has now broken down and the El Niño-Southern Oscillation (ENSO) phenomenon is currently in a neutral state. ENSO-neutral conditions are likely to continue to prevail through winter.

Currently, in relation to the ENSO phenomenon: The Southern Oscillation Index (SOI), a key atmospheric measure of ENSO, fell substantially from very high values in

March (+17.5) and April (+23.9), to near-average (+2.1) in May.

The recent breakdown of the strong La Niña pattern which has prevailed since last spring is consistent with an historical tendency for extreme ENSO events (i.e. La Niña or El Niño events) to break down over autumn.

The likely continuation of ENSO-neutral conditions over the coming months is supported by most global climate models.

### Probability of exceeding Median Rainfall

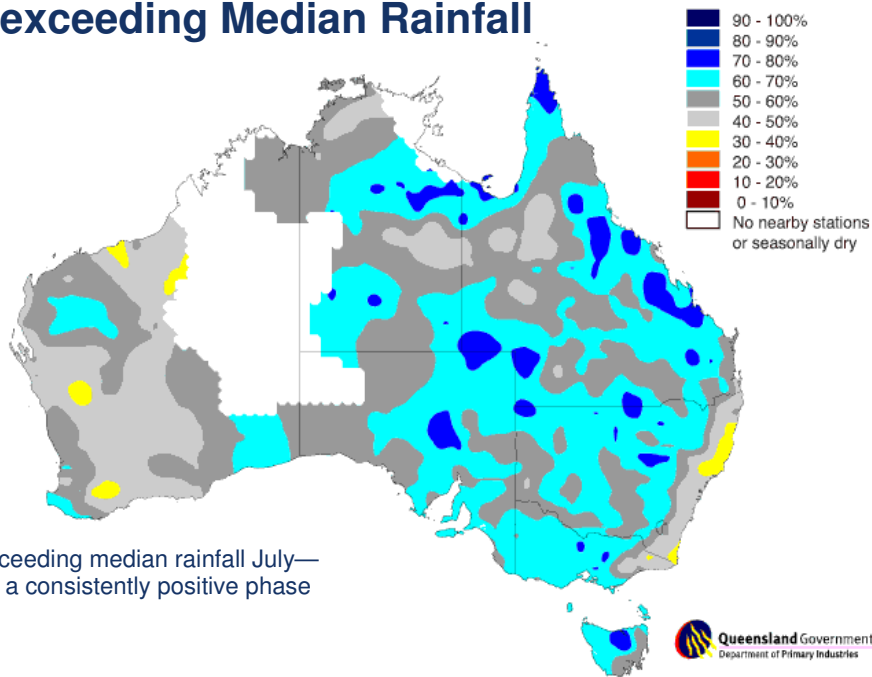
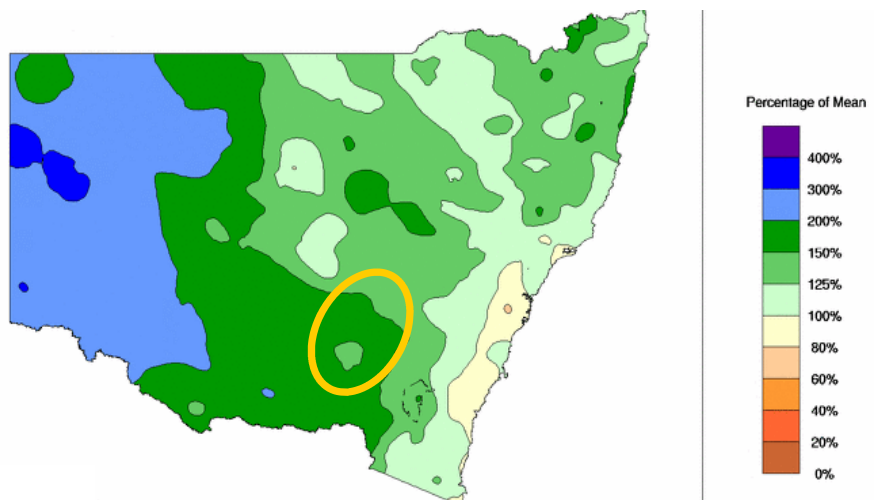


Figure 7—Probability of exceeding median rainfall July—September 2011 based on a consistently positive phase (Long Paddock)

### 12 monthly rainfall percentages for NSW and ACT

[www.bom.gov.au/climate](http://www.bom.gov.au/climate)

More than 50% of the FarmLink region has received 150% - 200% of mean rainfall for the past 12 months.







Farmers leading research through:  
co-ordination, collaboration, communication

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The National Climate Adaptation and Mitigation Initiative



**Australian Government**  
**Department of Agriculture,**  
**Fisheries and Forestry**

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