WEATHER or NOT

A REVIEW OF SEASONAL AND CROP OUTLOOKS FOR THE FARMLINK REGION

ISSUE September 2011

this issue

NSW crop predictions down on last year

According to Minister for Primary Industries, Katrina Hodgkinson, dry and warm spring weather is eating into the State's winter crop yields, with the estimated harvest now down 27 per cent on what it was at the same time last year.

This time last year the State's 5.1 million hectare crop was expected to produce 14 million tonnes of grain and oilseeds," Katrina Hodgkinson said.

"The latest estimates from the Department of Primary Industries put this year's estimated yield at 10.2 million tonnes from plantings of 5.2 million hectares.

Current NSW production estimates for major winter crops:

Wheat - 6.6 million tonnes
Barley - 1.7 million tonnes
Oats - 540,000 tonnes
Canola - 700,000 tonnes
Chickpea - 162,000 tonne

The season so far ...

The onset of spring weather has brought with it usual climate variability. Temperatures have varied from -2^{o}C up to 30^{o}C with the 16th -19th of September being exacerbated by hot northerlies. Current rainfalls have been well below average for every month of the growing season except August in most regions. With crops growing on just above decile 1 rainfalls the conservation of good summer rainfall has been critical to preserving their yield potential. Ardlethan, Greenethorpe and Lockhart are all just above decile 1, with Dirnaseer slightly better sitting at decile 4 for 2011 growing season.

Median predicted wheat yields* currently range from 3.6t/ha at Greenethorpe to 4.5t/ha at Lockhart, Ardlethan and Dirnaseer. Median predicted yields for Canola range from 1.9t/ha at Greenethorpe and Lockhart, while Ardlethan & Dirnaseer are estimated at 2.5t/ha.

(*remember 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 in Lockhart, Temora, Ardlethan canola, Dirnaseer wheat and Greenethorpe canola are low and range from 20mm to 38mm. All are above crop lower limits but below levels where crops may become moisture stressed.

Greenethorpe canola and Dirnaseer wheat were sown into a sprayed out Lucerne pasture which began the season in a depleted condition. These crops will need rain soon to achieve the estimated yields predicted by yield prophet. Predictions are based on decile 5 rainfalls and lower rainfalls will affect these predictions.

Dirnaseer canola, Greenethorpe wheat, Ardlethan wheat and Downside have reasonable moisture in the profile ranging from 51mm to 87mm, *(see page 6).* Current daily water use ranges from 3.9mm/day to 0.8mm/day. To achieve the yield predictions these crops will also need additional rainfalls and should hold yield potential for longer than the drier sites. Long term weather predictions are neutral with some positivity for a weak La Nina event later this year.

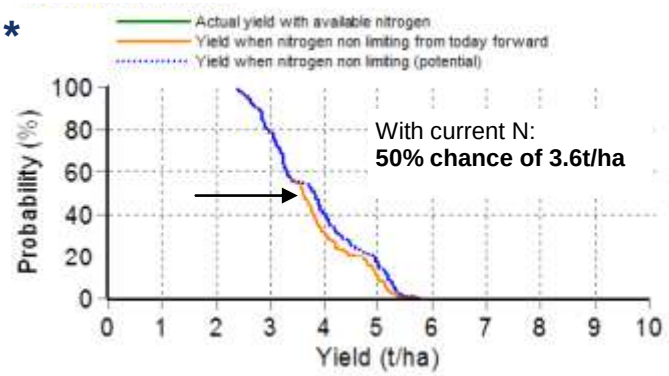
WHEAT

Grain Yield Probabilities

LOCKHART » » » »

variety Lincoln **sown** 11th May
N applied 31kg/ha
soil type Lockhart brown sodosol
growing season rainfall to date 153 mm
plant density 54 plants/m^2
current rooting depth 1496 mm
predicted final rooting depth 1650 mm

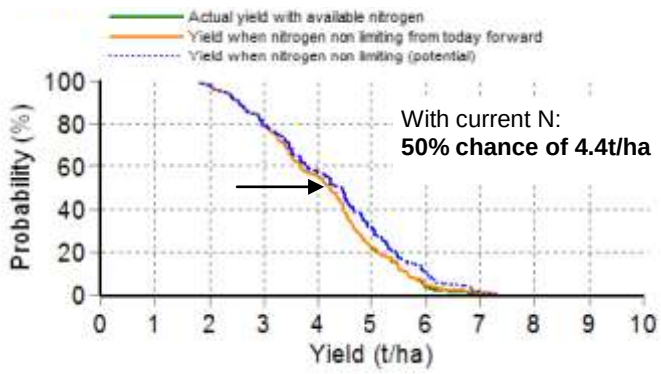
*



DIRNASEER » » » »

variety Crusader **sown** 2nd June
N applied 9kg/ha
soil type Dirnaseer red kandosol
growing season rainfall to date 164 mm
plant density 144 plants/m^2
current rooting depth 791 mm
predicted final rooting depth 1643 mm

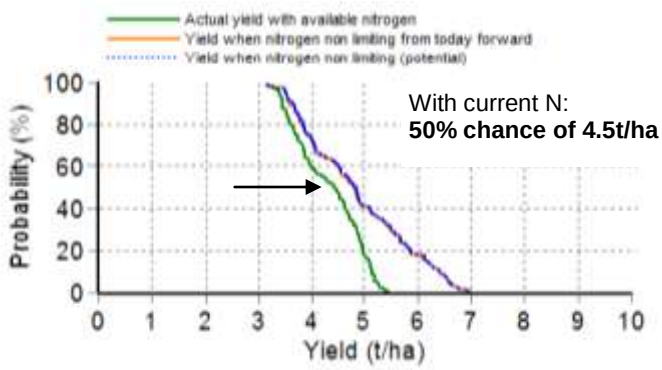
*



ARDLETHAN » » » »

variety Ventura **sown** 18th May
N applied 45kg/ha
soil type Griffith No 697
growing season rainfall to date 140 mm
plant density 56 plants/m^2
current rooting depth 1445 mm
predicted final rooting depth 1500 mm

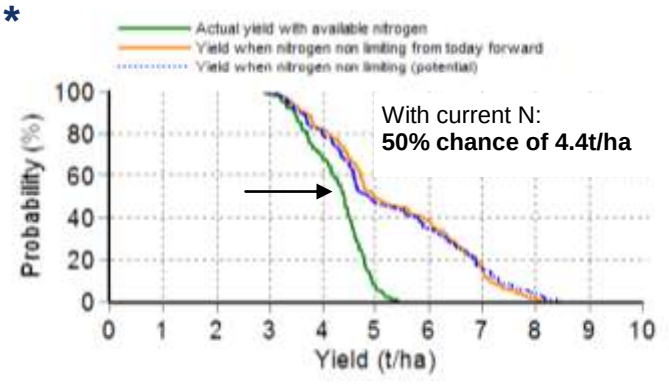
*



GREENETHORPE » » » »

variety Gregory **sown** 12th May
N applied 41kg/ha
soil type heavy red kandosol Grenfell
growing season rainfall to date 147 mm
plant density 150 plants/m^2
current rooting depth 1252 mm
predicted final rooting depth 1800 mm

*



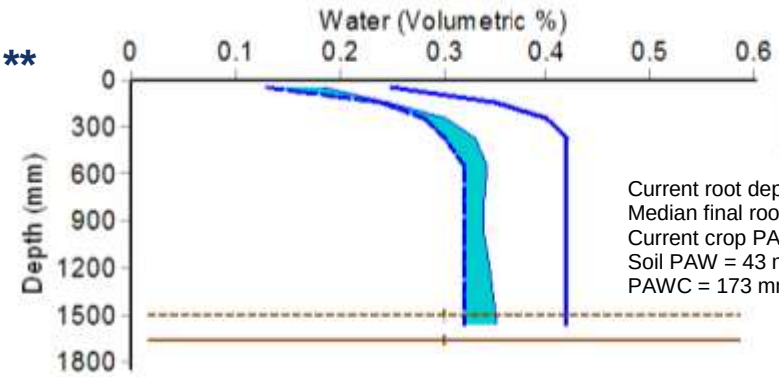
Please note Yield Prophet is a tool to help guide decision-making only.

* 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.

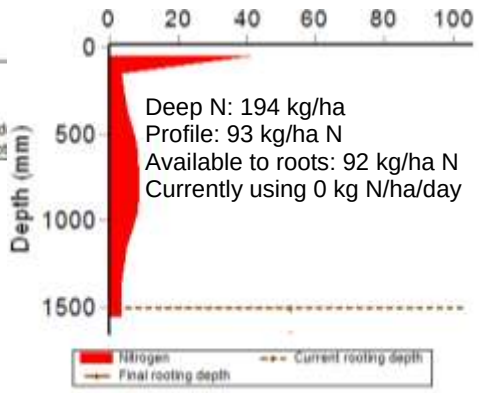
Water Availability

Soil Nitrogen

**

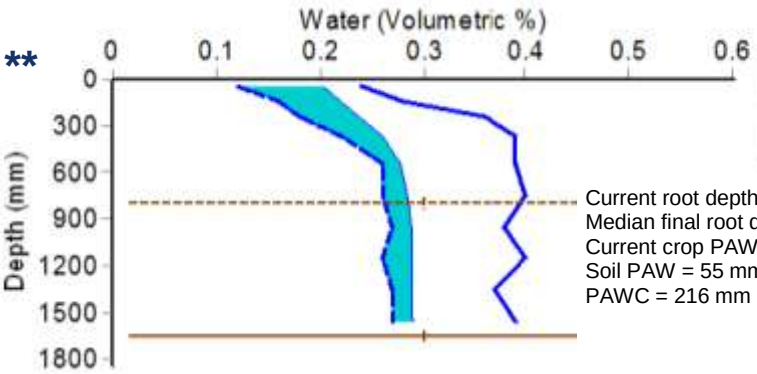


Current root depth = 1496 mm
Median final root depth = 1650 mm
Current crop PAW = 38 mm
Soil PAW = 43 mm
PAWC = 173 mm

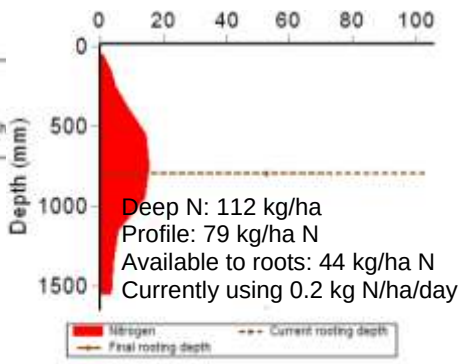


Deep N: 194 kg/ha
Profile: 93 kg/ha N
Available to roots: 92 kg/ha N
Currently using 0 kg N/ha/day

**

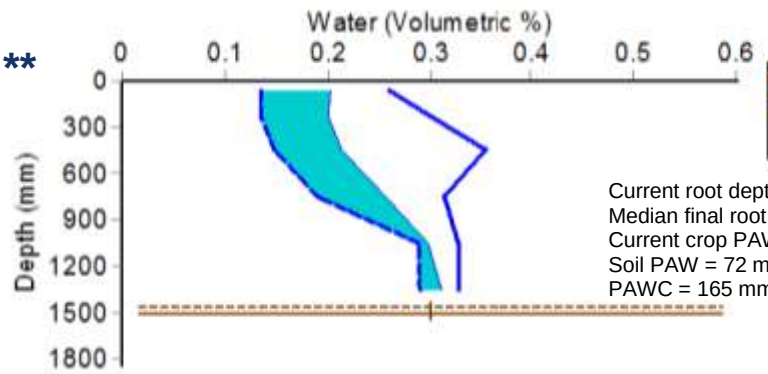


Current root depth = 791 mm
Median final root depth = 1643 mm
Current crop PAW = 35 mm
Soil PAW = 55 mm
PAWC = 216 mm

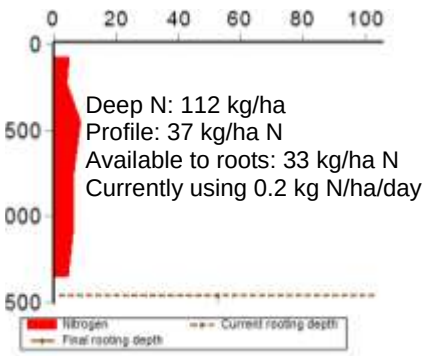


Deep N: 112 kg/ha
Profile: 79 kg/ha N
Available to roots: 44 kg/ha N
Currently using 0.2 kg N/ha/day

**

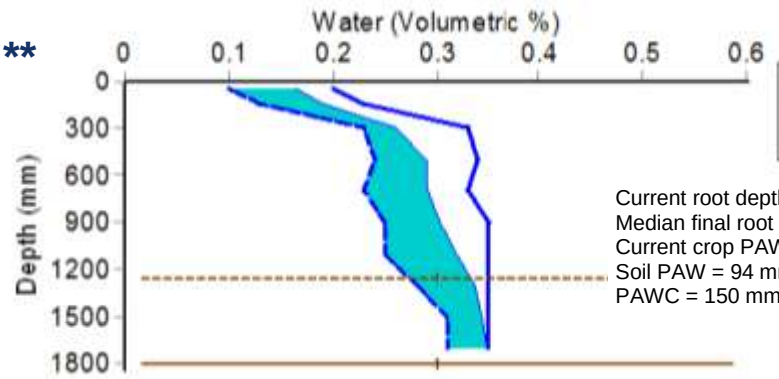


Current root depth = 1445 mm
Median final root depth = 1500 mm
Current crop PAW = 70 mm
Soil PAW = 72 mm
PAWC = 165 mm

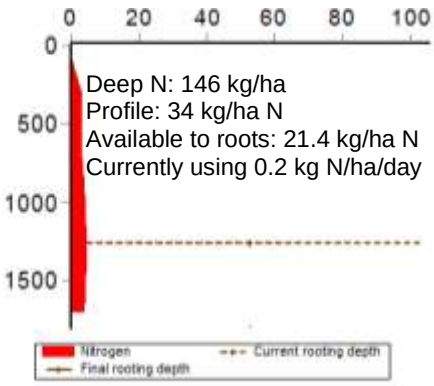


Deep N: 112 kg/ha
Profile: 37 kg/ha N
Available to roots: 33 kg/ha N
Currently using 0.2 kg N/ha/day

**



Current root depth = 1252 mm
Median final root depth = 1800 mm
Current crop PAW = 70 mm
Soil PAW = 94 mm
PAWC = 150 mm



Deep N: 146 kg/ha
Profile: 34 kg/ha N
Available to roots: 21.4 kg/ha N
Currently using 0.2 kg N/ha/day

** 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.

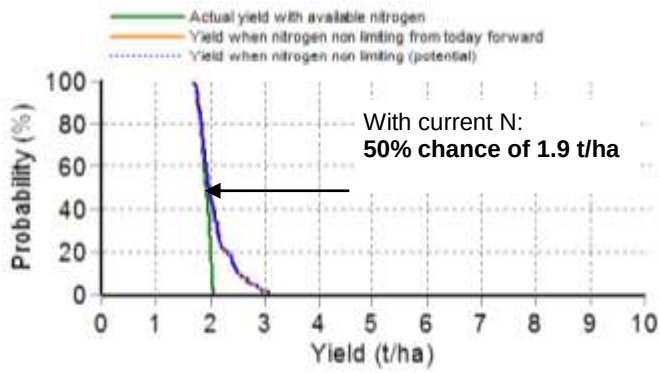
CANOLA

Grain Yield Probabilities

LOCKHART » » » »

variety Crusher
sown 25 April
N applied 40kg/ha
soil type Lockhart brown kandosol
growing season rainfall to date 153 mm
plant density 15 plants/m^2
current rooting depth 1033 mm
predicted final rooting depth 1033 mm

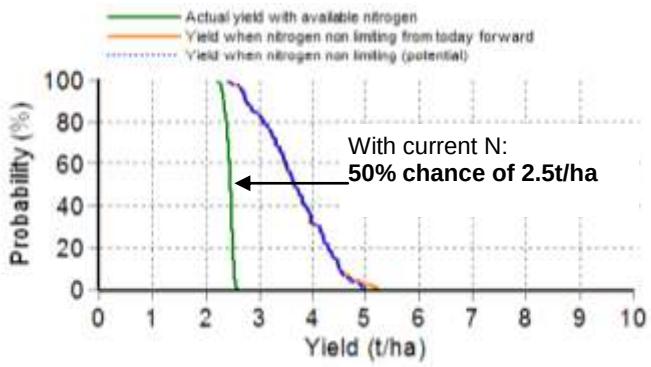
*



DIRNASEER » » » »

variety Jardee
sown 4th May
N applied 9kg/ha
soil type Dirnaseer red kandosol
growing season rainfall to date 164 mm
plant density 51 plants/m^2
current rooting depth 1650 mm
predicted final rooting depth 1650mm

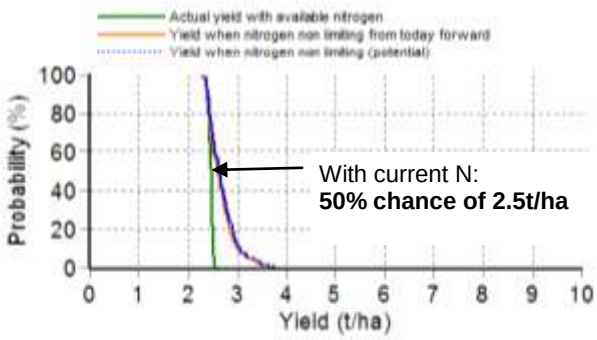
*



ARDLETHAN » » » »

variety Fighter tt
sown 28th April
N applied 60kg/ha
soil type Griffith No 697
growing season rainfall to date 140 mm
plant density 40 plants/m^2
current rooting depth 1500 mm
predicted final rooting depth 1500 mm

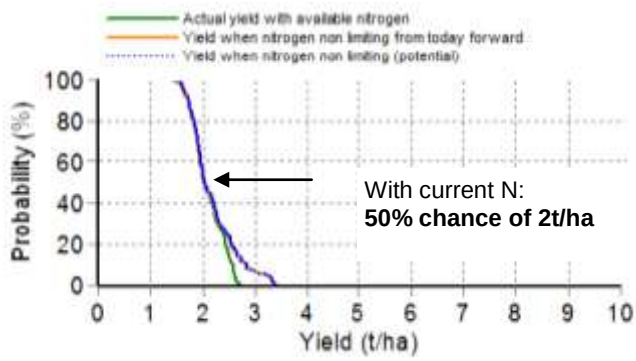
*



GREENETHORPE » » » »

variety Hyola 555tt
sown 4th May
N applied 27kg/ha
soil type heavy red kandosol Grenfell
growing season rainfall to date 147 mm
plant density 40 plants/m^2
current rooting depth 1359 mm
predicted final rooting depth 1359 mm

*

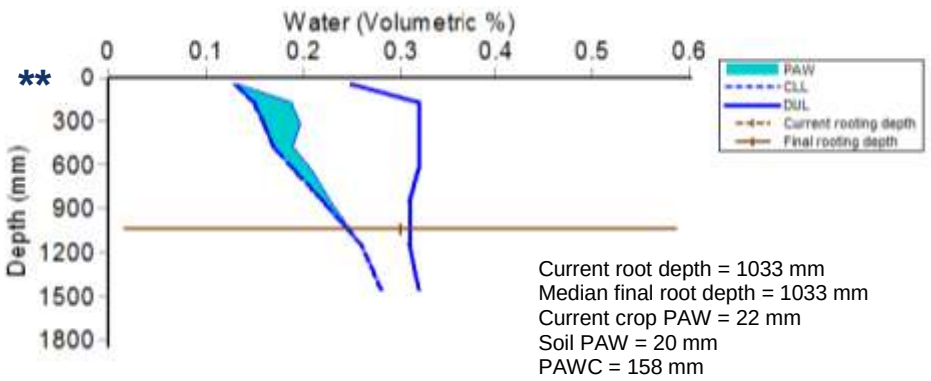


Please note Yield Prophet is a tool to help guide decision-making only.

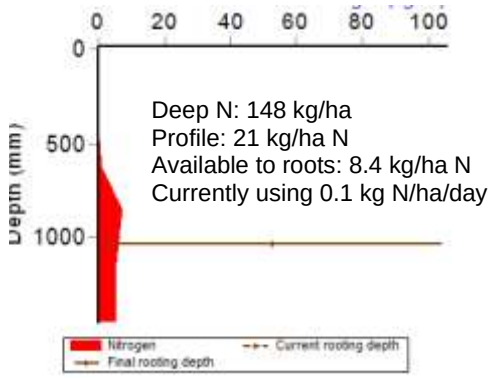
* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

Water Availability

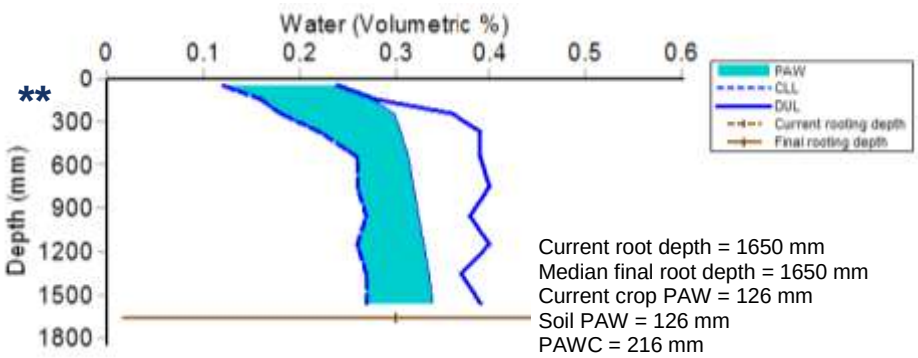
Soil Nitrogen



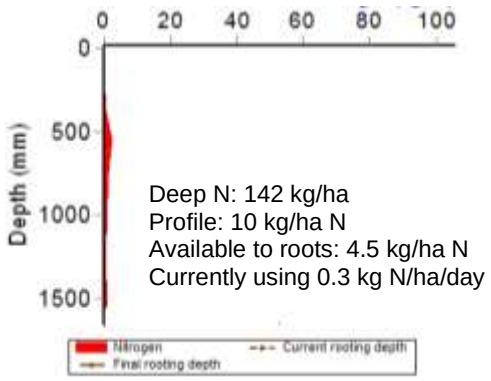
Current root depth = 1033 mm
Median final root depth = 1033 mm
Current crop PAW = 22 mm
Soil PAW = 20 mm
PAWC = 158 mm



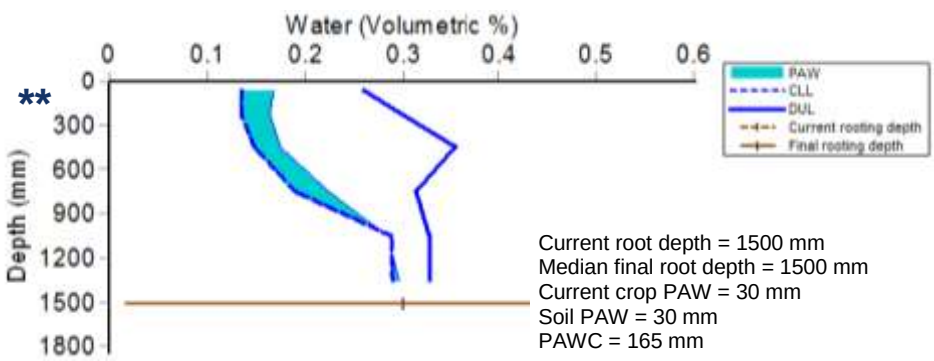
Deep N: 148 kg/ha
Profile: 21 kg/ha N
Available to roots: 8.4 kg/ha N
Currently using 0.1 kg N/ha/day



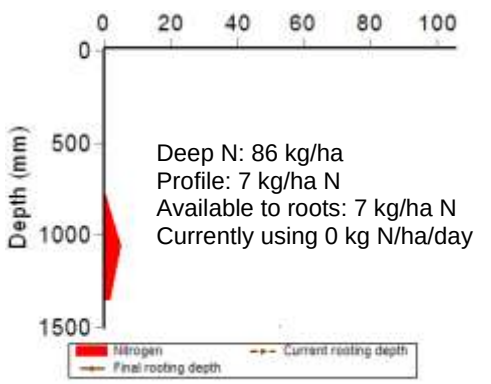
Current root depth = 1650 mm
Median final root depth = 1650 mm
Current crop PAW = 126 mm
Soil PAW = 126 mm
PAWC = 216 mm



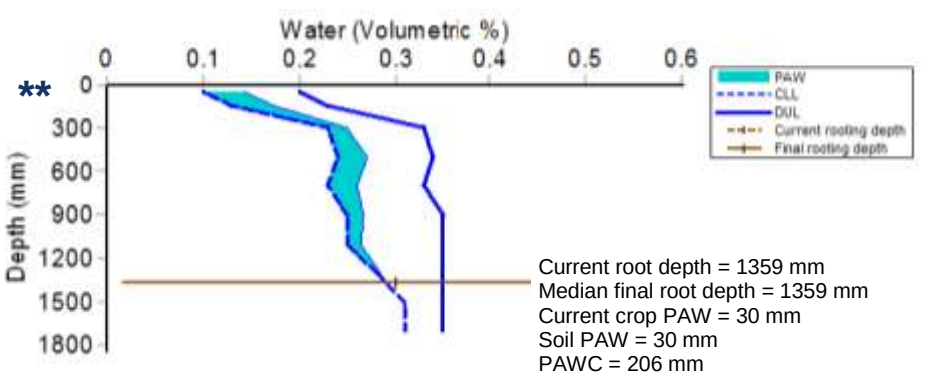
Deep N: 142 kg/ha
Profile: 10 kg/ha N
Available to roots: 4.5 kg/ha N
Currently using 0.3 kg N/ha/day



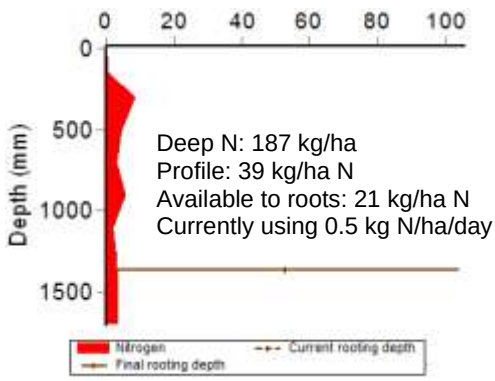
Current root depth = 1500 mm
Median final root depth = 1500 mm
Current crop PAW = 30 mm
Soil PAW = 30 mm
PAWC = 165 mm



Deep N: 86 kg/ha
Profile: 7 kg/ha N
Available to roots: 7 kg/ha N
Currently using 0 kg N/ha/day



Current root depth = 1359 mm
Median final root depth = 1359 mm
Current crop PAW = 30 mm
Soil PAW = 30 mm
PAWC = 206 mm



Deep N: 187 kg/ha
Profile: 39 kg/ha N
Available to roots: 21 kg/ha N
Currently using 0.5 kg N/ha/day

** 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

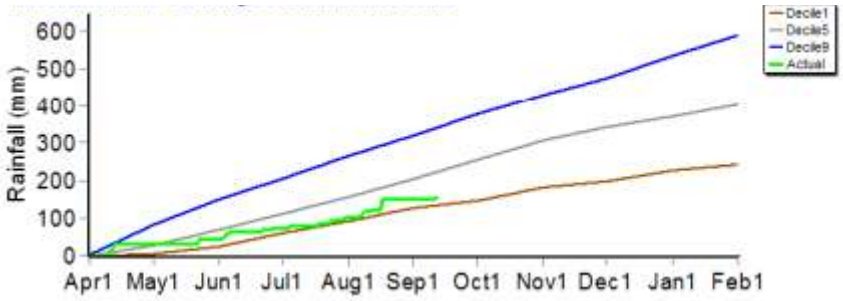


Figure 2: DIRNASEER growing season rainfall deciles

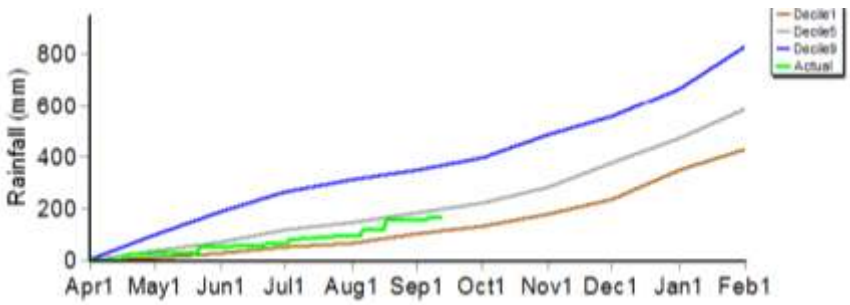


Figure 3: ARDLETHAN growing season rainfall deciles

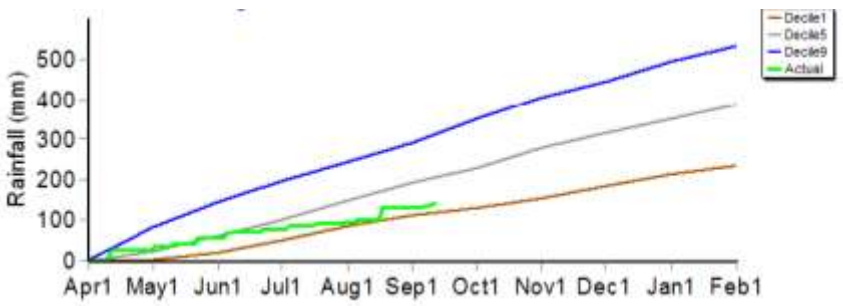
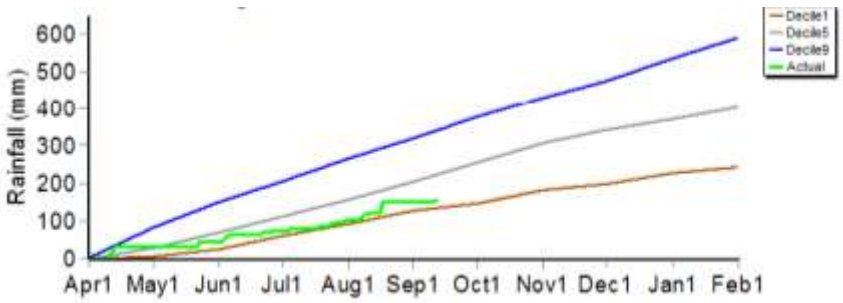


Figure 4: GREENETHORPE growing season rainfall deciles



Growing Season Rainfall Decile Explanations

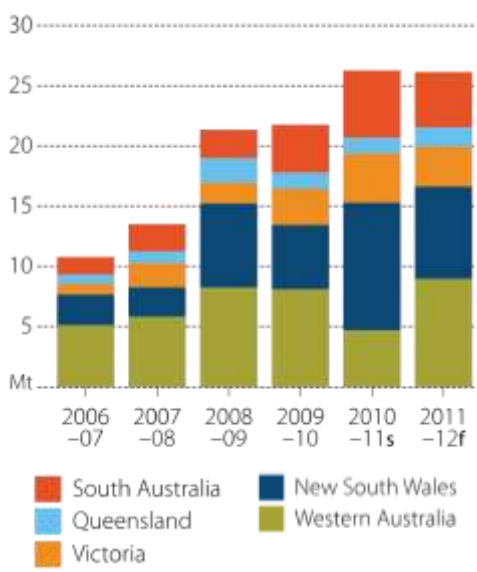
Figures 1 to 4 show how growing season rainfall (green line) is tracking in the Yield Prophet paddocks compared to deciles:

- 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.

Australian Wheat & Canola Harvest Predictions

Australian wheat production is forecast to be near record at around 26.2 million tonnes in 2011 –12, following the significant rise of 21 per cent to 26.3 million tonnes (a record high) in 2010 –11.

Australian wheat production



The volume of Australian canola seed exports are forecast to increase by around 5 per cent in 2011–12 to 1.5 million tonnes, the highest in 10 years.

Australian canola yields

Source: ABARES Agricultural Commodities September quarter 2011.

LOCKHART » wheat Lincoln » 21 Sep 2011

LOCKHART » canola Crusher » 21 Sep 2011

DIRNASEER » wheat Crusader » 20 Sep 2011

DIRNASEER » canola Jardee » 20 Sep 2011

ARDLETHAN » wheat Ventura » 22 Sep 2011

ARDLETHAN » canola Fighter tt » 22 Sep 2011

GREENETHORPE » wheat Gregory » 22 Sep 2011

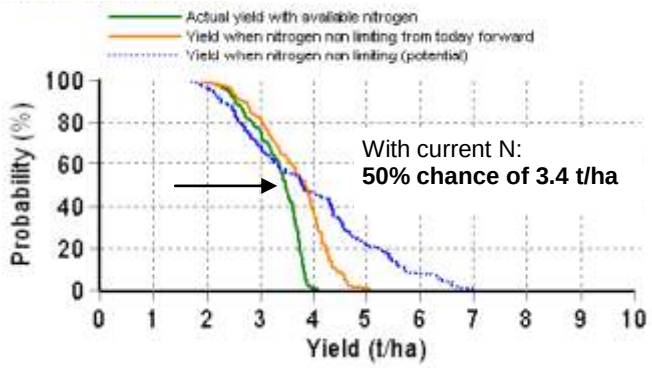
GREENETHORPE » canola Hyola 555tt » 22 Sep 2011

WHEAT

EH GRAHAM CENTRE Wagga »

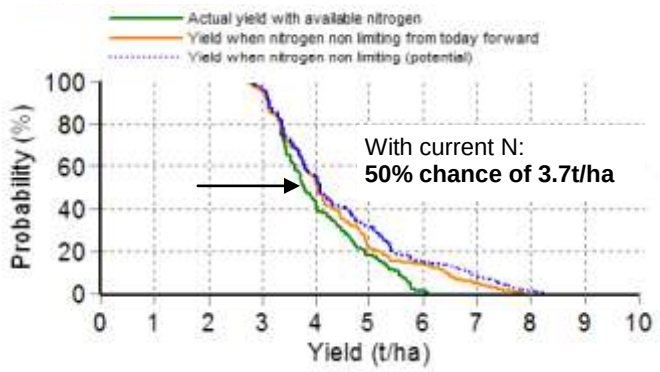
variety Wedgetail **sown** 14th May
N applied 62kg/ha
soil type Dirnaseer red kandosol
growing season rainfall to date 170 mm
plant density 89 plants/m^2
current rooting depth 1321 mm
predicted final rooting depth 1650 mm

Grain Yield Probabilities



TEMORA » » » »

variety Bolac **sown** 15th May
N applied 54kg/ha
soil type Red chromosol Temora
growing season rainfall to date 141 mm
plant density 104 plants/m^2
current rooting depth 1346 mm
predicted final rooting depth 1349 mm



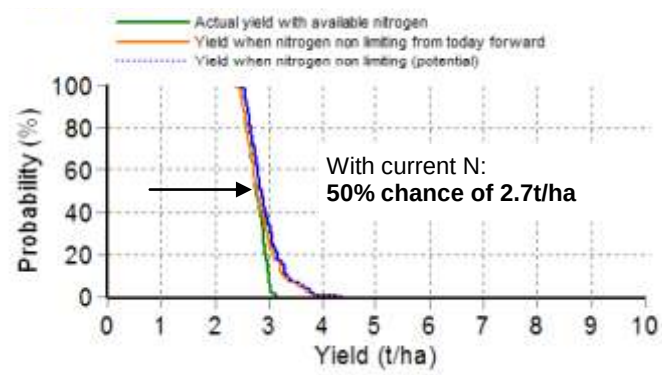
CANOLA

TEMORA » » » »

variety 45Y82 **sown** 15th April
N applied 74kg/ha
soil type red chromosol Temora
growing season rainfall to date 141 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.

Grain Yield Probabilities

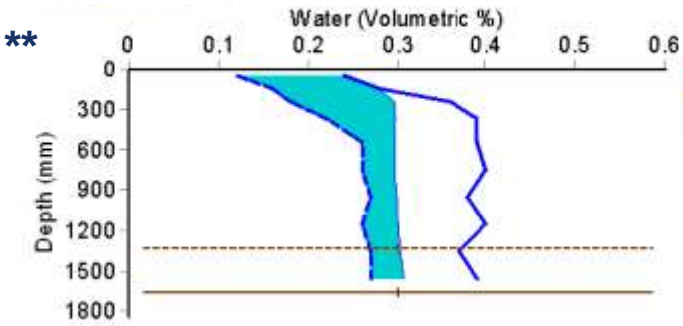


* given weather, soil N and agronomic inputs to date, and historical climate data (100 years) to simulate remainder of season. Does not account for disease, insect or weed pressure or extreme climatic events.

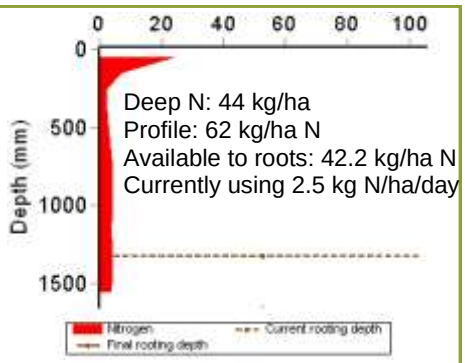
Rural Leadership Program 2011 - 2012

Water Availability

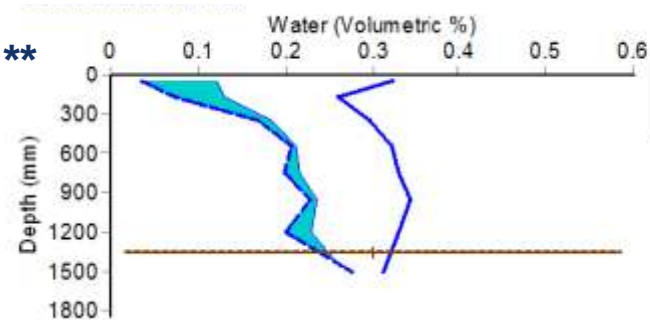
Soil Nitrogen



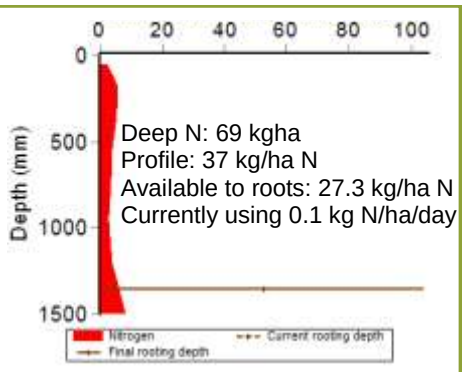
Current root depth = 1320 mm
Median final root depth = 1650 mm
Current crop PAW = 78mm
Soil PAW = 91 mm
PAWC = 216 mm



Deep N: 44 kg/ha
Profile: 62 kg/ha N
Available to roots: 42.2 kg/ha N
Currently using 2.5 kg N/ha/day



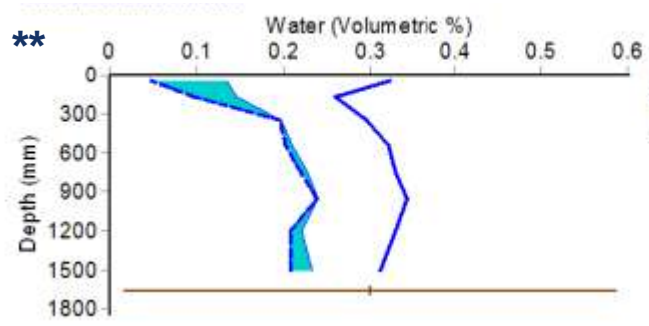
Current root depth = 1346 mm
Median final root depth = 1349 mm
Current crop PAW = 34 mm
Soil PAW = 34 mm
PAWC = 204 mm



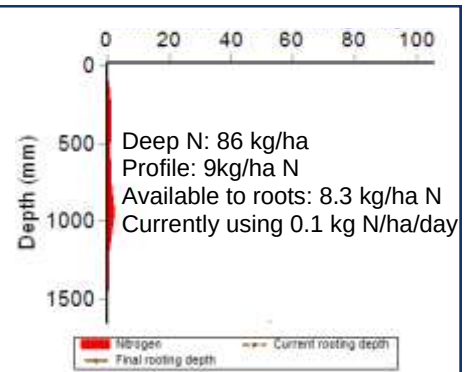
Deep N: 69 kgha
Profile: 37 kg/ha N
Available to roots: 27.3 kg/ha N
Currently using 0.1 kg N/ha/day

Water Availability

Soil Nitrogen



Current root depth = 1650 mm
Median final root depth = 1650 mm
Current crop PAW = 32 mm
Soil PAW = 32 mm
PAWC = 206 mm



Deep N: 86 kg/ha
Profile: 9kg/ha N
Available to roots: 8.3 kg/ha N
Currently using 0.1 kg N/ha/day

** 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.

Analyst forecasts drop in wheat prices

A commodities analyst says he expects wheat prices will come under pressure coming into harvest.

ProFarmer's Malcolm Bartholomaeus is predicting prices could dip down to $230 a tonne later this year, but he expects prices will firm in early 2012.

However, he expects the current pessimism surrounding the global financial market is unlikely is affect grain prices.

"I think we're fortunate in that we are in the food business and people still have to eat and grain is so fundamental to that," he said.

"We're more likely to see very wide fluctuations in the currency but in turn we'll probably see the underlying wheat price move to offset that."

Source: www.abc.net.au/news

This information is the latest from the Bureau of Meteorology in Australia. Steady cooling of the central Pacific Ocean since early winter has increased the chance of La Niña returning during the last quarter of 2011. Current ENSO indicators are approaching values typically associated with La Niña events.

BUREAU OF METEOROLOGY

Wetter season favoured for northern Australia

www.bom.gov.au/climate

The national outlook for the next three months (October to December) shows a wetter season is more likely over northern Australia and western WA. A drier season is more likely over Tasmania and southern Victoria.

The main driver behind this outlook is the persistence of above average temperatures across the central to southeastern Indian Ocean.

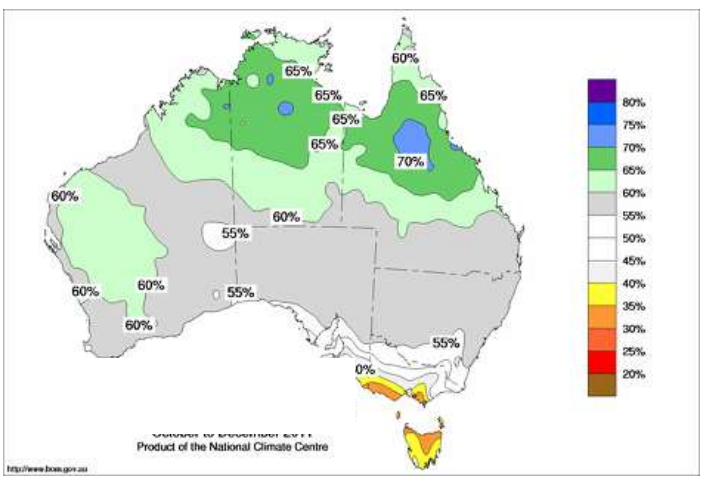


Figure 5—Chance of exceeding median rainfall October to December 2011 (Bureau of Meteorology)

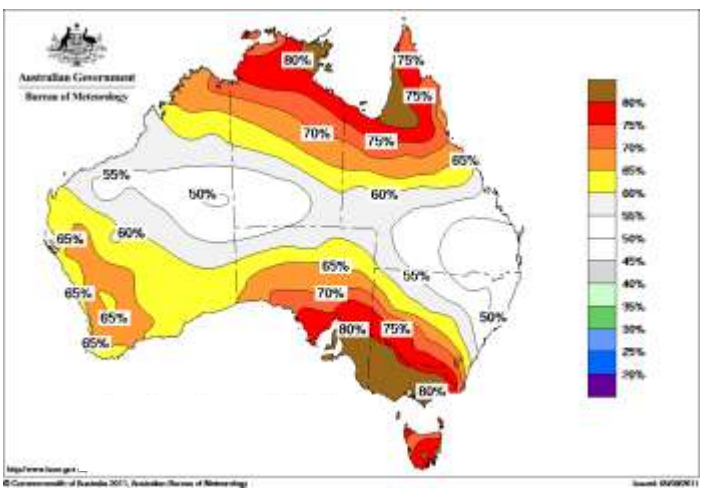


Figure 6—Chance of exceeding the median Max Temp. October to December 2011 (Bureau of Meteorology)

BUREAU OF METEOROLOGY

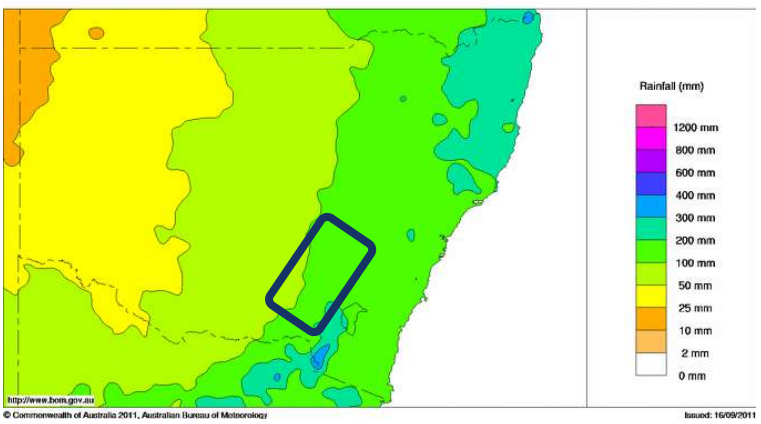
NSW Rainfall Outlook

October 1– December 31

Issued 16-9-2011

www.bom.gov.au/climate

Right: Figure 7 —NSW rainfall outlook October 1—December 31, 2011
(Bureau of Meteorology)



ZADOK'S GROWTH STAGES

Predicted growth stages for wheat at the yield prophet sites

	GS45 Booting	GS55 Ear emergence	GS65 Flowering	GS75 Ripening
LOCKHART WHEAT				
Earliest	5 Sep	15 Sep	2 Sep	9 Oct
Median	5 Sep	16 Sep	26 Sep	14 Oct
Latest	3 Aug	5 Aug	8 Aug	27 Aug
DIRNASEER WHEAT				
Earliest	27 Sep	5 Oct	14 Oct	2 Nov
Median	30 Sep	11 Oct	22 Oct	9 Nov
Latest	7 Oct	17 Oct	29 Oct	17 Nov
ARDLETHAN WHEAT				
Earliest	7 Sep	17 Sep	24 Sep	11 Oct
Median	7 Sep	19 Sep	29 Sep	16 Oct
Latest	7 Sep	22 Sep	4 Oct	22 Oct
GREENETHORPE WHEAT				
Earliest	18 Sep	28 Sep	7 Oct	23 Oct
Median	21 Sep	2 Oct	12 Oct	29 Oct
Latest	27 Sep	8 Oct	17 Oct	7 Nov
TEMORA WHEAT				
Earliest	7 Sep	17 Sep	25 Sep	12 Oct
Median	7 Sep	19 Sep	30 Sep	17 Oct
Latest	7 Sep	23 Sep	5 Oct	24 Oct
EH GRAHAM CENTRE WHEAT				
Earliest	24 Sep	1 Oct	7 Oct	23 Oct
Median	29 Sep	6 Oct	12 Oct	29 Oct
Latest	5 Oct	12 Oct	18 Oct	7 Nov

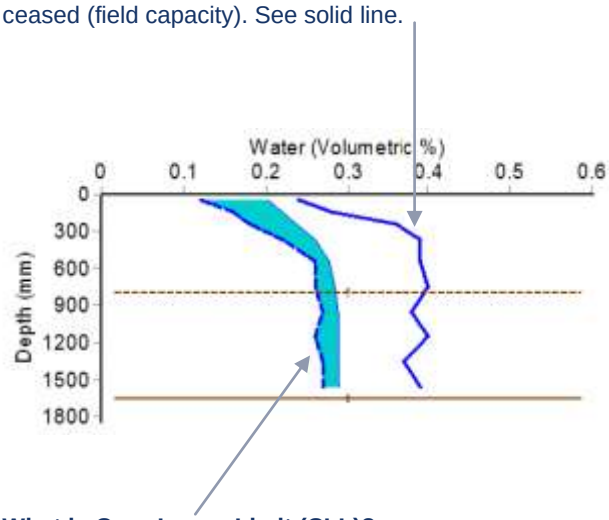
How full is the bucket for a particular soil?

What makes it differ between soils?

- Soil texture.
- Sub soil constraints.
- Depth.
- Crop type (physiology).

What is Drained Upper Limit (DUL)?

Amount of water able to be held in a soil after drainage has ceased (field capacity). See solid line.



What is Crop Lower Limit (CLL)?

Limit of water extraction of a particular crop on a particular soil (wilting point). See dashed line.

What is Plant Available Water Capacity (PAWC)?

- The maximum amount of water available to a particular crop grown on a particular soil.
- Varies between crops and soils.

What is Plant Available Water (PAW)?

The measurement of plant available soil water at a specific point in the season.

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Australian Government

Department of Agriculture, Fisheries and Forestry

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