

# The Link

FarmLink Newsletter

Vol 35. - Winter 2013



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Dear Members,  
June already, and how great does the country look at the moment?! A much softer start to the season, albeit late, has boosted confidence and has members talking about a return to more 'normal' seasons. There is a fair amount of conjecture though about exactly what a normal season is, and how long since we've had one!!

Welcome to the winter edition of The Link, and we hope you enjoy the read. Check inside for updates on our new website (and of course, go online and have a look), the wrapping up of our very well regarded Water Use Efficiency project, and an interesting article regarding nitrogen at seeding and N management throughout the year.

Make sure you have a look at the soil probe data that Paul Breust has pulled together in this issue as well. The comparisons between this time last year and now are very interesting and of real value for crop planning. Our probes at TAIC have been telling us that we still don't have a full profile of moisture, and last week we confirmed that with CSIRO staff pulling soil cores that showed great moisture to 500 - 550mm, but then very dry from there to about 1.25m. It might seem wet, but we definitely need the rains to continue to ensure we get a decent finish.

FarmLink staff, like you all, have been very busy as we finalise and report on projects, start new ones, layout new trials and get the sowing done. Paul and Tony have been flat out soil testing, preparing, sowing and monitoring. Our own FarmLink trials across the region, as well as those in collaboration with NSW DPI, CSIRO and others are away to a great start.

Operations at the Temora Agricultural Innovation Centre have been hectic too, but all the commercial crop is in and looking great thanks to a much more organised team that has been progressively developing. Many thanks to Phil, Donald, Chris and Andrew for getting and keeping things on track again this year. There were still some late trials going in this week, but the great majority of research plots have been in for a while and have established very well also. The sheep on-farm are in great condition given the season, and we commend Craig Wilson and Marty Moses and their support teams for working with well with us on strategies to ensure we get the best out of the pastures, the season and the

stock whilst continuing to improve the overall farm and its management.

I need to congratulate Karen Giddings for her fantastic job of updating the website and finalising the publishing of our 2012 Research Report over recent months. Feedback on both has been very positive from all, and it makes me proud to hear that these important outputs from FarmLink are well received.

A couple of major events for you to diary now are our Mixed Farming Forum on Wednesday July 31, and the Research and Innovation Expo at TAIC on September 11th. Further details inside, but we have been tweaking the formats of both these events to ensure they run smoother and provide you with even more information, value and opportunities to learn and network.

We are just finalising the details of our WA bus trip partly funded by GRDC under the Industry Development Award program. Expressions of interest have rolled in quite quickly, so let us know ASAP if you'd like to come along. The trip will be from 11th to 18th August, and as soon as we lock the final itinerary and cost in, we'll let you know by E-Link and on the website. A great opportunity to travel and learn from some of the best farmers in Western Australia. We recognise that their environment is somewhat different from here, and in many ways harsher, but I'm sure the participants will pick up lots of great ideas that can be adapted to our own farming systems.

Less than six months until Christmas now, so, if you're like me and need to put in some 'good behaviour' to ensure a visit from Santa at the end of the year, then time is ticking away - you'd better make a start!!

Let's hope the great beginning to the season continues. Happy winter everyone!

Best wishes  
Jon Cobden, CEO

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# FarmLink's New Website

## MEMBER AREA

To access the member area ... Your **Username** is your email address. **Password** is the first initial of your first name followed by your last name. For example, if your name is John Smith then your password is JSmith. (Case sensitive).

Once logged in, members will now be able to access the soil moisture probe graphs for their area in a much more user-friendly manner. This area of the website will undergo further development in the near future, as we seek to improve the access to the data. We welcome your feedback as you become familiar with the new site.

## E-NEWS

Our latest news can be seen at our 'News' blog page. You can view articles by subject matter (tags), date or perform a specific search for a news item. Each news item has the facility where you can post a comment or question regarding the news item.

## SOIL MOISTURE PROBE DATA

Is now easier to view through the member's area. Probes have been designated to a zone; North, South, East and West of Junee township. To find a probe near you click on the zone closest to you and the graphs will open in a new window.

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Soil Moisture Probe Data  
Members Publications  
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### Soil Moisture Probe Data

Due to sampling error and natural soil variation the soil moisture information displayed below is indicative only and should not be used alone when making management decisions.

The information displayed below is the graphical representation of live data being collected from Aquachek sub surface capacitance soil moisture probes. There are two probes at each location located either in a different crop, or under different management. The probes contain six sensors at 20cm, 30cm, 50cm, 70cm, 80cm, and 110cm deep.

The 'soil' graph provides an estimate of the total soil water in the profile down to 110cm.

Soil Moisture Probe Zones  
For a quick and easy view of the soil moisture graphs, they have been grouped into four zones, see map below.  
Graph Key: Wheat = W, Canola = C, Barley = B, Pasture = P, Faba Beans = FB, Field Peas = FP, Lucerne = L, In-Fallow = IF, 2011 = 11, 2012 = 12, 2013 = 13

QUICK LINKS  
North  
East  
South  
West

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## FarmLink Research Expo September 11, 2013

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### LATEST NEWS

#### My client has purchased a Disc Seeder - What does this mean for my advice?

It is important to first identify what the grower aims to achieve by moving to a zero-till system with a disc seeder. Latest information - NSW DPI

#### Grazing Stubbles and Water Use Efficiency

James Hunt, CSIRO and Michael Sinclair, 'Caitness', Temora discuss FarmLink's project 'Catch more, store more, grow more' and how to obtain the benefits of stubble retention while keeping sheep in the farm's mix. A short video produced by GRDC can be seen by clicking here.

See All News

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## FarmLink VIDEOS

FarmLink now has a YouTube channel where we hope members will view video footage about various topics relating to farming. You can access FarmLink's YouTube channel by clicking on the YouTube icon at the bottom right hand corner of the web pages.

# News and Events

## PROJECT HAS FARMERS CHANGING THEIR PRACTICES

The National Water Use Efficiency project 'Catch More, Store More, Grow More' will be completed this year after five years of research being held on the property of Peter, Lyn and Jason Coleman near Temora.

The aim of the project was to assess the impact of sheep grazing on crops and stubbles and the effect on soil structure, moisture conservation and crop yield.

A recent survey of farmers conducted by FarmLink Research has shown that over 70% of farmers that are aware of the project have changed their practices due to the project findings.

Key messages coming out of the project are;

- Sheep grazing on stubbles and crops do not reduce crop yields provided summer weeds are controlled and at least 70% stubble cover (2-3t/ha cereal stubble) is maintained.
- Reduced water infiltration and yield from grazing are due to removal of cover rather than compaction (mouths, not feet).
- Sheep do compact soil, but only at the surface and natural shrinking and swelling of soils and sowing with knife points alleviates this.
- Summer weeds need to be controlled effectively, and the ROI for this weed control is very high in terms of retained moisture and improved sowing conditions and timing.
- Well planned exits from the pasture phase need to be started early and managed well to conserve maximum moisture over summer for the following crop.
- Grazing of stubbles and crops appears to make more N available to crops which can increase yield, though the mechanisms remain uncertain.
- Strategic grazing of crops in-season (both cereals and canola) has little effect on yield provided strict guidelines for timing, stocking rate, weather and ground conditions are maintained. Critically, getting stock off well before cereal crop stage Z31 (first node) or canola stem elongation ensures a timely recovery. We suggest exclusion cages to monitor this. Also, consider topdressing nitrogen to assist recovery.

The 'Catch more, store more, grow more' project has been in the spotlight recently, where two short videos have been produced.

- **GRDC Groundcover TV** have produced an excellent video about the project findings and integration of livestock and cropping.
- **FarmLink Research** has produced a short video where Matthew Dart and Mike O'Hare share their stories on how the project findings have assisted them in their management decisions.

To view FarmLink's Youtube channel visit our website and click on the Youtube icon on the bottom right hand corner of the home page.

## MIXED FARMING FORUM

FarmLink Research takes great pleasure in inviting you to the 'Mixed Farming Forum' to be held at the Temora Ex-Services Memorial Club, cnr Baker and Loftus Sts, Temora.

**Date:** Wednesday July 31, 2013

**Time:** 9am - 4.30pm

**Cost:** \$40 per person (includes catering).

The Agenda is still being developed, however we do have the following speakers locked in!

- **Cam Nicholson**, Southern Farming Systems - Risk and Diversity
- **David Lamb**, University of New England - Precision Agriculture in Livestock
- **John Kirkegaard**, CSIRO - Grazing Canolas
- **Phil Graham**, NSW I&I - ProGraze
- **Lachlan CMA**, Stock Containment Facility Incentives
- **Paul Brust**, FarmLink Research - Farming Profitability with Retained Stubble
- **Craig Wilson**, Craig Wilson and Associates - Merino Genetics

RSVP by 26 July, 2013 for catering purposes.

P: 02 6924 4633

## GRAIN AND GRAZE II

The Jugiong Grain and Graze II group met recently at Adjungbilly to look at 2011, 2012 and 2013 sown pastures. Major discussions occurred about the three to four year processes involved in preparing a paddock to be sown down successfully.

General discussion focussed on the value of perennial pastures compared to annual mixes and the importance of producing feed all year round.

More information: Chris Minehan M: 0427 213 660



## GROWERS PROACTIVE WITH N AT 2013 SEEDING

WATERLOGGING drained about 80 kilograms a hectare of nitrogen from soils in parts of southern New South Wales in autumn last year. That's the equivalent of \$120/ha on urea at \$1.50/kg.

This caused lower yields and lower protein in crops harvested, which has driven many growers to want to know more about last year's N story and whether it will have any implications for this year.

The level of soil total N is extremely sensitive to moisture - in lower rainfall areas, changes in total soil N are equal to the N removed by crops but in wetter areas, denitrification means more soil N is lost than crops remove.

The main reason for low N in 2012 was denitrification - the conversion of nitrate to  $N^2$  and  $N^2O$  and loss to the atmosphere - during the March floods.

This was widespread in southern NSW in autumn 2012, where waterlogging led to more than 50kg/ha of N disappearing from soils as microbes responsible for denitrification found perfect conditions in warm and anaerobic soil conditions after floods.

Grassroots Agronomy's Greg Condon, based at Junee, held a farm field day for clients just before seeding with CSIRO researcher Dr John Angus to outline the story behind low protein wheat and where the N went.

The extent of denitrification resulting from last year's waterlogging in early autumn, in which soils stayed wet until July, is considered an anomaly. This year, some tests before seeding have showed 80-100 kilograms of N in the top 0-60cm of soil.

But even so, Greg says growers are being more strategic in using nutrient evaluation tools such as deep soil testing, paddock history and Yield Prophet, perhaps mixed in with a bit of 'gut feel' at times.

"We haven't seen low soil N as a general trend this year but we'll be doing more testing after seeding and later in the season," he said.

"We've found the general rule of thumb that N will be half the depth of the wetting front to be true."

He says the lesson from 2012 was timing of N and whether growers should be considering a more proactive approach, such as putting on one-third of N upfront in wet conditions rather than more later.

"When N is lost to the system like it was, we can be more proactive with N upfront, particularly on canola where we can get the plants set up earlier in the season," he said.

For canola, this might mean putting on 15-20kg/ha of N at sowing, or for wheat 10-15kg/ha of N, where growers have the ability to split N fertiliser from the seed at sowing to avoid issues with crop emergence.

"The timing is highlighted when you have extreme rainfall events, we had a profile of moisture which was great for yield but the N wasn't there for protein."

But the question is being considered in a broader context of the sustainability of rotations without legumes.

"With continuous cropping, it's quite a big issue at the moment in terms of the whole N story and how to deal with N for canola, wheat and barley without growing pulse crops.

"There has been a lot of interest in pulses for grain and brown manuring for their ability to have a slower release form of N in the system."

Greg says growers need to be conscious that 2013 has lower subsoil moisture levels which means yield potential, particularly for canola, will be reduced.

"We don't have that buffer in medium and low rainfall areas and that has a big influence over N requirements because yield potential is less so the risk is higher without that moisture.

"We'll be relying on in-crop rainfall this year so yield potential hence the N requirements won't be there if the profile doesn't fill up in the winter."



Greg Condon. Source:GRDC

# Soil Moisture Probes

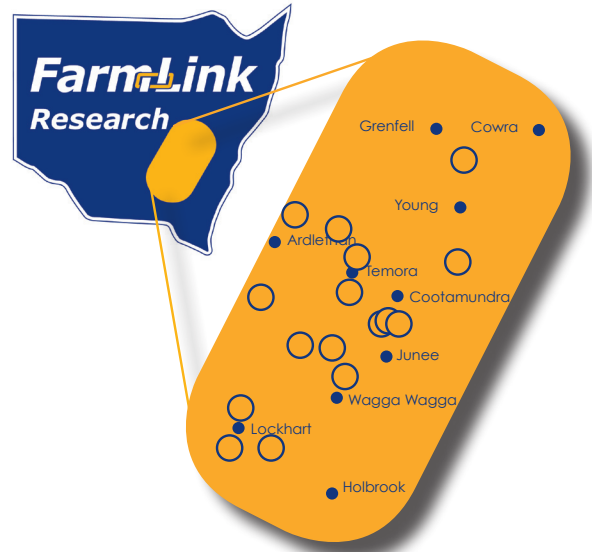
**Monitoring and understanding soil moisture to improve management decisions.**

FarmLink Research has 18 paired soil moisture capacitance probes and automatic rainfall gauges throughout the region updating data daily to the Member's area of the website.

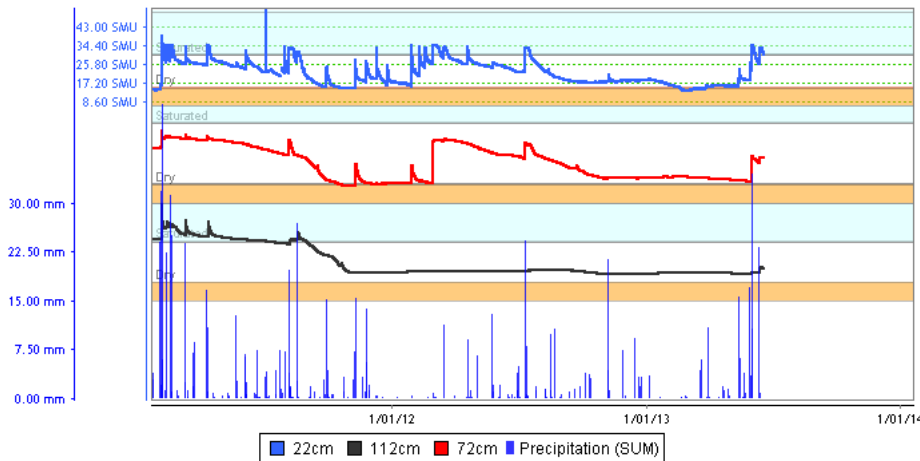
Graphed below are soil moisture graphs from some of the probes across the region. The 'Separate' graphs include soil moisture data for three different depths at the probe site, (red, blue and black lines). At the bottom of the 'Separate' graph in blue is the rainfall data (amount in mm and dates) from the probe site.

'Sum' graphs show the sum of moisture from all sensors (6) at levels from 22 - 112cm and compare total soil moisture to this depth over a two year period as well as the rainfall data.

Consider the differences between this season and last, and where we are in terms of moisture at this time of the crop season compared to exactly twelve months ago.

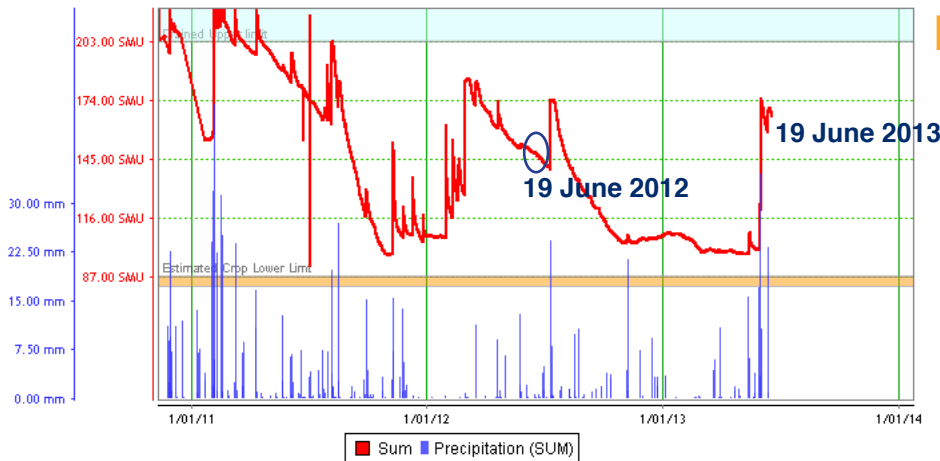


## LOCKHART NORTH EAST PROBE SEPARATE



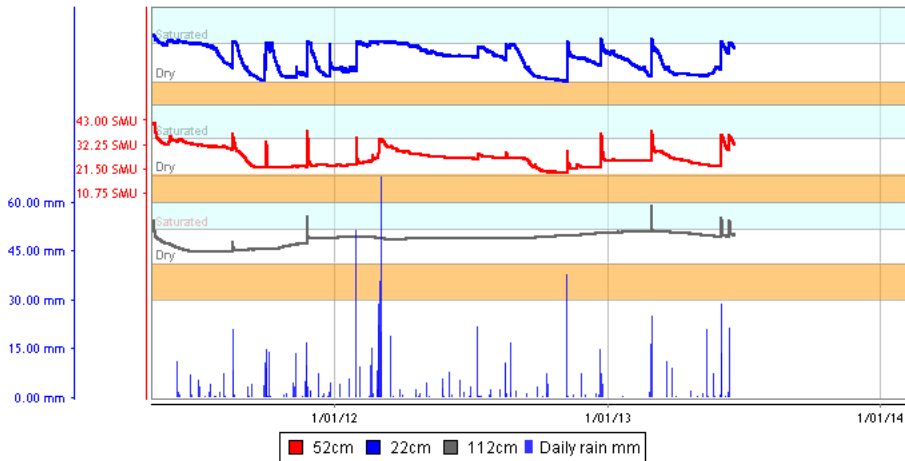
3 depths - 22cm, 72cm and 112cm

## LOCKHART NORTH EAST PROBE SUM



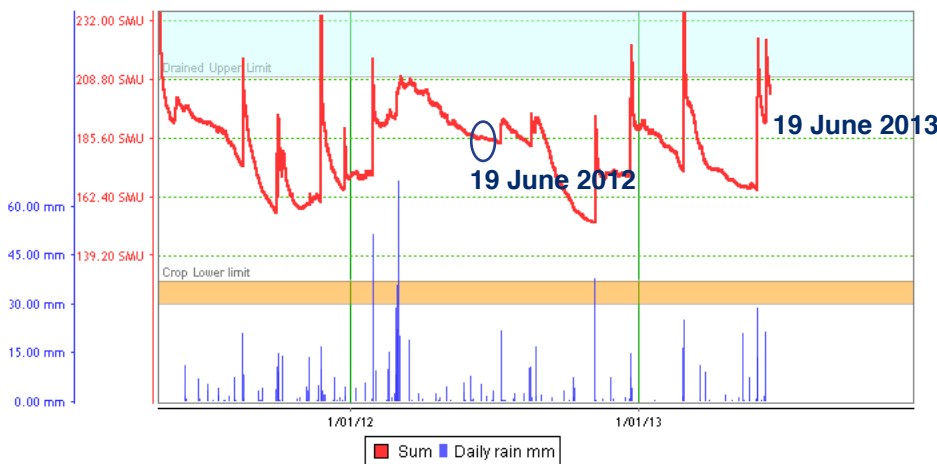
# Soil Moisture Probes

## BECKOM SOUTH PROBE SEPARATE

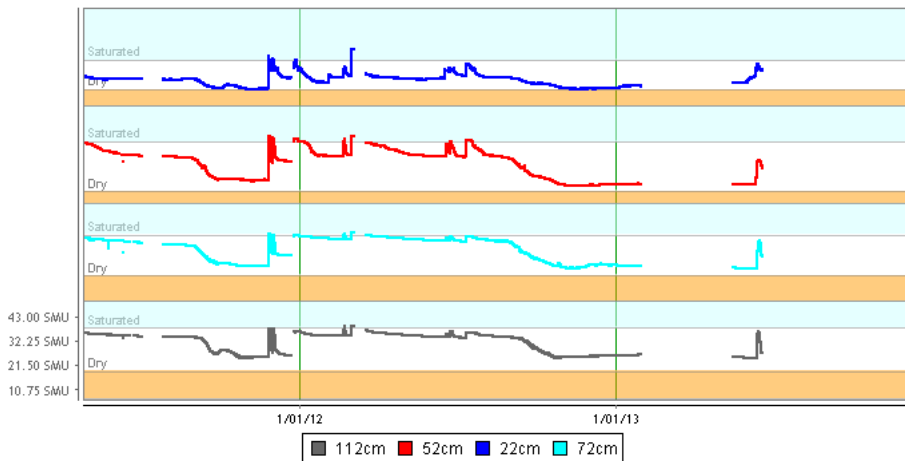


3 depths - 22cm, 52cm and 112cm

## BECKOM SOUTH PROBE SUM

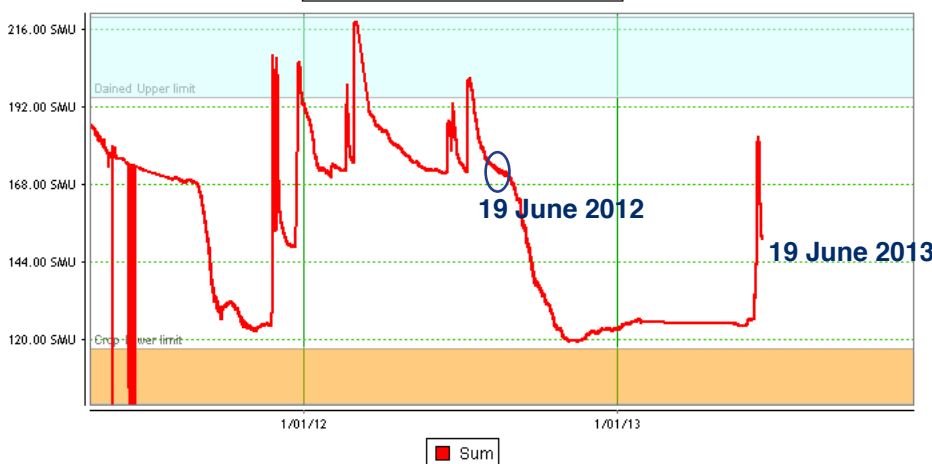


## GREENETHORPE WEST PROBE SEPARATE



3 depths - 22cm, 52cm and 112cm

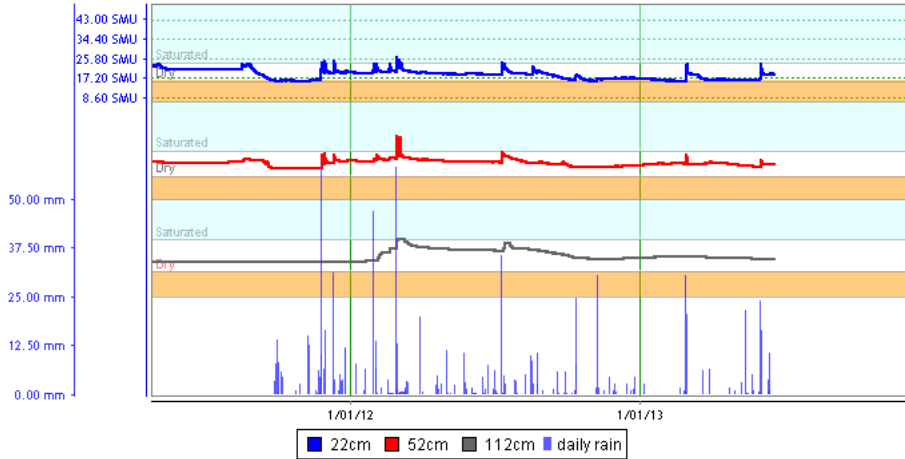
## GREENETHORPE WEST PROBE SUM



# Soil Moisture Probes

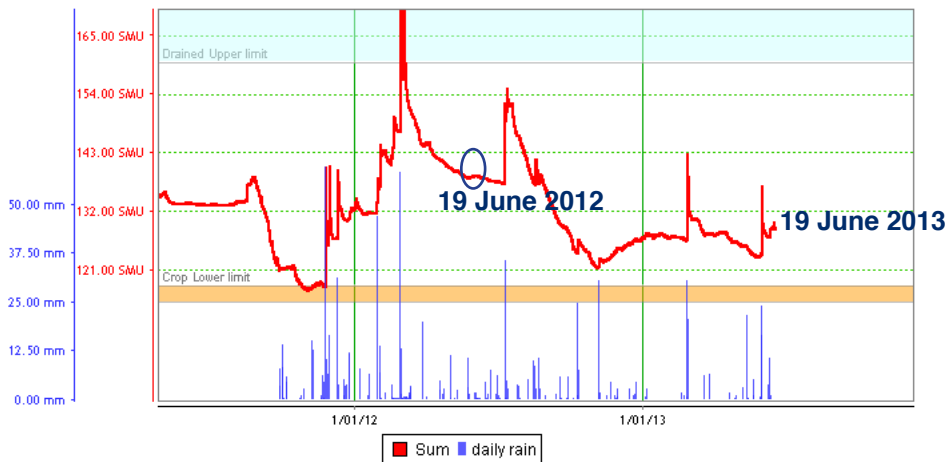
## DIRNASEER NORTH PROBE SEPARATE

3 depths - 22cm, 52cm and 112cm



## DIRNASEER NORTH PROBE SUM

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## Diary Dates

### JULY 2013

#### GRDC Water Use Efficiency Technical Workshops

19 July, Charles Sturt University Convention Centre, Wagga Wagga

More information: Deanna Lush M: 0419 783 436

#### Mixed Farming Forum

31 July, Temora Ex Services Club

More information: Jon Cobden 02 69 24 4633

### AUGUST 2013

#### Mirrool Creek Landcare Group and Murrumbidgee CMA Moisture Probe Information Day

5 August, Aria Park

More information: Paul Breust 02 69 24 4633

#### Western Australia Study Tour

11th August - 18th August. This Study Tour will commence from Perth and explore the central wheat belt, looking at all three rainfall zones.

More information: Jon Cobden 02 69 24 4633

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# EXECUTIVE in PROFILE

## BRUCE HOLDEN, Rannock



Above: FarmLink Executive Member Bruce Holden.

Bruce has been farming for the past 26 years at Rannock north of Coolamon.

Bruce completed his school certificate at Yanco Ag High School and worked on the farm ever since.

Bruce has run trials on farm over the last four years to determine ways of achieving a better yield in a cost effective manner.

Bruce's wife Deb, assisted him with the management of the farm, however just recently they have had a change in direction, where farming is no longer a part of their life.

Bruce now works with farmers through rural property sales in Temora. He still has a strong passion for agriculture and is delighted to be involved with agriculture through the FarmLink Executive Committee.

Bruce and Deb have three children and when life is not too busy, Bruce enjoys finshing and camping.

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