

# Wild Dog Management Workshops winding up

By Ben Allen  
Project Officer  
Vertebrate Pest Research Unit  
NSW DPI Broken Hill

Since early 2011, a series of free wild dog management workshops have been held in various locations across western NSW, with a total of over 190 landholders participating. The workshops have been funded by Australian Wool Innovation and managed by NSW DPI. There have been hands-on practical demonstrations of wild dog trapping and management planning, and each participant has taken home a free trapping kit, which includes a trap, an instructional DVD and everything else needed to set traps on their property. The program has been led by Ben Allen from the Vertebrate Pest Research Unit of NSW DPI, based in Broken Hill. Ben has been involved with dingo–livestock issues for over 15 years. He has a background in dingo-baiting trials in northern South Australia as part of a national project developing a poison called ‘PAPP’ for wild dog and fox control.

Participants have found the information provided at the workshops extremely useful. One landholder, Wesley Herring from Gum Park station, 120 km north-west of Broken Hill, had just returned from a wild dog management workshop in Broken Hill in late April to find approximately 20 of his sheep killed by a wild dog. Mr Herring said the techniques he learned in the workshop helped catch the dog. ‘The workshop gave me a few hints on setting traps. We were all given one of the new soft-jaw traps ... and a tracking kit. So I thought I’d give it a go. I took it out and picked out a spot to set the trap and upon inspection yesterday morning, the dog was in it!’ Mr Herring said.

This series of workshops is now drawing to a close: the last workshop will be held at Cobar on 22 June. Landholders in the Western Division who have not been able to get to a workshop but would like to do so are urged to register and attend this workshop. See the ad on the back page for further details. ■



Ben Allen handing out free dog-trap kits to each landholder at the Wild Dog Management Workshop held in Enngonia in 2011. The last workshop in this current project will be held at Cobar on 22 June. See the back page of this Newsletter for details. This is your last opportunity to attend a workshop, and an RSVP is essential. Photo by Trudie Atkinson

## Winter 2012

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# Message from the Ledknapper Wild Dog Action Group Inc.

The Ledknapper Wild Dog Action Group Inc. is located north of Bourke and has been proactively targeting wild dogs over an area of about 750 000 ha for the last 4 years. We would like to encourage anyone who has seen evidence of wild dog activity to take

just two minutes to load their sightings onto Feralscan. Feralscan is a community website that allows you to map online any sightings and/or the damage caused by wild dogs in your local area. Go to [www.feralscan.org.au](http://www.feralscan.org.au). Please also let your local LHPA ranger know, even if you think the sighting is insignificant. Wild dog numbers in the Western Division are on the increase, so now is the time to be vigilant.

For further details contact Liarne Mannix, Secretary, Ledknapper Wild Dog Action Group Inc. ([ppmannix@bigpond.com](mailto:ppmannix@bigpond.com)). ■



Right: Three dogs trapped recently in the Ledknapper Wild Dog Action Group area by group member Brian Bambrick, who is a local landholder and trapper. Brian has trapped over 30 dogs in the last 4 years in the Ledknapper area. *Photos by Brian Bambrick*

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## Legal Roads Network Project

By Rex Miller  
Legal Roads Network Project  
Crown Lands Division (West)  
NSW DPI Dubbo

The Legal Roads Network Project Team has now drawn up and lodged 44 plans identifying over 9100 kilometres of shire roads and 1800 kilometres of restricted easements to landlocked properties in the Western Division.

The Project Team has finished the plans for roads and easements in the Unincorporated Area and in Central Darling and Bourke Shires and is currently working on plans representing 30% of Cobar Shire roads.

We have recently completed plans of the Kamilaroi Highway between Bourke and Brewarrina, of Dry Bogan Rd and Snake Gully Rd, and of the Barrier Highway from Barnato east to the Division boundary. Plans of the Mitchell Highway south of Bourke, Jumps Rd, Arthur Hall VC Way, Doneys Rd, Tubbavilla Rd, Colane Rd and part of Monkey Bridge Rd have also been completed.

We are currently working on plans for Budda Rd, Buckanbe Rd, Tilpilly Rd, Tiltagoona Rd, Mt Gap Rd, Kidman Way (North of Cobar), Wilgaroon Road, Wilga Downs Road, Coronga Peak Road, Pulpulla Rd, Mulya Rd, CSA Mine Rd, Endeavour Mine Rd, Gidgee Rd and that part of The Wool Track east of Belarabon Station.

Landholders whose primary access is via these roads should have received paperwork outlining the actions they need to take to ensure that legal access is provided. Landholders who have not returned their paperwork should do so as soon as possible to make sure that their needs are met.

It is important to remember that, under NSW DPI property transfer policy, legal access should now be in place before any consent to transfer is granted. Landlocked Western Lands Lease property holders should give careful thought to their preferred primary access location so that they can maximise this opportunity.

If easement applications are not returned by the due dates, then the opportunity to create an easement to a landlocked property may be missed. It won't be possible for the project to revisit these areas, and any creation of legal access in the future will be at the landholder's expense.

The Project Team looks forward to your continued support and the timely return of paperwork so that an effective legal access system can be achieved in the Western Division. ■



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- » Lachlan CMA
- » Lower Murray Darling CMA, and Western CMA

# New solar lighting to be installed at Tibooburra Aerodrome

Tibooburra Aerodrome is a Crown Reserve managed by the Tibooburra Aviation Reserve Trust. It provides essential aviation infrastructure to the remote communities living and working in the far North West corner of the state. It is regularly used by the Royal Flying Doctor Service (RFDS) and other emergency aircraft, and it has also been used as a base for spraying operations by the Plague Locust Commission.

The Aerodrome is currently managed by the Lands Administration Ministerial Corporation on behalf of the Reserve Trust, but day-to-day management is done by Aerodrome Reporting Officer Steve McDermott, who is based in Tibooburra.

Over the next few weeks a new Avlite Solar Lighting System costing over \$43 000 will be installed by the Trust to replace the existing pilot-activated system, which has become

quite unreliable, increasing the risk of incidents occurring at the Aerodrome. The new LED lights will automatically turn on at dusk and off at dawn, removing the need for pilots or the Reporting Officer to manually turn on the lights.

The new lighting system was made possible by a \$20 000 funding grant received by the Trust from the Federal Government under the Regional Aviation Access Program to upgrade remote airstrips. The application submitted by the Trust was one of only two successful applications for NSW, with the other being for Walgett. The replacement program was fully supported by the RFDS and the Tibooburra Health Service, who gave valuable help to the Trust when the application was being lodged.

For any inquiries about Tibooburra Aerodrome, please contact Trust Manager Sharon Hawke on 02 6883 5405 or Aerodrome Reporting Officer Steve McDermott on 08 8091 3310. ■

By Sharon Hawke  
Assistant Western Lands  
Commissioner  
Crown Lands  
NSW DPI Dubbo

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## Floods and new grasses in the Bourke district

The Bourke district has seen one of the wettest starts in a good while: officially, for the month of March, the rain gauge at Bourke airport registered 299 millimetres, although many unofficial gauges registered more than this – including the 352 millimetres recorded by my own gauge!

March also saw the Darling River reach heights not seen since the 1976 floods, with the river peaking at 13.81 metres, surpassing the height of the 1998 floods, which peaked at 13.78 metres. As a result of the heavy rainfall encountered around Moree and Narrabri and into Queensland, it is estimated that more than 1 million hectares of country in the Bourke district has been inundated with water flowing downstream from these areas. This has prompted many landholders to move sheep and cattle to alternative locations out of harm's way.

Although the inundation has caused obvious difficulties for both stock and infrastructure, the receding of the floodwaters has brought with it a fresh lease of life to the Darling River floodplain. Grasses have responded extremely well, and their growth will be slowed only by the encroachment of the cooler weather of winter. It has been remarkable to see the continued improvement in land condition across the District over the last couple of years. Having arrived in Bourke in the mid 2006, when things were not at their best, I've found it fantastic to

see the country recover, along with the spirits of those who worked tirelessly to keep businesses going during the tough times.

The wet start to the year has seen the continued resurgence of vegetation – particularly perennial grasses – across the District, forcing me to pull out the old faithful plant book to identify the many species I have not previously encountered! Obviously pastures are at, or close to, near-optimum conditions wherever the floodwaters have managed to run. Despite this, many areas away from the floodplain have hayed off over the past 6 weeks and could use an inch of rain to make sure their condition lasts over the winter. Hopefully we can get some timely rainfall soon to continue our great start to 2012.

As is the case across the Western Division, I have been continuing to roll out the Western Division Range Condition Assessment Program and have visited a few properties during my recent travels. The program establishes a number of photo points on properties as part of the assessment of pasture condition. Collection of this information will, over time, help in the long-term understanding of rangeland conditions and will also be a valuable source of information for those making management decisions. I look forward to visiting more properties over the coming months and continuing to work with both familiar and new faces into the future. ■

By Anthony Azevedo  
Rangelands Management Officer  
Crown Lands  
NSW DPI Bourke

# Crown Lands projects helping to strengthen regional communities

By Shaun Barker  
Group Leader – Natural  
Resources and Property Services  
Crown Lands  
NSW DPI Dubbo

**Crown Lands has been working on a number of projects and initiatives over the past year that will help strengthen local communities throughout the Western Division. These projects are very diverse and offer increased tourism opportunities, better access to public assets, and improvements to public infrastructure and facilities.**

Developed as a national tourism icon in 2000, the \$1.84 million Line of Lode Visitors Complex sits in a Crown Reserve some 50 metres above the city of Broken Hill, on the highest point of the historic Line of Lode mine workings. The Complex consists of the Broken Earth Café/Restaurant, a retail outlet/visitor centre, and the Miners Memorial. Earlier this year, Crown Lands implemented a project to do essential repairs and maintenance on the Complex totalling over \$140 000. This included major kitchen renovations, walkway roofing and wall repairs, replacement of floor coverings, and painting and cleaning. These works will restore the building to its original condition so that tourism and commercial opportunities can be maximised for the benefit of the Broken Hill community.

The Lightning Ridge Caravan Park, which is considered to be a valuable parcel of Crown land in a prime location, is currently quite run down and highly underutilised by visitors to Lightning Ridge. Crown Lands has prepared a redevelopment strategy for major works that will revitalise the Park and offer modern tourist facilities. These works include the purchase of five cabins and the establishment of more than 50 powered sites (including eight with ensuite), 16 unpowered (camping) sites, and up to 10 long-term sites. There are also proposals for a new camp kitchen, a new amenities block and a new office and manager's residence. In redeveloping

the site, Crown Lands will be improving the existing infrastructure and providing extra new accommodation facilities. This will enable the Park to recognise its full market potential and will give the township of Lightning Ridge another accommodation option for tourists, visitors and residents.

The Silverton Tramway used to run from Broken Hill via Silverton to Cockburn on the South Australian border. Between 1888 and 1970 it was used to transport ore deposits, bullion, passengers and livestock. This unique Crown Lands site, which covers a distance of approximately 20 kilometres between Broken Hill and Silverton, is now used only on occasions by mountain bike clubs and other off-road biking enthusiasts. Crown Lands is investigating the feasibility of developing the tramway into a recreational cycleway, which would enhance the existing recreational, tourism and heritage aspects of both Broken Hill and Silverton. The cycleway will be unique, as it will be the first in NSW to be located along an old tramway, and it will give a variety of people with different bike-riding skills a very different tourism experience. As part of its investigations, Crown Lands is discussing the project and the construction and installation of bridges, fencing, signs and rest stops with Broken Hill City Council, Silverton Village Committee, Broken Hill Mountain Bike Club, Broken Hill TAFE and local landholders. Funding for these feasibility



Right: The Line of Lode Visitors Complex at Broken Hill is undergoing essential repairs and maintenance. *Photo by Shaun Barker*

works has been provided by the Department of Sport and Recreation, Broken Hill Council and Silverton Village Committee, who all are partners in this project.

The Brewarrina Fish Traps (Baiaime's Ngunnhu) are among the world's oldest man-made structures. Given their importance, Crown Lands is preparing a Plan of Management for the Crown Reserves where they are located. The Plan will ensure that the natural and built Aboriginal cultural heritage resources are appropriately protected and rehabilitated, while at the same time allowing clearly defined land uses to occur. It will supplement existing documents and literature such as the 'Looking after Baiaime's Ngunnhu – Conservation Management Plan for the Brewarrina Fish Traps (Final Draft)' and the State Heritage Register listing for the site, and it will be developed in consultation with all stakeholders in the Brewarrina area.

Tibooburra Aerodrome in the far north-west corner of the state is also located on a Crown Reserve, about 320 kilometres north of Broken Hill. It provides the remote rural communities and visitors in this area with essential emergency infrastructure. It is primarily used by the Royal Flying Doctor Service for

emergencies, patient care and clinic visits, but from time to time it is also used by charter flight operators, the Plague Locust Commission and Emergency Services. In May 2011, the Tibooburra Aviation Reserve Trust, which manages the Aerodrome, performed essential repairs and maintenance on the unsealed runway, which was damaged by both the dust storm in September 2009 and the heavy rainfall in late 2010. These works included substantial reforming, water compaction, gravel sheeting and installation of adequate water drainage. More recently, the Reserve Trust was notified of its successful funding application under the Federal Government's Regional Aviation Access Program. This application was one of only two approved in NSW, and the \$20 000 received will be used to install a new solar lighting system that will operate automatically from dusk until dawn. The new lighting system will eliminate many of the problems being experienced with the existing solar lights and will help to keep the Aerodrome safe. The Trust will also be seeking quotes for repairs and maintenance to the Aerodrome perimeter fence, which has been damaged in the last 2 years by all the heavy rainfall and is no longer animal proof. ■

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## Good rollup for Landcare forum

One hundred and forty people turned up for the Western Landcare forum and dinner in Cobar on 20 and 21 April. The forum, hosted by the Buckwaroon Catchment Landcare Group, was a celebration of the social aspect of Landcare, with lots of catching up, laughter and information to absorb.

'Landcare is alive and well, and there is great optimism in the pastoral industry generally', said Rob Chambers, president of the Buckwaroon group.

Forum attendees were presented with a diverse range of speakers, including Terry McCosker, Tom Nicholas, Sally McInnes-Clarke, Rory Treweeke, Mike Chuk, Carole Hungerford, Mike Parish and Reg Kidd. They presented information ranging from grazing for enhancing soil carbon to the importance of monitoring soil health, along with gardening in arid areas and human nutrition.

'I was impressed by the calibre of the speakers, and I got a lot out of the event', said Chris Higgins, one of the Landcarers. Chris also enjoyed getting out in the paddock to look at local success stories.

Field tours included a local garden tour, a look at the specifics of grazing management, a tour of earthworks for water spreading to control soil erosion, and a look at machinery conversions to use tractor exhaust as a fertiliser.

Forum attendees were also entertained over dinner by Damian Mullin, an Elvis tribute artist. Guests sang and laughed along with Elvis as he got the whole crowd involved. ■

By Anne Holst  
Regional Landcare Facilitator  
Western Landcare NSW Inc.  
Western CMA Bourke



Lorraine Lewis being serenaded by Elvis. Photo by Marra Cartner

# Innovative methods used to mentor landholders

By Jennifer Sandow  
Western CMA Catchment  
Officer, Grazing  
Management  
Western CMA Bourke

The Western Catchment Management Authority (CMA) has been supporting landholders over the past year through a coaching program aimed at introducing change-management regimes and new systems into their business enterprises.

The Western Innovators program is a mentorship initiative with a focus on supporting enterprise development for landholders in the Western Catchment. The program innovators, or mentors, are landholders living in the Western Catchment who are recognised for their expertise in land management techniques and practices.

The partnership between mentor and participant, or mentee, runs over a 12-month period, covering a range of topics that have been identified in supporting change management that results in a successful grazing enterprise.

The program's emphasis on business and production helps participants to better manage their natural resources. This aspect of the program has been recognised by the Western CMA as an important step towards achieving a sustainable and productive business.



Graeme and Emma Barton of 'Ours', near Cobar, have praised the Innovators program. *Photo supplied by Western CMA*

Participants are able to work with their mentors to develop and review their business direction, look for business opportunities, share ideas and learn from someone with extensive knowledge in a similar field of business.

Since the program's launch in June 2011, participants have been working closely with their mentors to address

specific goals, including infrastructure planning, livestock management and planning, marketing strategies and budgeting techniques.

Some of the actions achieved by the partnerships are:

- developing property management calendars
- infrastructure planning and budgeting
- implementing systems to better record and manage livestock numbers
- implementing changes in marketing direction
- implementing changes to grazing management
- developing and implementing methods to monitor groundcover.



L to R: Innovators Sue Hanson of Bloodwood Station and Graham Finlayson with participants John and Ann Crossing of 'Glenace'. *Photo supplied by Western CMA*

Program participants are also invited to attend open days hosted by their mentors at their respective properties. This enables participants to see first-hand the hurdles that their mentors have overcome in achieving a successful business and to also get together with other landholders who are like-minded and passionate about improving their business and land management.

John and Ann Crossing, of 'Glenace', near Cobar, who are mentees in the program, said that the Innovators program had provided them with an opportunity to work with an experienced leader in the field of Dorper sheep.

'With the guidance of our mentor, Andrew Mosely, we have put in place a number of business management practices', they said.

'This has allowed us to improve our business with the view of working towards a sustainable venture which also supports our vision for Glenace.'

Emma and Graeme Barton, of 'Ours', near Cobar, also praised the success of the program, saying that they were fortunate to have been able to participate in the program under the guidance of Graham Finlayson.

'The program has prompted us to take a fresh look at our business and has provided us with a clear focus and strong direction of where we would like to be in the future', they said.

'The Innovators program has helped us to identify that infrastructure is our biggest opportunity, and that's where we need to start. This in turn has provoked us to plan to meet our identified goals.

'We would recommend the program to anyone who would like instigate any positive change in their business.'

If you would like to know more about the program, please contact Jennifer Sandow, Western CMA's Catchment Officer – Grazing Management, at the Bourke office on 02 6872 2144. ■

# Around the Traps – and then it started to rain ...



The homes and woolshed of the Carmichael family at 'Rose Hill', near Ivanhoe, after the area received 550 mm (22 inches) in 6 days.  
*Photo by Jo Gates*



Clive Linnett releases stranded sheep from a cage being air lifted by a helicopter on his property 'Kilfera' at Ivanhoe, where the Willandra creek flooded. About 90 were air lifted in a cage six at a time. The rest of the mob of 600 were moved out over channels using tarps and a force-up yard. *Photo by Fay Linnett*



Dogs going in! Dogs and equipment being caged in by helicopter to the stranded sheep during the air lift at the Linnett's property, 'Kilfera'. Three quad bikes and fence panels were also airlifted into the site.  
*Photo by Fay Linnett*



Ewes at the point of lambing behind flood water being caged out with a helicopter on a property near Hay. *Photo by Sally Ware*

## Natural disaster relief and recovery grants

### Central Darling Shire – Primary Producers, Small Businesses and Not-For-Profit Organisations

A \$15 000 grant can be accessed for clean-up and recovery activities from the 2012 rainfall and flood event. These activities can include replacement of damaged equipment and general repairs to roads and fences.

Application forms can be obtained by calling the NSW Rural Assistance Authority on 1800 678 593 or via the website [www.raa.nsw.gov.au](http://www.raa.nsw.gov.au)

**THE DEADLINE IS 31 OCTOBER 2012.**



A \$15 000 grant can be accessed by people living in the Central Darling Shire for clean-up and recovery activities such as general repairs to roads and fences. *Photo by Sally Ware*

## Australian Government disaster recovery payment

A payment of \$1000 per adult and \$400 per child is available through the Department of Human Services for people evacuated from their homes for a period of over 24 hours in relation to the Southern NSW floods and rainfall in February/March 2012.

Visit [www.disasterassist.gov.au](http://www.disasterassist.gov.au)

**THE DEADLINE IS 20 SEPTEMBER 2012.**

For further information contact Danny Byrnes, Rural Support Worker, NSW DPI Hay. Phone 0428 973 141.

*Note: Other shire areas may also become eligible for this assistance. Check the Disaster Assist website for updated information.*

# Mental health referral pathway

Information provided  
by the Rural Adversity  
Mental Health Program,  
Murrumbidgee Local Health  
District

Prolonged periods of stress place people at increased risk of developing depression or other mental illnesses. During hard times, many people will manage their mental wellbeing by using coping techniques, such as staying connected with (and supported by) friends, family and community; seeking good advice on business, finances and relationships; exercising; and eating and sleeping well. However, if you notice symptoms of depression, stress or 'not coping' that last for longer than 2 weeks, or if a friend or family member is worried about you, the following services are available to help:

Visit your GP. Ask for a longer appointment, and tell your GP how you're feeling. Your GP may manage your care, or they may refer you to a Psychologist or Counsellor for services such as the free Better Access to Mental Health Care initiative. This Initiative basically means that the GP refers you for six initial sessions with a Counsellor, followed by a review, and then a further six or 12 counselling sessions as appropriate. The program is monitored by your GP.

Contact your nearest Community Health Centre to make an appointment with a Generalist Counsellors, or with others such as Drug and Alcohol or Youth Counsellors. Look under 'Hospitals' in your local directory.

Medicare Locals (formerly Divisions of General Practice) have counselling services available, and many employ Counsellors or Psychologists to work with people who are affected by hard times. The Division contact numbers for the area are: Riverina (Wagga) 6923 3100; Broken Hill 08 8087 9330 and Murrumbidgee (Leeton/Griffith) 6953 6454.

The Rural Mental Health Support Line is a free, 24-hour number developed to support the mental health of rural people and to make appropriate referrals, including to the NSW Mental Health Line (more information on the right). You can ring this number to discuss your own situation, or if you are concerned about a friend or family member. This line is staffed by people who are regularly updated on other services available to farming and rural populations, such as NSW DPI Rural Support or Rural Financial Counselling. The staff can therefore make referrals to these agencies if needed. The Support Line number is 1800 201 123.

Relationships Australia has a program that enables qualified counsellors to see rural clients on their farms or in rural towns. Call 6923 9100 for an appointment.

Various church organisations also offer counselling services, with some currently offering specialist rural counselling. If this is something that suits you, contact your local church to find out more.

Murrumbidgee Local Health District Mental Health Services are available for more acute cases. The Mental Health Line is the number to ring to access these services. Staff will assess and make appropriate referrals into the Health Service. The NSW Mental Health Line is available 24 hours a day, on 1800 011 511.

The Emergency Department of your local hospital is also available 24 hours a day.

Your local school will have access to a counsellor or a Murrumbidgee Local Health District Mental Health Clinician.

Various other organisations have free telephone counselling or support lines. They include:

- Lifeline: 1300 131 114
- Kids Helpline: 1800 551 800
- Mensline: 1300 789 978
- Beyondblue: 1300 224 636

In an emergency situation, dial '000' for police and ambulance. ■

**For advice, information and help relating to mental wellbeing, or for strategies to help a friend, family or community member, please contact:**

- your doctor or other health professional
- the 24-hour, free NSW Rural Mental Health Support Line 1800 201 123
- in an emergency dial '000' and your local Hospital Emergency Department
- Beyondblue – the national depression initiative [www.beyondblue.org.au](http://www.beyondblue.org.au)
- Lifeline – 13 11 14 [www.lifeline.org.au](http://www.lifeline.org.au)
- NSW Mental Health Line – 1800 011 511

# Carp-reduction efforts take new tack at Booligal

Friday 27 April marked the beginning of a new phase of carp-reduction efforts in the Lower Lachlan, with the delivery of a new carp separation cage for trial on the Booligal Weir fishway. Early last decade, the Lower Lachlan Landcare Group identified carp as an issue in our rivers and started working to reduce carp numbers and increase native fish populations. Since then, hundreds of carp have been removed from the Booligal weir pool locale during the Booligal Carp Fishing Competition and associated events, and many thousands of native fish fingerlings have been released to improve the ratio of native to exotic species.

When developing its first Catchment Action Plan, the Lachlan Catchment Management Authority (CMA) also identified carp as a major concern to many stakeholders in the catchment. Since 2005, the Lachlan CMA has been working on a strategy to reduce carp numbers and improve native fish habitat.

Actions undertaken, in partnership with NSW DPI, the South Australian Research and Development Institute, the Invasive Animals Cooperative Research Centre and K&C Fisheries Global, among others, have included:

- trial of carp separation cages, which capitalise on carp's innate jumping behaviour to separate and remove them from the system as they migrate through fishways
- identification of carp breeding hotspots
- design and trial of cages aimed at separating and removing carp from wetlands, which have been identified as key breeding and recruitment areas
- commercial-scale carp fishing
- community fishing events, including the annual catchment-wide Cleanup a Lachlan Carp Day
- protection and improvement of streambank vegetation for the benefit of native fish species.

State Water contractors finished constructing a fishway on the Booligal Weir just before the recent flooding on the Lachlan River. The fishway allows fish to make their way upstream from Oxley to Tallawanta, near Hillston. By trialling the installation of a carp separation cage on the Booligal Weir fishway, it is hoped that many carp attempting to

migrate upstream from Oxley will be caught and removed from the system before they can breed. Native fish will still be able to pass freely through the fishway.

The cage is expected to be installed when the river level drops, before the spring carp migration. The trial is intended to run over the spring carp migration period and will be coordinated by NSW DPI (Fisheries). The results of the trial will determine whether the cage operation becomes a regular feature of the fishway operation each year.

For further information on the River Revival – Lachlan River Carp Cleanup, please visit the Lachlan CMA website at [www.lachlan.cma.nsw.gov.au](http://www.lachlan.cma.nsw.gov.au) ■

By Kylie Krause  
Media and Public Relations  
Officer, Lachlan CMA



Carp separation cage components being delivered to a property near the Booligal Weir. The cage will hopefully be installed before the carp migration next spring. *Photo by Michelle Crossley*

# Pigs invading rangelands

By Kylie Krause  
Media and Public Relations  
Officer, Lachlan CMA

The rangelands of the western Lachlan catchment contain some of the last refuges in NSW for the now endangered malleefowl. As part of the Lachlan CMA's biodiversity program, efforts to conserve this species require strategies that will help landholders to protect their vegetation from degradation by feral pests.

In recent years, improvements to goat trapping across strategic points in the landscape have promoted more sustainable grazing patterns, but recent rains have allowed another pest animal – the wild pig – to multiply.

Pig populations in the western part of the catchment have exploded in the past 6 months. Pigs have destroyed crops and are now eating crop seedstock as it is dry sown. Unfortunately, these pigs also destroy malleefowl nesting sites as they search for

and eat eggs; the malleefowl has no defence against this destruction. To combat this problem and the landholders' crop losses, the Lachlan CMA has started trialling a baiting technique that uses 'Hoghoppers'. These feeding stations deliver bait specifically to the target animal through an ingenious sliding door that only pigs are able to access.

In the first part of this trial the Lachlan CMA has joined forces with landholders to explore how efficient this method is and whether it can be taken to other pig-affected areas. Hopefully the new method will give landholders a more effective long-term solution to this unwanted guest in their crops and will help malleefowl numbers to recover.

For more information about the Lachlan CMA Biodiversity program, visit:  
[www.lachlan.cma.nsw.gov.au](http://www.lachlan.cma.nsw.gov.au) ■

Below left: Trial pig bait feeding station. A sliding door allows only pigs to access the bait. Below right: A remote sensor camera is used to determine what animals are visiting the Hoghopper and in what numbers. *Photos by Angela Higgins*

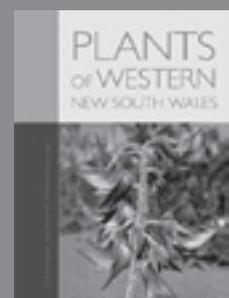


Winner of the *Plants of Western New South Wales* book prize for completing the survey on the Western Division Newsletter was Mr Alf Withers, of Springwood Station via Wentworth.

The survey was contained in the Spring and Summer editions of the Newsletter and was available online through the website. Mr Withers wins a copy of the new edition of the book, worth \$180.

Thank you to everyone who took the time to fill in and return the survey forms and provide comments on the Newsletter.

Sally Ware, Editor



# A significant agreement for the future of management of Toorale

The National Parks and Wildlife Service (NPWS) and the local Aboriginal community will jointly manage and protect Toorale National Park and State Conservation Area (near Bourke) and its important cultural values after the signing of a significant agreement at Toorale on Saturday 12 May 2012.

'Toorale is a culturally significant place for the Kurnu Baakandji / Paakandji people and contains a range of important Aboriginal sites, including burials, occupation sites and ancestral story places', said Nerida Green, NPWS Bourke Area Manager.

'The resource-rich floodplain provided the local Aboriginal people with a variety of plants used for food, medicine and tool making.'

On Saturday 12 May the NPWS and Aboriginal Elders signed a Memorandum of Understanding that formalises the relationship between the NPWS and the Kurnu Baakandji/ Paakandji people to jointly protect and conserve Toorale National Park and Toorale State Conservation Area.

'Aboriginal Elders and the NPWS have worked together to draft the MOU, which sets out the

principles and agreements for how we are going to work together to manage the area', said Ms Green.

'The MOU ensures the involvement of Aboriginal people in the protection and conservation of Toorale's important cultural values.'

A celebration was held at Toorale to commemorate the signing of the MOU.

'Lots of people came out to celebrate and everyone got involved in the range of activities on the day, including an art and craft market, cultural heritage displays, a yarn space and traditional cultural dancing. The well-known local group Bell Riverband also performed throughout the day.

'The day provided an opportunity for members of the NPWS and traditional owners to celebrate with the local community and share their knowledge and history of the area.'

Joint management is a partnership arrangement between Aboriginal people and the NSW Government for sharing the management of a park or reserve.

In the Bourke area, Culgoa National Park and Ledknapper Nature Reserve are also jointly managed by the local Aboriginal community and NPWS. ■

The signing of an agreement between the local Aboriginal community and NPWS took place at Toorale in May 2012. *Photo by David Bender*



## Do you live or work on the banks of a waterway?

If you do, NSW DPI has released two new brochures to help you comply with the laws aimed at protecting our native fish and their habitat.

Rivers and other natural waterways are vital habitat for a range of species, including fish, shellfish, frogs, platypus and water birds. They are also an important part of our way of life, providing water for livestock and domestic use and supporting industries such as tourism, recreational and commercial fishing, and aquaculture.

However, these habitats are under pressure from further development, increasing demand for

water use, and inappropriate land management practices. Together, these pressures have resulted in loss of aquatic habitat, sedimentation, erosion and other water pollution issues.

Everyone has a role to play in ensuring that our waterways continue to be healthy and productive for future generations.

The new brochures outline ways to manage important fish habitats, including riverbank and in-stream vegetation and snags (large woody debris). They also identify the sorts of

*Continued on page 12*



*Continued from page 11*

works that require approval before they can be implemented on the beds or banks of waterways.

The brochures include information on recent changes to the *Fisheries Management Act 1994* and associated Regulations affecting riverbank works, including dredging activities and the removal of these key fish habitats.

To find out more and get some useful tips to help you to look after your riverbank and comply with current laws aimed at protecting our fisheries and their habitat, check out the new brochures at <http://www.dpi.nsw.gov.au/fisheries/habitat/rehabilitating/living-and-working-on-a-riverbank>. If you would like a copy of the brochures, please call (02) 6626 1269. ■

## Goat tag reminder – tag your goats!

By Megan Rogers  
Livestock Officer (Sheep  
and Wool)  
NSW DPI Forbes

Goat producers throughout NSW are being reminded to comply with National Livestock Identification Scheme (NLIS) regulations or face penalties for breaches.

All landholders running goat operations of any kind (including harvesting operations) are reminded that they need to be aware of the rules regarding identification of goats as part of the NLIS – in particular the rules that are specific to their operation.

NLIS is Australia's system of identifying animals and linking them with the properties on which they have run. Every person in the supply and regulatory chain has responsibilities to ensure that animals are properly identified and that movements are recorded.

Over the past 2 years, NSW DPI has invested time and resources into an awareness campaign for the sheep and goat industries; it has also contributed to more widespread campaigns. There is plenty of information relating to the rules and regulations that apply to sheep and goat operations in NSW. More recently, in 2011, with a strong level of support from industry representatives, NSW DPI conducted 'Operation Shepherd', a compliance campaign throughout saleyards in NSW, with very pleasing results.

All sheep and goats are required to be identified with an approved NLIS tag before they leave the property on which they are kept. This includes animals that are being moved to a saleyard, abattoir or show, between properties as part of normal management, or for agistment.

All movements of goats must be accompanied by an approved movement document. Movement documents must be kept for 7 years by the person or depot sending the goats.

Feral goats being consigned for slaughter directly or via a depot are exempt from tagging. However, this exemption applies only to goats captured in the wild and sent for slaughter within a few weeks. Any goats that are sent to another property to grow out; are sent to a saleyard; or have been subject to an animal husbandry procedure (e.g. tagging or drenching) or a managed breeding program are not exempt.

There is also the need to be aware that, when goats are described from a marketing perspective, the term 'rangeland' refers to the environment where the goats originated, not necessarily to whether they were captured in the feral state or farmed. So not all rangeland goats are exempt from tags!

The goat harvesting industry is fortunate to have the only nationally-agreed tag exemption. If you abuse it, you may lose it!

All movements to and from a goat depot must be accompanied by a national vendor declaration (NVD) for goats or a transported stock statement. Mob-based movements to a depot must be recorded on the NLIS database within 7 days of when the goats arrive. There are no exemptions from these requirements.

More detailed information is available at the following web address, which also contains the necessary rules and regulations for NLIS Sheep & Goats:

<http://www.dpi.nsw.gov.au/agriculture/livestock/nlis/sheep-goats>

If you are in doubt, please make contact with someone from NSW DPI or the LHPA, or your stock agent. ■

Western Division Newsletter

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The information contained in this publication is based on knowledge and understanding at the time of writing (May 2012). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Trade and Investment, Regional Infrastructure and Services or the user's independent adviser.

# Does soil carbon talk mean anything for the Western Region?

Carbon in our soils is not new. What is new is our appreciation of the role of carbon in agriculture and how our management practices influence the amount that is stored in soil. We know that soil carbon levels are low in the rangelands, but considerable potential to store soil carbon exists because rangelands cover extensive areas: even small changes will have a large impact.

Recent increased interest in soil carbon is being driven by the fact that storing or sequestering carbon in our soils has been recognised as a possible tool to help mitigate greenhouse gas emissions. So let's look at some facts:

**Fact 1.** Soil organic matter is not the same as soil carbon. It may seem like a game of words, but they are actually different things. We often talk about the benefits of increasing carbon levels in our soil, but we are in fact talking about increasing the amount of organic matter in the soil. Soil organic matter includes partially decomposed plant material, microbes, humus and charcoal. Organic matter in soil is approximately 58% carbon by weight, with the remainder being made up of nitrogen, phosphorus, sulfur and other nutrients in smaller amounts. It is the carbon component that is easy to measure and that is important when we talk about agricultural soils being a sink, rather than source, of atmospheric carbon. It remains true, however, that to increase soil carbon levels we need to increase soil organic matter.

Some soil carbon is inorganic and is not linked to organic matter. This is most often in the form of calcium carbonate, which can occur as hard nodules or as a powder-like substance through the soil. It is very difficult to change the levels of inorganic carbon in the soil, and management practices to increase soil carbon levels are mostly aimed at increasing soil organic matter.

**Fact 2.** Increasing soil organic matter levels can improve your soil structure, increase nutrient cycling, encourage a diversity of soil organisms and provide small increases in water-holding capacity. This means that your soil can cope better with variable seasonal conditions and support more plant growth. When soil organisms decompose organic matter, they make some of the nutrients available for plant growing. These organisms also secrete a glue-like substance that binds soil particles together and helps improve soil structure. It's the combination of all of these benefits that allows root growth and the movement of water and air through the soil.

**Fact 3.** You can increase the amount of organic carbon stored in the soil – you just need to have more inputs of material than outputs. Really, it's like

kilojoules in food: eat lots (input) and do no exercise (output) and you store the rest (fat) – or in this case carbon. So how can you increase your inputs? For western NSW the most effective way to increase soil organic carbon is by increasing above- (and therefore below-) ground (root) biomass production. During these last couple of fantastic seasons, this is exactly what has been happening: we are producing more biomass than we are using, and the excess is being returned to the soil as organic matter. The key outputs (i.e. the losses of carbon from the system) occur through organic matter decomposition, soil erosion, burning biomass and utilisation by animals. Reduction and reversal of soil degradation and implementation of management practices that increase ground cover and biomass offer the potential to increase soil organic carbon.

**Fact 4.** Climate and soil type largely determine the amount of carbon that you can store in your soil. Arid and hot environments are limited in the amount of biomass that can be grown and therefore returned to the soil. Therefore, it is important to try to limit any losses in these environments, because they are slow to replace carbon. However, our clay soils have a great capacity to store and protect organic matter, and our sandy soils would be highly responsive to the increased water availability that comes with increased carbon content.

We have such a fantastic opportunity to take advantage of these recent good seasons. We can use them to replenish the organic matter in our soils and build resilience into our systems so that the soils remain a sink, not a source, of atmospheric carbon.

The potential for rangeland areas to provide a sink for soil organic carbon has not been quantified, but it soon will be. NSW DPI has recently been told they are to receive funding under a Federal Government Department of Agriculture, Fisheries and Forestry initiative called Carbon Farming Futures – Filling The Research Gap. The aim of this initiative is to determine the potential for alternative management practices in western NSW to alter soil organic carbon. This project is also being supported by the Western CMA. ■

By Susan Orgill  
Research Officer, Soil Carbon  
Climate  
NSW DPI  
and  
Cathy Waters  
Research Scientist (Pastures  
and Rangeland Research)  
NSW DPI Trangie

Ashley McMirtrie of  
'Gilgunnia', Cobar, and Cathy  
Waters, Research Scientist  
at NSW DPI, examining a  
potential site for measuring  
soil organic carbon. *Photo by  
Trudie Atkinson*



# Potential sheep health issues after the floods

By Geoff Duddy  
Livestock Officer (Sheep  
and Wool)  
NSW DPI Yanco

Given the unseasonably heavy rain and flooding recorded across southern NSW in March this year, producers need to be mindful of the health risks faced by the district's ewe flocks as we head into the winter lambing period.

Losing a breeding ewe can mean a potential loss of between \$650 and \$850 over her productive life when we factor in the high replacement cost of breeders, the lost wool and lamb returns and the mutton value of the ewe. With sheep gross margins consistently two or three times more per hectare than those of cereal crop enterprises, reducing ewe (and lamb) losses is critical.

The mild, warm and wet conditions of the past few months have made it almost impossible to prevent some health problems; the trick is to minimise the severity and be proactive instead of reactive!

**Worms.** Barber's pole and black scour worm burdens have exploded state wide. Consider doing a worm test (this can be mailed to you – contact your local LHPA office or NSW DPI office) to identify worm levels and types before you reach for the drench gun. Remember that scouring does not necessarily mean that your sheep are 'wormy'; nor does lack of scouring indicate that your sheep are 'healthy'. High-moisture/low-fibre feeds and excess protein intake – commonly the case on legumes and early-growth cereal crops at this time of year – can cause scouring, whereas worms such as barber's pole are more likely to cause anaemia (pale gums and eyelids) and bottle jaw, without scours. Use of an effective drench before grazing low-worm pastures is critical for long-term worm control. The WormBoss website ([http://www.wool.com/Grow\\_WormBoss.htm](http://www.wool.com/Grow_WormBoss.htm)) can help with worm, drench and grazing management decision-making.

**Flystrike.** This is an ongoing – and costly – issue. Consider an integrated pest management approach by using selection (against wrinkle and fleece rot susceptibility), management (timing of shearing/crutching) and chemicals to minimise flystrike risk and incidence. Be mindful of withholding periods for both wool handling and meat. Visit <http://www.flyboss.org.au> for up-to-date recommendations and information.

**Foot abscess/scald.** This is difficult to prevent during wet conditions. Foot bathing with a 10% zinc sulfate solution, and antibiotics, can help. These conditions can predispose heavy ewes to pregnancy toxemia if they are left untreated.

**Pregnancy toxemia.** Most lambing flocks are expecting higher than normal twin-bearing

ewe percentages and, possibly, higher risks of pregnancy toxemia. If ewes don't have access to energy-dense (i.e. green, early-growing, good quality) and abundant winter paddock feed they should receive high-energy supplements (normally grain or pulses) and 'dry' feed (such as reasonable quality hay) to help maintain normal rumen and body functions before and after lambing. Prevent ewes going down with this sickness by not stressing them in the last month of pregnancy and/or by holding them in small paddocks around yards and sheds. A ewe standing off by itself is not a good sign. Treatment works best if you can give a 100-mL milk fever injection and a drench of 120 mL of glycerine before the ewe goes down.

**Pulpy kidney/red gut/pizzle rot.** When sheep are grazing nitrogen-rich feeds, provide grain and hay such as 'fresh' lucerne to maintain a healthy rumen. This will make full use of available nitrogen/protein and prevent excess ammonia production, which can lead to inflammation and ulceration of the penis or sheath.

**Possible effect of rain or flooding on joining results.** The disappointing scanning results reported by a producer near Hillston may highlight a potential issue within later lambing flocks. The producer's Border Leicester – Merino flock has consistently scanned above 140% in recent years but recently scanned only 100% lambs. Although some of this higher proportion of 'dry' ewes may be attributed to the fact that some ewes had 3- to 4-month-old lambs at foot at the start of joining in early February, it is also possible that joining was affected by localised flooding (and the consequent separation and isolation of mobs) and the 200 mm of rain recorded during the final 2 weeks of the 6-week joining period. If you join your ewes during flood and heavy rain events, it's a good idea to consider scanning your flock if you don't usually do so. If possible, have your scanning contractor provide information on the 'age of foetus' spread to see if any poor joining or conception results can be aligned to weather conditions during the joining period.

For more advice or information relating to these or other sheep health and disease issues, please contact your District Sheep and Wool Officer or your local LHPA Veterinary Officer. ■

# Heat and ewe body temperature do influence joining

Flock scanning in the far north-west by Cousins Merino Services has shown for the first time that high daytime temperatures during joining combined with high ewe body temperatures reduces fertility.

In two flocks joined during January and February and into March, ewes showed generally good fertility (70% to 90% of ewes were pregnant), consistent with excellent pasture and a good summer.

It is known that, for both sheep and cattle, any animal's body temperature is repeatable. In other words, some always have relatively high temperatures, some low, and most stay about average. On this basis, a body temperature taken at one stage of an animal's life, or at one time of the year, will reflect its body temperature at other times, relative those of other animals in its mob. This was the reasoning behind taking the body temperatures of pregnant and non-pregnant ewes when the ewes were scanned, as an indicator of their body temperatures during joining.

In research terms, the hypothesis being tested was that ewes with higher body temperatures would not conceive as well as ewes with lower body temperatures when both were exposed to high summer temperatures. Experimentally, it has been known for decades that when Merino ewes are subjected to high temperatures for short periods just before, and at the time of, ovulation, they usually don't conceive, or they lose the pregnancy very early. This work had not examined whether individual ewe body temperatures made any difference to fertility under field conditions, although in cattle this had been shown to be the case.

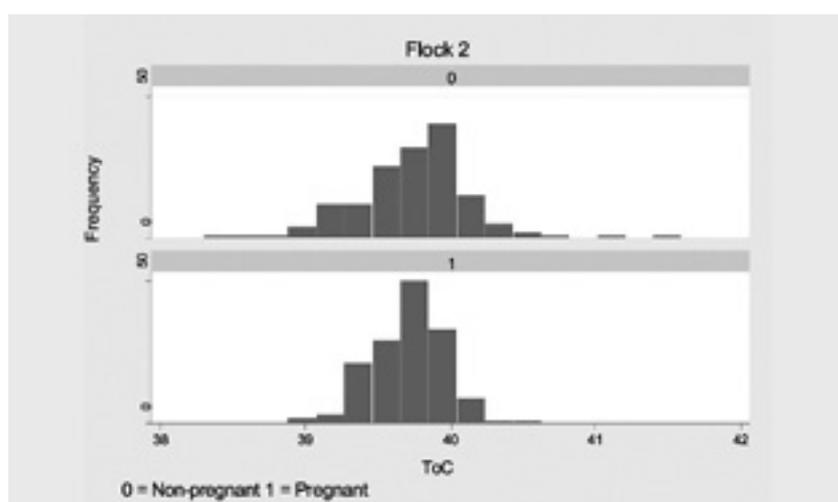
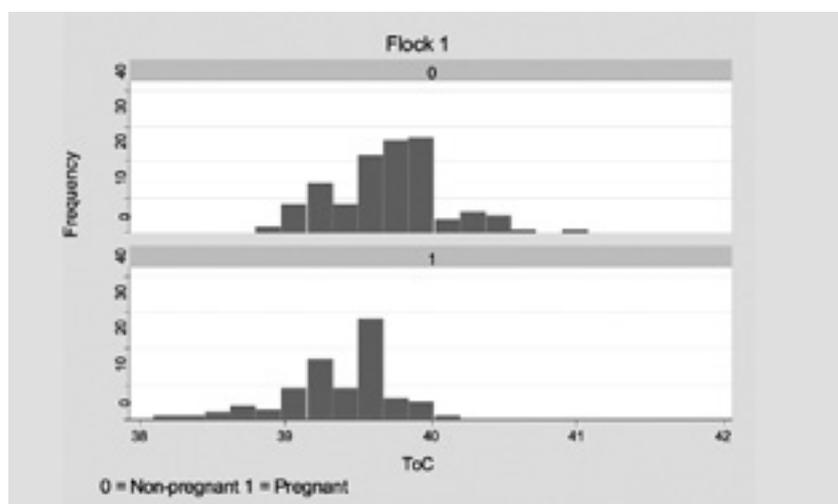
In both of the flocks tested, the difference in fertility was statistically highly significant. The distributions of body temperatures in non-pregnant and pregnant ewes are shown here in the graphs. In flock 2, the ewes were shorn shortly before scanning, reducing insulation and altering body temperatures compared with those in flock 1. The average body temperature of non-pregnant ewes in flock 1 was 0.32°C higher than that of pregnant ewes; the difference between the two groups in flock 2 was +0.13°C. Allowance was made for the sequence in which ewes presented in the race, and body temperatures were measured with simple digital thermometers.

The rams were taken out at scanning in both flocks, so some ewes would have been classed as 'non-pregnant' because their pregnancies were very early.

If those undetected ewes with very early pregnancies also had generally lower body temperatures, then this would strengthen the already strong evidence that ewes with lower body temperatures have higher fertility under summer heat than those with higher body temperatures.

This work opens up the possibility that selecting and breeding sheep with lower body temperatures and sheep that withstand the heat better may improve fertility. It has been shown in cattle that the ability to withstand heat stress ('thermotolerance') is strongly heritable and leads to higher conception rates and better calf survival. ■

By Greg Curran  
Veterinary Officer and  
Technical Specialist  
NSW DPI Broken Hill



These histograms show the distribution of ewe body temperatures in non-pregnant (top histogram in each panel, '0') and pregnant (bottom histogram, '1') ewes. The body temperatures of the ewes in the top histogram in each panel are higher (and the ewes are thus less fertile) than those of the ewes in the lower histogram, particularly in flock 1. The ewes in flock 2 were shorn before scanning, so the differences in body temperature between the pregnant and non-pregnant sheep are not the same as those in flock 1.

# NSW version of Climate Dogs

By Michael Cashen  
Agricultural  
Climatologist  
NSW DPI Wagga Wagga

The NSW DPI Climate Smart Agriculture Team has released the NSW version of the 'Climate Dogs'. This project was managed by Michael Cashen, an Agricultural Climatologist based with NSW DPI in Wagga.

The NSW Climate dog animation series uses humorous animations of sheep dogs to explain complex atmospheric phenomena to farmers. The series has been developed in collaboration with the Australian Bureau of Meteorology and Victorian Department of Primary Industries.

Each of these dogs represents the main drivers of climate variability in NSW. 'Ridgy', otherwise known as the Subtropical Ridge, is the lead dog of the pack. 'Enso' represents the El Niño Southern Oscillation phenomenon. 'Indy' represents the Indian Ocean Dipole and 'Sam' the Southern Annular Mode. New to the pack is 'Eastie', representing the East Coast Low phenomena. Having 'Eastie' join the pack helps explain some of the rainfall variability east of the Great Dividing Range, where most people reside. Unlike the other dogs, 'Eastie' is not a sheepdog; he is a Jack Russell who gets very wound up and is full of energy – a great analogy for the phenomenon he presents.

## Getting to know the Dogs

**Ridgy (the Subtropical Ridge).** Ridgy is one of the four major drivers that shape NSW's seasonal weather. Although Ridgy is the lead dog of the pack, his behaviour is influenced by the other dogs.

As warm air in the tropics continually rises, moves south, then cools and falls, large areas of high pressure are created. These high pressures – in this case Ridgy – are great at blocking rain-bearing fronts. From November until April, Ridgy chases away cold fronts around southern Australia for days, or even weeks, at a time. Occasionally cold fronts sneak through, and if they connect with moist air from the tropics southern NSW gets some summer rain.

As winter sets in, Ridgy heads north and the cold fronts find it much easier to reach southern NSW and deliver their rain, until Ridgy returns next November. Ridgy does this every year, but in recent decades he's been getting more effective at chasing away cold fronts from southern NSW; this explains a lot of our drier weather, particularly in autumn.

The Bureau of Meteorology has observed that Ridgy's increasing strength is related to the

rising global average temperatures. Scientists are continuing to investigate how this climate dog might change his behaviour in the future.

**Enso (the El Niño Southern Oscillation).** Enso has a big influence on NSW climate over winter and spring. The Pacific Ocean trade winds blow from an easterly direction, pushing moist air towards Australia. This moist tropical air is a big source of rain across eastern Australia, including NSW.

But Enso's behaviour can vary from year to year. During La Niña, Enso chases greater amounts of moist tropical air across Australia. Many La Niña years have seen higher rainfall in inland NSW during winter and spring.

During El Niño, Enso changes his mind and drives warm moist air towards South America instead. El Niño years have often resulted in drier winter and spring periods for inland NSW.

Each year climatologists follow Enso's behaviour, providing us with a potential rainfall outlook for inland NSW. So Enso is definitely an important dog to keep an eye on.

**Indy (Indian Ocean Dipole).** Indy influences inland NSW's rainfall in winter and spring. Indy brings rain to NSW when the north-eastern Indian Ocean increases the amount of moisture it provides to the atmosphere. This moist air is herded across Australia and can deliver significant rainfall, particularly into southern NSW.

When the north-eastern Indian Ocean produces less atmospheric moisture Indy doesn't drive as much rain towards inland NSW, and we can end up with a drier winter and spring. Historically, Indy has been a significant source of rain.

However, in recent years Indy has not been chasing moisture down south as often as farmers would like, reducing the average rainfall for NSW. Indy is closely watched by scientists, who make limited predictions on his behaviour before winter and spring arrive. Keeping an eye on Indy's behaviour can provide an indication of the expected rainfall coming from the north-west to NSW.

**Sam (Southern Annular Mode).** Sam herds cold fronts across the Southern Ocean. Sam's

actions affect rainfall in south-eastern NSW during spring and summer. If we take a look at the southern ocean we can see westerly winds circling around Antarctica, throwing out cold fronts of stormy wet weather. The strength and position of these winds are known as the Southern Annular Mode, or 'Sam'. Sam is an unreliable climate dog, often changing his behaviour in a matter of weeks and thus affecting NSW rainfall. When Sam is tied up, strong winds are pulled in towards Antarctica, allowing stronger easterly winds and moisture to penetrate to inland NSW and thus increasing summer rainfall. When Sam is let off the leash, the westerly winds move farther north, decreasing the likelihood of summer rainfall in south-eastern NSW.

Over recent decades Sam has found himself tied up more often, increasing summer rainfall in parts of NSW. Sam's behaviour is complicated, so scientists are in full swing trying to understand how this climate dog will affect NSW's weather down the track.

**Eastie (East Coast Low).** Eastie represents the deep low-pressure systems that are an important climate feature along the south-east

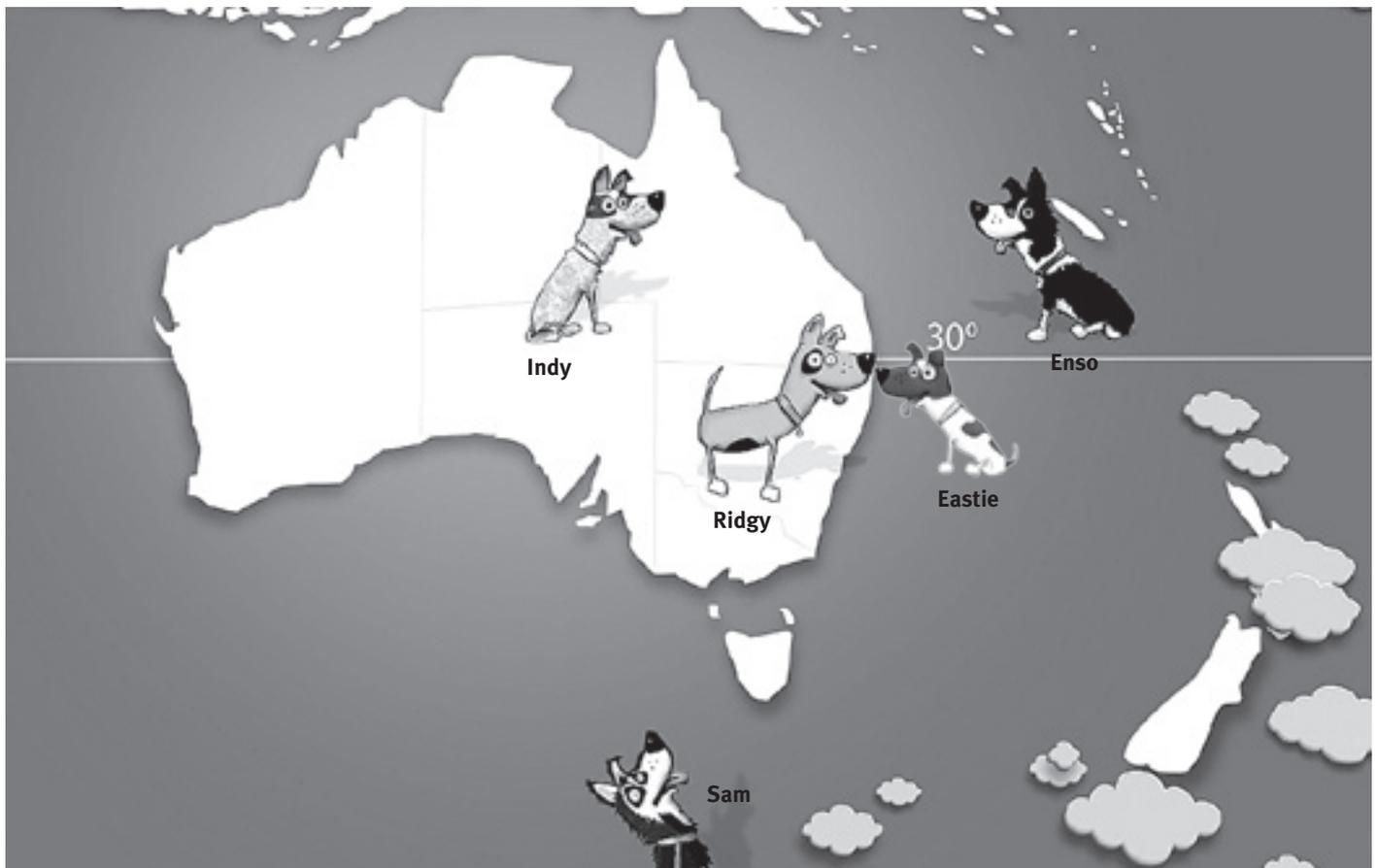
coast of Australia. These deep low-pressure systems can be triggered by upper atmosphere disturbances, decaying cyclones or existing low-pressure conditions. They can also follow in the wake of passing fronts. Scientists have found that Eastie tends to have a mind of his own and can be quite hard to predict. This energetic little dog can be triggered into action overnight, causing strong winds, big surf, heavy rain and lots of rough weather.

Eastie can appear all year round but typically prefers autumn and winter. Even one-off events can dominate a region's annual rainfall tally, explaining a lot of the seasonal variability east of the Great Dividing Range. Eastie usually cares little about what the larger climate dogs are up to, but scientists have noticed that Eastie can be a bit timid when Ridgy (with his high pressure) is around.

Scientists continue to look into Eastie's behaviour. In the meantime we'll need to keep a close eye on this powerful little dog, especially when it's sparked into action!

For further details go to: <http://www.dpi.nsw.gov.au/agriculture/resources/climate-and-weather/variability/climatedogs> ■

These five 'Climate Dogs' help farmers gain an understanding of our weather systems.



Deadline for articles for the next Issue 142 of the Western Division Newsletter is Wednesday 1 August 2012. Please email articles to Sally Ware to [sally.ware@dpi.nsw.gov.au](mailto:sally.ware@dpi.nsw.gov.au) or phone 0429 307 627.

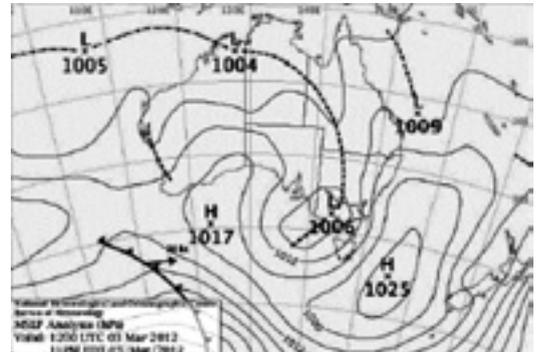
# So what happened when the deluge hit at the end of February and in early March?

By Michael Cashen  
Agricultural Climatologist  
NSW DPI Wagga Wagga

## According to the Bureau of Meteorology's Special Climate Summary 39:

An extensive cloud band associated with a slow moving low pressure trough with embedded thunderstorms extended from the northwest to the southeast of the country between 27 February and 4 March 2012. The trough directed tropical moisture from the northwest and northeast across South Australia, New South Wales and Victoria leading to very humid conditions. This resulted in unusually widespread and persistent rainfall from 27 February to 4 March.

This synoptic chart dated 3 March 2012 shows warm, moist air being fed into southern Australia by the low pressure trough off



Broome. It also shows the blocking High that was also feeding moisture into NSW and Victoria, resulting in the massive rain event that caused the extensive flooding of many areas in March. ■

*Advertorial*

## Maverick changes lice and worm control forever

**A**ustralian sheep producers can look forward to a more efficient and effective way of managing lice and worms following the release of a new pour-on lice control product by Coopers.

For more than 150 years, Coopers has been developing the largest single range of lice control products, beginning with the legendary Coopers Dipping Powder first manufactured in 1852, when they said it couldn't be done.

They also said that no single product can control both lice and worms in sheep, and yet Coopers has done it, with Maverick. The unique Aqueous Micellar Formulation allows the active ingredient to pass around the sheep's body, controlling lice, and at the same time move internally to control worms.

More than a decade in the making, Maverick is a new active for lice that represents 100% lice control with no known lice resistance.

Maverick is the first and only sheep product on the market that provides dual lice and worm control in a single treatment. Now sheep producers can benefit from the same convenience that cattle producers have long been accustomed to: a single pour-on product to control lice and worms simultaneously.

As all sheep producers know, lice control is critical when it comes to flock performance, productivity and profit: sheep lice alone cost the Australian wool industry up to \$123 million annually through loss of income and increased cost of production. However, the battle against lice is about to change.

As a dual action product, Maverick is set to help reduce labour requirements during shearing, with just one trip up the race and one single off-shears backline application. Maverick controls both lice and

worms – there's no need for an oral drench as well. Pen trials have demonstrated that Maverick was as effective at controlling worms in sheep as an oral abamectin drench.

There's also no need to be concerned about your wool clip – Maverick is European Union eco-compliant. And with low Meat Withholding Periods it allows you to capitalise on market demand.

Maverick's new formulation is water based, providing simple handling and easy clean up. Applicators can be washed with warm soapy water after use, reducing messy and time-consuming clean ups during busy times such as shearing.

By applying Maverick off-shears, sheep producers will maximise their chances of success. This has been demonstrated in on-farm trials that have been conducted in varying geographical regions of Australia and have shown Maverick to be highly effective at controlling both sheep lice and worms. In all trials lice counts were reduced to zero between 1 and 6 weeks post-treatment, giving producers total confidence that with Maverick their lice and worm management program will succeed.

Coopers has developed an extensive amount of knowledge on sheep lice and management principles for effective control. Producers can contact Coopers to discuss their own lice management programs so they can get it right the first time and ensure long-term success.

Coopers is the trusted name in lice control that brought you Magnum, Eureka Gold and Assassin and now brings you Maverick.

**Want to know more about Maverick? Simply talk to your local Coopers representative by calling 1800 885 576.**

# THIS CHANGES EVERYTHING

COOPERS<sup>®</sup>  
EST. 1843



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- You can't spend over a decade to develop a product just for our Australian sheep farmers;
- You can't improve on current lice products;
- You can't control lice and worms with a single pour-on application...



## YES WE CAN!

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EST. 1843



# 2012 ROB SEEKAMP MEMORIAL SCHOLARSHIP

Application forms and Guidelines for the Rob Seekamp Memorial Scholarship are now available for collection at the Pastoralists' Association office, situated in Adelaide Road at Broken Hill.

Forms are also available by mail – send a request form to **PO Box 279 Broken Hill** – or by email at **pwd01@bigpond.net.au**, or you can obtain a form by calling **(08) 8087 3322**.

**APPLICATIONS CLOSE ON 30 JUNE 2012. THE SCHOLARSHIP AMOUNT FOR 2012 WILL BE \$2,500.**

## Wild dog management *(Free workshop)*

**WHO:** Everyone interested in managing wild dogs – graziers, public land managers, NRM officers, you ...

**WHERE:** Cobar Bowling & Golf Club

**LUNCH PROVIDED**

**For information on directions and available facilities at Cobar contact:**

Jacqueline Mills  
Western Lands Office  
Cobar  
(02) 6836 3018  
Jacqueline.Mills@lands.nsw.gov.au

**WHAT'S HAPPENING:** Sit-down workshops covering wild dog distribution, control tools and options, strategies to prevent wild dog incursions, and integrated pest management. Hands-on demonstrations and training for using soft-catch traps, M44 ejectors and Lethal Trap Devices (LTDs).

**YOU MUST RSVP BY FRI 15<sup>TH</sup> JUNE TO:**

NSW Department of Primary Industries  
Broken Hill  
(08) 8088 9300  
benjamin.allen@dpi.nsw.gov.au

**FRIDAY 22<sup>ND</sup> JUNE  
9.00AM – 3.00PM**

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**awi** Australian Wool  
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**Department of  
Primary Industries**

# AWI WOOL CLIP

hosted by Bestprac

Bestprac provides innovative information and support for pastoral producers to improve their business and production performance. Bestprac operates in the pastoral zones of Queensland, New South Wales, South Australia and Western Australia.

**Cobar, New South Wales - Thursday 6 September**

Providing an update to wool growers on the outcomes  
of AWI investments at a local level.

For more information visit [www.bestprac.info](http://www.bestprac.info) or to RSVP, please email National Bestprac Coordinator, Carlyn Sherriff, at [bestprac@ruraldirections.com](mailto:bestprac@ruraldirections.com) or call 08 8842 1103.

