

Big day out at Tilpa

By Sally Ware
Livestock Officer
Department of Primary Industries – Hay

Arising from a teleconference discussion during a Wilcannia Bestprac meeting, the idea for a Lamb Production Day in the west gradually grew into reality. Organised by the Department of Primary Industries in conjunction with Justin and Julie McClure, the first attempt in October 2010 was postponed because of rainfall. The second attempt took place on Friday 28 October and proved to be a huge success, with close to 100 people attending.

The 'Making More from Sheep' Lamb Production Day was held at Justin and Julie's property 'Kallara', near Tilpa in Far Western NSW. Justin and Julie operate a large-scale, organically certified operation producing lamb, beef and goat meat and are long-term members of the Wilcannia Bestprac Group. With the benefit of the recent Darling River flooding, they have been able to grow 405 ha of organic milling oats for Blue Lake Milling and 160 ha of organic canola. In addition, an estimated 4000 large round and square bales of native hay, cut from native summer floodplain grasses and medics, have been produced.

The infrastructure used on 'Kallara' to improve livestock management, reduce labour input and costs and help meet processor specifications was showcased on the day and was used

in practical demonstrations. This included demonstrations of a Prattley 5-way auto-drafter housed in a covered working area and a remote water-management system that is used to monitor the waters on the property. Phil Whitton from the remote water management company Observant and James Brown from Durapoly spoke about water management.

Sheep fat scoring was demonstrated and producers had an opportunity to practise the technique. Static displays were also provided by staff from Western CMA, NSW Department of Primary Industries, Landmark Russell Cobar, Elanco and Durapoly.

Producers attending the day heard a range of presentations that looked directly at opportunities and management options for lamb production in the Western Division. Presentations included an overview of lamb production on 'Kallara' by Justin McClure and a lamb marketing update by NSW Department of Primary Industries Livestock Officer Geoff Duddy. This update was complemented by a report from organic lamb buyer Paul Leonard from the company T & R Pastoral and two sheep reproduction presentations presented by Trudie Atkinson from the Department of Primary Industries and long-time organic lamb producer Garry Hannigan from the local property 'Churinga'. Ben Allen from the

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Summer 2011

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Above: The crowd at the Lamb Production Workshop held in the woolshed on 'Kallara' at Tilpa. *Photo by Chrissie Ashby*



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Department of Primary Industries in Broken Hill and Ben Mannix from 'Gumbooka' at Bourke also spoke about the looming wild dog problem in western NSW. There was also a live cross to the ABC's Country Hour from the 'Kallara' homestead, with Rural Reporter Skye Shannon interviewing Justin McClure, Geoff Duddy and Paul Leonard.

Key points from the day were provided by each guest speaker. Justin McClure spoke about selecting rams with high weaning weight ASBVs (Australian Sheep Breeding Values) to ensure quick-growing progeny. He mentioned that some of the native pasture hay recently baled on the property will be used to finish lambs for the organic markets—in particular, for a lucrative contract with T & R Pastoral for the American export market using Kallara's USDA (United States Department of Agriculture) organic certification. To maintain the supply of lambs for such contracts, more western lamb producers may need to consider USDA organic certification. The importance of fencing on the property for multi-species (e.g. Dorpers, goats and cattle) was also outlined by Justin.

Department of Primary Industries Livestock Officer Geoff Duddy said that all sheep enterprises are going well at the moment, with similar gross margins for prime lamb enterprises through to Merino wool-based operations. Geoff believes that the sheep meat market will remain strong for several years, and he suggested that western lamb producers should concentrate on producing

as many lambs as possible in the short term as flock rebuilding gains momentum. Given that feed quality and availability may be limiting in most years within the pastoral zone, he urged those present to calculate their individual costs of production and consider selling their lambs as stores or restockers if they are unable to produce a finished product.

Trudie Atkinson, Livestock Officer with the Department of Primary Industries, spoke about managing reproduction in pastoral flocks, including highlighting opportunities for producers to improve the reproductive performance of their flocks. Trudie encouraged producers to understand their flocks' performance in terms of fertility, fecundity and lamb survival, rather than just lamb marking percentage; she said that pregnancy scanning and 'wet and drying' were useful tools for achieving this. Trudie stressed the importance of giving ewes sufficient opportunity after rearing their lambs to regain condition (to fat score three) before the next joining. Improving ewes' fat scores from 2 to 3 at joining will generally result in 12 extra lambs being conceived per 100 ewes joined (depending on flock responsiveness). Preparing rams for joining is important as well: their health and condition in the 2 months preceding joining are important. Soundness checks should be done on the 4 Ts: teeth, toes, tossle and testicles.

To increase lamb survival and production, Trudie suggested that management should focus on meeting ewe nutrition requirements and fat score targets during late pregnancy and lactation. Trudie gave examples of how plans to meet ewe requirements could vary depending on seasonal conditions and how knowing the ewes' pregnancy status and fat score can provide options. The importance of incorporating good grazing management and opportunities for improvements via within-flock selection were also discussed.

Local landholder Garry Hannigan and his wife Tracy run 5000 Dorper Damara Wiltshire cross ewes on a 48 600 ha fully certified organic property located 130 km east of Broken Hill. Garry spoke about his long-term goal to lift his average lambing percentage from 160% to 200%, as 10% of his ewes were already having twins every 6 months.

Final speakers Ben Allen from the Department of Primary Industries in Broken Hill and landholder Ben Mannix from 'Gumbooka' at Bourke spoke about the importance of taking the current dog issue in the Western Division seriously. Landholders were urged to attend the



Above: Justin McClure being interviewed for the Country Hour during the Lamb Production Day on his property by ABC Rural Reporter Skye Shannon. *Photo by Sally Ware.*

current round of wild dog control workshops. (See details about the workshop at Wanaaring on December 7 in the flyer on page 4 of this Newsletter.) Attendees were also asked to highlight areas on a map where dogs had been seen or shot in the last 12 months; many were surprised to learn just how widespread the problem had become in the Western Division.

Landholders attending the day travelled from areas such as Broken Hill, Hungerford, Port Augusta, Dubbo and Ivanhoe. For further details about the day contact the organiser, Livestock Officer Trudie Atkinson (Trangie), ph: 02 6880 8041.

Right: Justin McClure with the Prattley 5-way auto-drafter that he uses to draft organic lambs to meet specific market weights. *Photo by Sally Ware.*



Around the Traps – a washed-out Kilferla Field Day

Despite the 22nd Annual Kilferla Field Day being washed out, organisers Clive, Fay and Peter Linnett still managed to raise \$4000 for the Royal Flying Doctor Service and Ivanhoe Hospital. Approximately another \$4000 worth of donated goods will be placed in the auction at the 2012 Kilferla Field Day, which will be held on 26 September. For further details about the Kilferla Field Day contact Clive or Fay on 02 6995 1315.



Far left: A storm looms as exhibitors set up in the morning for the Kilferla Field Day in September. Lightning strikes from the storm started four fires within a few kilometres of the site; Left: Down the rain came, with 31 mm falling within a couple of hours, flooding the Field Day site. The bonus was that the storm extinguished the fires. *Photos supplied by Michelle Crossley, Lachlan CMA*



Above: Exhibitors stop on the very greasy main road exit to Ivanhoe from the Field Day, while another vehicle is pulled down the table drain. *Photos supplied by Michelle Crossley, Lachlan CMA*

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Wild dog management Free workshop

Who:

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

Where:

Wanaaring Town Hall

When:

Wednesday 7th December

9:00am – 3:00pm

LUNCH PROVIDED

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 and Lethal Trap Devices (LTDs).

For more information contact:

Allan Neilsen
LHPA Ranger
Bourke
0428 722 045
Allan.Neilsen@lhpa.org.au

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

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Above: Ben Allen handing out free dog-trap kits to each landholder at the Enngonia Wild Dog Management Workshop. *Photo by Trudie Atkinson.*



Above: Local landholders learning how to set an M-44 ejector at the Enngonia Wild Dog Management Workshop. *Photo by Greg Mifsud.*

Arid Lands Administrators Conference at Carnarvon, WA

In early September, the biennial Arid Lands Administrators Conference was hosted by the Department of Regional Development and Lands in Carnarvon, Western Australia. The delegates from NSW who attended on behalf of the Crown Lands Division were Western Lands Commissioner/Senior Area Manager Far West Area Andrew Bell and Assistant Western Lands Commissioner Sharon Hawke.

The Crown Lands Division of the Department of Primary Industries is responsible for administering all Crown lands in the Western Division, including leasehold lands under the *Western Lands Act 1901* and/or the *Crown Lands Act 1989*.

This unique forum allows for the exchange of ideas across State borders with people who are also responsible for administering publicly owned Crown lands.

Delegates attended from Queensland, South Australia, Western Australia and the Northern Territory to share strategies and ideas for improving arid land administration and land management.

During the Conference, delegates covered issues such as land tenure reform, diversification of pastoral leases, competing land uses (e.g. mining and tourism industries) on pastoral lands, carbon sequestration, rental schemes, native title, lease and licence conditions, and rangeland monitoring programs and procedures.

A field trip took delegates to several properties along the Ningaloo coastline, which was recently gazetted as a World Heritage area, to showcase the land administration and land management issues facing the Western Australian Government in regard to pastoral lease management, renewal of leases, and diversification opportunities arising from a growing tourism industry.

Once again the Conference was considered extremely valuable for the attending delegates, as many of the items discussed were common issues found in each of the States. The next Conference will be hosted by the Queensland Government in 2013.

By Sharon Hawke
Assistant Western Lands
Commissioner
Crown Lands Division
Department of Primary
Industries
Dubbo



Above: Unauthorised structures on a pastoral lease along the Ningaloo Coast. *Photo by Sharon Hawke.*

Rural Western Lands Lease rents 2011–2012

The NSW Government recently granted a rebate on the 2011–2012 rent to all holders of rural Western Lands Leases. This waiver is one component of the Government's commitment to provide support to landholders to help with recovery after the breaking of the drought.

Upon receiving advice of the rebate from the Treasurer, the Crown Lands Division of the Department of Primary Industries issued account notices to eligible holders of Western Lands Leases for a reduction of 50% of their annual rent (although no rent was reduced below the statutory minimum of \$100.00 pa), with payment due on or before 24 November 2011.

Although the drought is considered to have broken throughout most of the Western Division, the Government recognises that landholders have not had enough time to recover financially from its effects and from those of other severe weather events.

Many landholders are still running significantly reduced numbers of livestock, and the opportunity to increase stock numbers is constrained by the limited numbers of stock for sale at market, together with the current prices of the available stock. Many landholders are expected to rely on traditional breeding programs to rebuild their stock numbers.

Rent relief is considered to be an equitable and efficient assistance strategy that is appreciated and well received by Western Lands Lease landholders. The cost to Government of a 50% rent rebate for the 2011–2012 rent year is about \$843 000.

Further information on the rent rebate may be obtained from the Western Region Office of the Crown Lands Division, Dubbo, phone: 02 6883 5400.

By Elizabeth Burke
Crown Lands Division
Department of Primary
Industries
Dubbo

Legal access to your property in the Western Division

By Rex Miller and Maurice Cenzato
Legal Roads Network Project Team
Crown Lands Division (West)
Department of Primary Industries, Dubbo
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maurice.cenzato@lands.nsw.gov.au

The important issue of legal access is becoming more and more relevant to landholders in the Western Division, and the Department of Primary Industries acknowledges the need to provide some clarification.

Up until recent times, access across the Western Division depended largely on a condition on all grazing leases that stated that 'the lessee shall not obstruct or interfere with any reserves, roads or tracks or the lawful use thereof by any person'.

The Western Lands Review (2000) identified one of the main reasons for initiating the Legal Roads Network Project was that landholders wanted to amend the aforementioned condition on their leases so that access on property tracks could be restricted at their discretion.

As a result, we have received hundreds of applications from landholders wanting to make the change in the condition so that the access requirement is no longer part of their lease conditions. This will have the effect of providing more security on properties and will make trespass issues more clear-cut.

It is vital that you give your immediate attention to any requests by the Legal Roads Network Project for your input into providing legal access, because once the lease condition has been amended there will not be any requirement for a neighbour to continue to allow access. If a neighbour has been approached about providing an easement or another form of legal access and has refused, then we will not amend the condition on the affected leases. However, we will not disadvantage an adjoining landholder by holding up his application because of the inaction of a landlocked neighbour.

As previously advised, this Department's property transfer policy now requires that legal access must be in place (or agreed in writing) **before** any consent to transfer will be granted. This is particularly important in the case of subdivision of a lease. When planning how a property might be subdivided, serious consideration should be given to the impacts of providing legal access.

When the Legal Roads Network Project has completed providing legal access in a particular area it cannot revisit that area to satisfy subsequent access requirements. **In those cases where transfer or subdivision of a Western Lands lease results in another being landlocked, it will be the responsibility of the transferor to provide legal access.**

This Department has made amendments to policy regarding the provision of access in an effort to make things easier. We consider there are three options: restricted easement, alteration of lease conditions, and a Crown Lands licence.

Our preference is for the provision of a restricted easement that is recorded on title; this is the most secure option. Second, the conditions of affected leases can be altered to accommodate access. Third, a Crown licence can be granted for access.

All of these options require the consent of the burdened landholder, and any of these options will satisfy our requirements and allow for subdivision or transfer applications to progress.

The area of legal access has the potential to be complicated, so if you have any queries regarding this advice please give me a call on the number above.

Increased fire risks this season

By Tiff Brown
Rangelands Management Officer
Crown Lands Division
Department of Primary Industries
Dubbo

The drought-breaking rainfall has resulted in a substantial increase in vegetation growth across many parts of the Western Division. With the recent warmer weather, properties are at increased risk of bush and grass fires.

The upcoming fire season has already started in parts of the Far West, mainly thanks to lightning strikes, and we've had a reminder of how quickly bush and grass fires can take hold. Although weather forecasters are predicting a wetter than average end to 2011, property owners cannot be complacent when it comes to fire risks.

According to the NSW Rural Fire Service Commissioner, NSW is facing its most extreme grass fire risk in more than 30 years, and properties in the Western Division are at particularly high risk this season.

Preparation to reduce fire risks, such as by grading and slashing along boundary fences and tracks and creating asset protection zones around houses and sheds, is essential. These activities should be done by all landholders on a regular basis.

Grass fires are especially dangerous because they start quickly and spread rapidly, often catching people off guard. They can be very hot, and this is why it is important for landholders to prepare themselves and their properties.

The NSW Rural Fire Service recommends that all landholders create firebreaks, check their fire-fighting equipment, have a fire plan, be alert, and contact their local Rural Fire Service for more information.

NPWS controls fires and conducts hazard reductions in Sturt National Park

In what could prove to be an unusually busy fire season, staff from the National Parks and Wildlife Service have already successfully contained several grass fires in Sturt National Park and have undertaken hazard reduction.

The grass fires that started in Sturt National Park in October were successfully controlled by NSW National Parks and Wildlife Service (NPWS) crews from Tibooburra, Broken Hill, Mutawintji, White Cliffs, Bourke and Wilcannia.

NPWS Far West Region Duty Officer Anne-Marie Smith said that a severe thunderstorm generated numerous lightning strikes, resulting in at least five separate fires in the remote park:

‘Four fires were located in the north-western section of the park close to the Queensland border, about 75 km north-west of Tibooburra and 35 km east of Cameron Corner. Under warm and windy conditions, these fires joined up to form one single larger fire. This fire burnt approximately 6000 hectares.

‘Another fire was located in the south-western section of the park, about 90 km west of Tibooburra. This was restricted to an area of grass-covered sand dunes and burnt approximately 200 hectares.

‘The fires were located up to two hours drive from Tibooburra, which meant that communications, fuel, water and catering all presented challenges.

Despite this, crews worked tirelessly to prevent the fires from spreading, particularly along the Queensland border.

‘We also used a trained NPWS Air Observer to map the location and extent of the fires, as well as give information to ground crews regarding the location of hotspots. The Air Observer was also able to assist with providing intelligence to the Rural Fire Service on a separate fire on Border Downs Station,’ she said.

Ms Smith also thanked local businesses, who provided accommodation, supplies and catering during the fire-control operation.

Although fires in the Tibooburra area are unusual, extensive rainfall last year has resulted in an increased risk of fire. NPWS Tibooburra Area Manager Ingrid Witte said that’s why the first-ever hazard-reduction activity in Sturt National Park had been undertaken this winter.

‘Following above-average rainfall throughout 2010 and the early part of 2011, there has been a significant increase in vegetation – particularly grasses,’ she said.

Below: NPWS crews conduct a back-burn during a fire control operation in Sturt National Park, October 2011. *Photo by Mick Williams.*



Positive management at the Rick Farley Reserve

By Sharon Hawke
Assistant Western Lands
Commissioner
Crown Lands Division
Department of Primary
Industries, Dubbo

The Rick Farley Soil Conservation Reserve was established near Pooncarie in 2007 by the Crown Lands Division, Far West Area, to honour the late Rick Farley, a tireless advocate for farmers, soil conservation, environmental management and reconciliation.

Mr Farley played a pivotal role in establishing the National Soil Conservation Program (later to become the National Landcare Program) and was a member of the Council for Aboriginal Reconciliation and the Native Title Tribunal.

The land within the Reserve, formerly known as Garpung Station, is located approximately 70 km south-east of Pooncarie and was a former Western Lands Lease used historically for grazing purposes. It adjoins Mungo National Park and the Willandra Lakes World Heritage Area, which is recognised for its high cultural and spiritual significance to Aboriginal people.

In January this year, the Rick Farley Soil Conservation Reserve Trust granted a licence under the *Crown Lands Act 1989* to the Mothers Ancestral Guardians Indigenous Corporation so that the Reserve could be managed in accordance with Aboriginal land management practices and used to conduct cultural activities and teaching programs.

The Mothers Guardian group comprises men and women who manage the land according to traditional Aboriginal practices and philosophies. Along with managing the health of the landscape, the group is also focused on creating opportunities for Aboriginal people to reconnect with their culture, country and spirituality through continuing traditional practices.

To date, the Mothers Guardians have carried out cultural burning activities and cleaned up over 13 km of internal trails. They are continuing to build partnerships with the Lower Murray Darling CMA for possible funding opportunities. They have also conducted a men's gathering, attended by 75 men, and have held cultural activities such as stone-tool making, wood working and teaching of cultural protocols while on country. Future plans are to hold culture camps for young Aboriginal people aged 12 to 14 years in order to start the teaching process with this generation.

The land management and Aboriginal cultural programs undertaken so far on the Rick Farley Soil Conservation Reserve by the Mothers Guardians have been very successful. The Trust regards this as the best positive tribute to the work undertaken by Rick Farley and the reason why the Reserve was established in Rick's honour.



Right: Mallee spinifex country before burning. Note the density of the spinifex choking out other native species. *Photo by Mick Kelly, Mothers Ancestral Guardians Indigenous Corporation.*



Right: Spinifex after burning. *Photo by Mick Kelly, Mothers Ancestral Guardians Indigenous Corporation.*



Right: Mallee tree after burning. *Photo by Mick Kelly, Mothers Ancestral Guardians Indigenous Corporation.*

Have you got a wetland on your farm?

Wetlands are valued natural resources on many farms. They are diverse and highly productive areas of our landscape that, when managed successfully, can reap both production and conservation benefits.

By Michelle Crossley
Catchment Officer
Projects
Lachlan CMA, Hillston
Phone: 02 6967 2897

Wetlands provide habitat and breeding areas for a huge variety of birds, frogs, fish and other animals, as well as being home to some beautiful and amazing plants, such as the highly resilient lignum, the lagoon saltbush, and the well-known black box. They are also fragile areas that require particular attention and management, especially when wet.

Wetlands vary greatly from one property to the next. Because of this variation, their management to ensure productive outcomes also varies. Farmers can now seek advice about best management practices for their farm wetlands from the specialists at the Lachlan CMA.

Lachlan CMA staff are available to help you assess the condition of any wetlands on your property. They can visit your farm and help you develop a plan to manage your wetlands for improved production and environmental outcomes.

Ben Barlow of 'Ulonga Station', on the lower Lachlan north of Hay, commented that 'having someone come out and examine the condition of our property provided an invaluable discovery of how we can shape grazing practices and wetland management and protect environmental assets all in one go. Completing a Property Environment Plan with help from the Lachlan CMA has given us a platform of understanding for our blueprint for the future, for us on 'Ulonga' and for the CMA as well.'

If your property falls within the Lower Lachlan High Ecological Value Aquatic Ecosystem, you may also be eligible for help from the Lachlan CMA to implement your plan.

Contact the Lachlan CMA office in Hillston on 6967 2897 to find out more or to arrange a time for staff to come and help you assess your wetland.



Left: Lachlan CMA staff and Board members visiting the Booligal wetlands with local landholder Jim Crossley.
Photo by Michelle Crossley.

Rotate effective fly-control insecticides

By Ed Joshua
Livestock Officer (Sheep and Wool)
Department of Primary Industries
Dubbo
Phone 02 6881 1275

All Australian populations of the Australian sheep blowfly *Lucilia cuprina* are now resistant to organophosphate chemicals such as diazinon, and this resistance has reduced the effectiveness of products containing these insecticides. Products containing diazinon are no longer registered as flystrike preventatives: resistance has meant that this chemical has gone from providing 16 weeks of flystrike protection to less than 4 weeks!

This situation arose because for many years there were no alternatives to organophosphates. The situation today is much better. However, over-reliance on one class of insecticide is not a good strategy for controlling any pest, and sheep producers need to rotate their effective insecticides if they are to maintain control of *Lucilia cuprina*.

Farmers rotate effective herbicides for weed control and herbicide resistance management; graziers rotate the effective active ingredients of drenches for the control of internal parasites in animals and for drench resistance management. Farmers rotate insecticides for the control of pasture and crop insect pests and for insecticide resistance management; and sheep producers rotate effective insecticides to control sheep lice and manage insecticide resistance. In the same way, sheep producers need to rotate their effective insecticides to maintain control of *Lucilia cuprina* and postpone resistance for as long as possible. For a list of chemicals available for treating the Australian sheep blowfly, go to FlyBoss on the internet at <http://www.flyboss.org.au/>

Maggots resistant to insecticide A might be susceptible to insecticide B. Rotating to the effective Insecticide B should kill most of

the maggots that are resistant to insecticide A, leaving few resistant flies to strike sheep. It's a good idea to use different types of insecticides when treating sheep to prevent flystrike, treat for lice, or treat flystrike. FlyBoss can help here too.

No insecticide should be considered 'immune' to resistance. Early this year, a population of blowflies from a Monaro property was found to be resistant to cyromazine, with low-level cross-resistance to dicyclanil (Clik®). Lambs treated with a cyromazine spray-on product became struck only 4 weeks after treatment. Cyromazine has been registered as a flystrike preventative since 1979, so it has taken over 30 years to detect resistance. Hopefully this was an isolated case. The Department of Primary Industries will be testing blowflies from that property to see if the resistant types have survived the winter. If they have, it would be prudent to use a product other than cyromazine or dicyclanil to treat or prevent flystrike next season.

The thrust of the message is to rotate effective blowfly treatment chemicals. Over-reliance on one chemical will eventually result in failure of the chemical because of resistance. If we can better manage our application of the available chemicals into the future through rotation, using an unrelated active ingredient at successive sheep treatments, we'll have effective products into the future. We need to learn from the experience with organophosphates that, without choice, resistance is inevitable. If you suspect that you have a problem with resistance to a blowfly product, your first step should be to contact the relevant chemical company representative.



Landholders need to rotate effective blowfly treatment chemicals. Over-reliance on one chemical will eventually result in failure of the chemical due to resistance.
Photo by Garry Levot.

New 'sheepo' in Bourke

By Allie Jones
Livestock Officer (Sheep
and Wool)
Department of Primary
Industries
Bourke
Phone: 02 6830 0001

Allie Jones is a recent recruit to the Department of Primary Industries and is based at the Bourke office. She is working in Gemma Turnbull's position until Gemma returns from maternity leave.

Allie hails originally from the Northern Rivers area of NSW, where she grew up on a beef cattle property on the outskirts of Lismore. Currently St George in South East Queensland is the home base for Allie, who previously

was based with Landmark in St George in the Merchandise/Animal Health Division.

Allie graduated from the University of Queensland's Gatton campus in 2009 with a Bachelor in Applied Science, majoring in Animal Production. She is currently completing her Masters in Agriculture, Sheep and Wool through the University of New England, Armidale and plans to graduate with her Masters in 2012.

Allie has been involved in helping organise and run fly and lice workshops and also the very successful market-focused lamb production workshop held at 'Kallara' station on 28 October (see front page story).

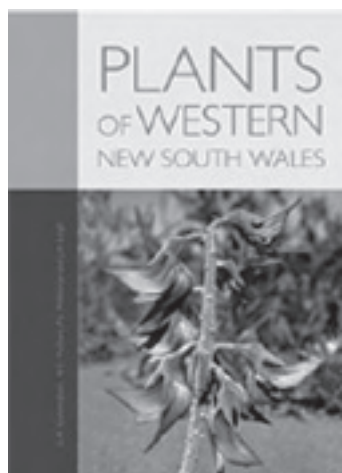
Current projects on Allie's desk include a case study on goat enterprise profiles in the Western Division. This work is aimed at gaining insight into rangeland goat production. Allie is interested in talking to any producers about the issues and challenges they face in the goat industry. Allie can be contacted in the Bourke office on 02 6830 0001.

Allie is also currently organising a web-based seminar on reproduction and ewe management, to be held in early to mid December. Further details can also be obtained from the Bourke office.

Producers in the Bourke area are encouraged to call in to the Bourke office to meet Allie and discuss any issues they may have.



Right: Allie Jones, the new 'sheepo' in Bourke.
Photo by Sally Ware.



Plants of Western New South Wales

The 1992 edition of Plants of Western New South Wales has been reprinted and published by CSIRO Publishing complete with a new cover and a one-page appendix giving website addresses of various herbaria in Australia where the reader can readily access up-to-date information on botanical name changes.

Costing \$180, the book can be purchased online at www.publish.csiro.au or by contacting the customer service team ph: 1300 788 000 or email: publishing.sales@csiro.au

For your chance to win a copy of this fantastic 766-page full-colour book, fill out our survey form on page 11 and send it to the address at right.

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Hay NSW 2711

Farewell to a colleague and friend

In May this year, Dr Ronald Hacker retired from NSW Primary Industries after more than 40 years of research in Australian rangelands. Ron was both the Director of the Centre of Excellence for Rangeland Management at Trangie Agricultural Research Centre (a position he had held since 1996) and also the Research Leader (Forest & Rangelands Ecosystems) at Trangie. However, his official capacity does not reveal the full depth of his contribution to Australian rangeland science, his role as mentor and coach, and his leadership within the Department.

Ron started his undergraduate studies in eastern NSW, completing Agricultural Science at the University of Queensland and later postgraduate studies at the University of NSW, but he soon headed to Western Australia to begin what would be four decades of fascination with arid and semi-arid rangelands. After 12 or so years working initially in extension and then coordinating a state-wide monitoring program in Perth, Port Hedland and Kalgoorlie, in 1991 he headed east again to take up the position of Special Officer (Rangelands) for the then NSW Agriculture. Now based in Dubbo, he found himself in a position ideally suited to integrating the rangeland research and extension program for the State. At this time, rangelands science offered little in terms of practical advice or guidelines for range management, and Ron spent the following decades gaining an understanding of the effects of seasonal conditions and grazing on range condition and critical thresholds for grazing management. Particularly, Ron's publication of *The Glove Box Guide to Tactical Grazing Management for the Semi-Arid Woodlands* with Tac Campbell and his paddock-based method for estimating kangaroo populations represent a major contribution to practical range management. There is little doubt that Ron's pastoral advisory background in Western Australia formed the basis for his close connection with NSW landholders and allowed him to focus on the practical application of his science.

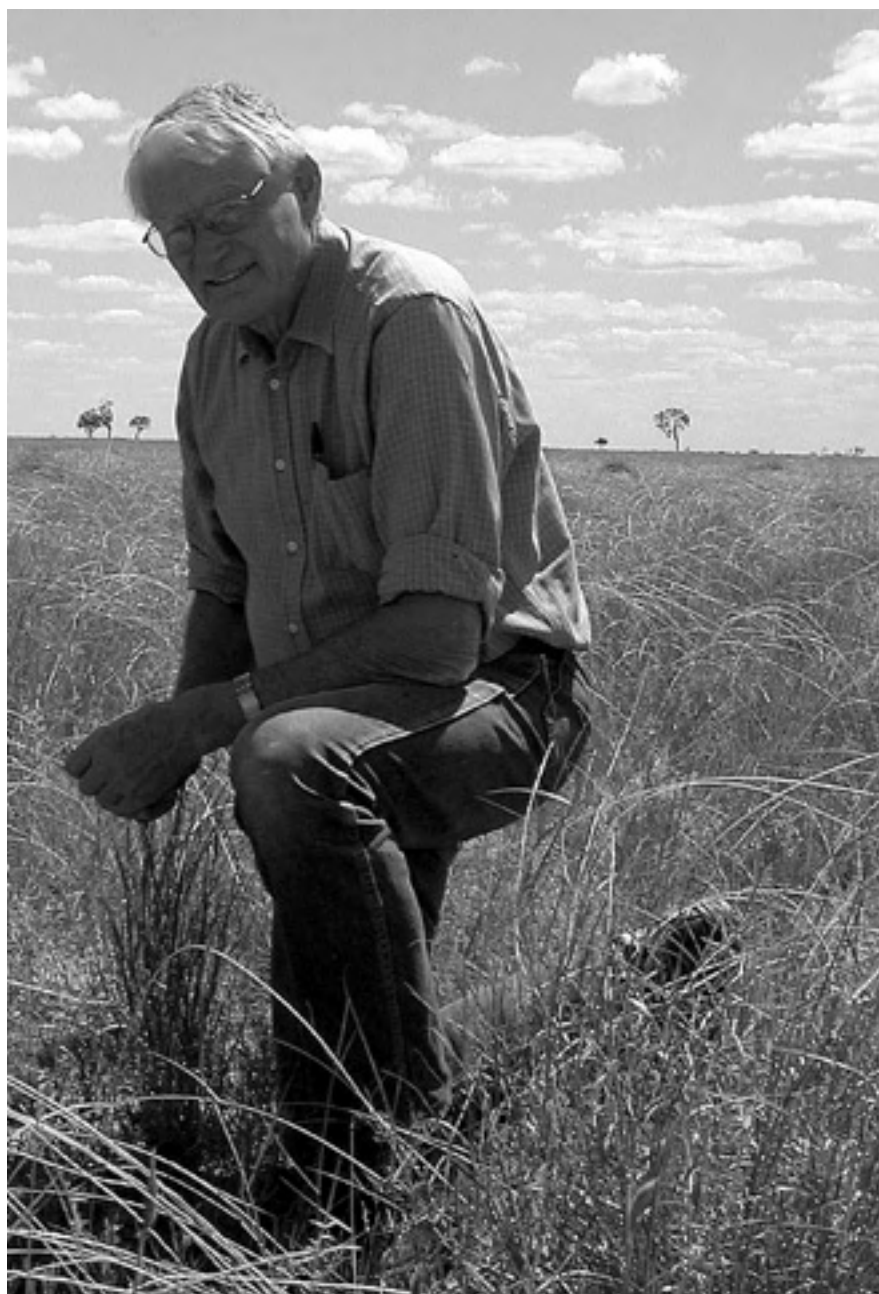
Ron's scientific contribution was extensive, including over 170 scientific papers and publications spanning his career. His contribution to natural resource management was also recognised more broadly when he was appointed to the Lands Resources Reference Group, which was responsible for the 'Lands Resources' chapter in the first

National State of the Environment Report; his membership on the NSW Natural Resources Advisory Council, the NSW Western Lands Advisory Board and the Western CMA Board also reflects the level of community respect he received. Ron has also maintained a close association with the Australian Rangeland Society as President and Vice President between 1994 and 1997. Through his career Ron has also undertaken a number of overseas consultancies in Ethiopia to develop a national range resource inventory, along with assessment and monitoring programs. He

Continued on page 14

By Dr Cathy Waters
Research Scientist
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Below: Ron looking at
native grasses at 'Bokhara
Plains', Brewarrina. *Photo
by Warren Smith.*



Continued from page 13

has also undertaken two tours of the United States to investigate the relationships between grazing and biodiversity in rangelands.

But for me, Ron is simply a man of the highest integrity, a man who inspired excellence in science, and a man who is capable of great compassion and empathy. Although his insistence on having sausage rolls at work meetings won't be missed, and his ability to demolish a family-size bag of snakes in less than 400 km has not been surpassed, Ron will be greatly missed by all the staff at Trangie Agricultural Research Centre, where he was more than just a boss. Here are two

quotes from Ron's work colleagues that capture his working relationship with staff at the Trangie Agricultural Research centre:

'What stood out about Ron was his trustworthiness. You would always know you could trust Ron as your boss, and that is not only a very important thing in your working life, it is something that is highly valued.' (Luke Beange, former Extension Specialist, Rangelands)

'Ron always made me feel an important member of staff, which allowed me to gain confidence in dealing with the scientific community. Although he had an extremely busy workload he always found time to mentor me.' (Toni George, Office Supervisor, Trangie)



Right: Ron relaxing with a beer after a long day working at 'Myrnong', Wanaaring. Photo by Warren Smith.

Western Division Newsletter

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The information contained in this publication is based on knowledge and understanding at the time of writing (Dec 2011). 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.

Deadline for articles for the next Issue 140 of the Western Division Newsletter is 14 February 2012. Please email articles to Sally Ware, NSW DPI: sally.ware@industry.nsw.gov.au or phone 0429 307 627.

OJD Exclusion Area: Producers give a big thumbs up!

In July 2011, sheep producers of the Western Division voted to maintain the current ovine Johne's disease (OJD) Exclusion Area for another 3 years. An Exclusion Area (EA) is a protected area for OJD that is declared by the Minister for Primary Industries at the request of the Livestock Health and Pest Authorities (LHPA). Western LHPA sent out 510 voting papers, and 295 completed papers were returned. This is a response rate of 58%, which is remarkable for a mail-based survey: most mail surveys have 20% to 30% response rates! In this case, of the 295 completed returns, 272 were positive (92%) in wanting the EA to be maintained.

Just to refresh our memories, an EA:

- relies on producers cooperating with each other to protect their area's OJD status for mutual benefit
- is principally driven by extension advice that gives producers the knowledge to manage the risk of introduction of OJD
- gives producers in the area the tools to minimise the risk of introduction and spread of OJD within their area
- helps to preserve trade advantage
- provides the LHPA and the Department of Primary Industries with 'reserve' regulatory powers to ensure that optimum management of OJD can occur within the area.

The aim of having an EA is to prevent the entry of OJD into the area and manage any outbreaks that may occur, with a view to eradication.

The current OJD National Plan has four main objectives:

1. Minimise the risk to properties and geographic regions that currently appear disease free, and actively manage incursions when they occur.
2. Reduce the prevalence in regions where the disease is endemic through the use of vaccination and implementation of grazing management practices to minimise the exposure of stock to the disease.
3. Promote the benefits of active biosecurity planning to manage disease risk at the individual property and regional level.
4. Provide improved trading opportunities for producers who actively manage the disease through the use of the ABC (Assurance Based Credit) Scheme.

Following the positive survey, the LHPA is now required to develop an OJD Exclusion Area Operation Plan, which describes 'how' the integrity of the EA will be maintained. This Operational Plan is being worked on right now, and details will be available shortly.

The plan will aim to:

- discourage the entry of OJD-infected sheep into the EA
- monitor the movements and disease status of sheep being moved into the EA
- manage any outbreak of disease that might occur within the EA so that the disease is eradicated

By Dermot McNerney
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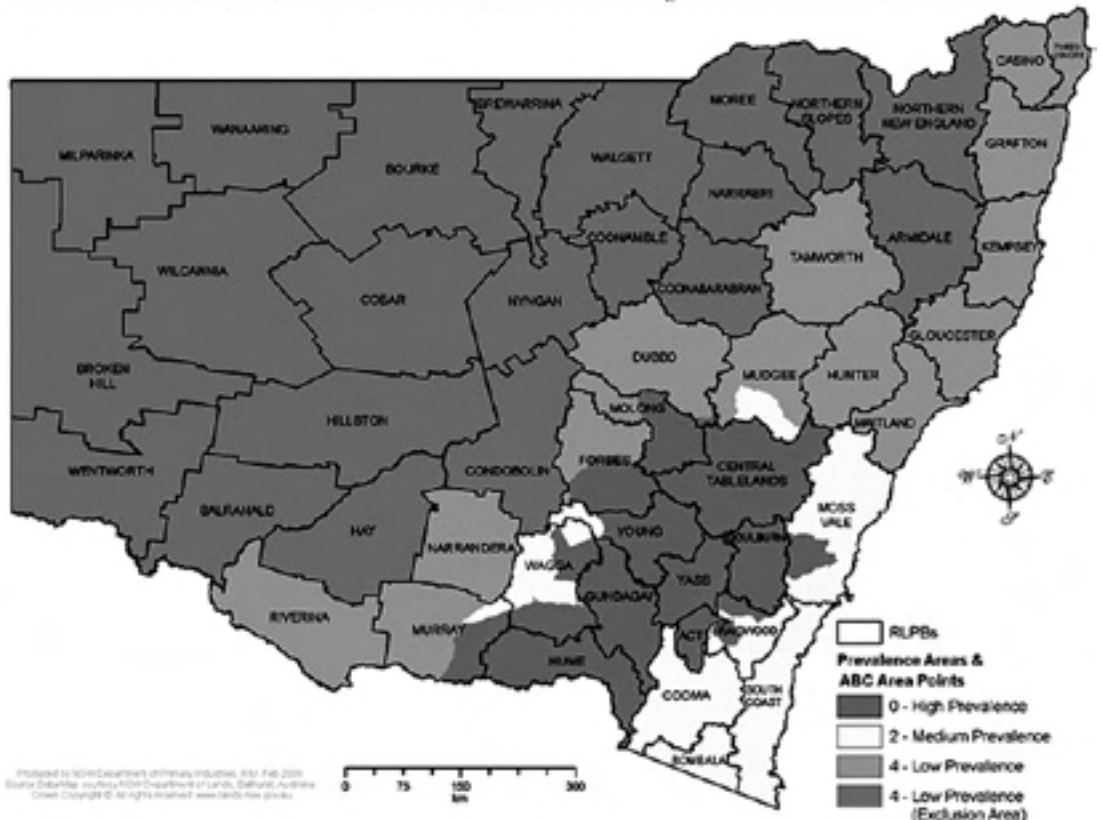
Left: Typical pathology of ovine Johne's disease in a sheep with thickening of the mucosa of the terminal ileum due to granulomatous enteritis. *Photo courtesy University of Sydney.*



Above: Sheep infected with ovine Johne's disease. *Photo courtesy of the National Johne's Disease Control Program, April 2011 (D Kennedy, L Citer).*

- create a sense of community responsibility towards maintaining the EA status for the benefit of all sheep producers within the EA.
- At the core of the Operational Plan will be properly completed Sheep Health Statements (SHSs) and NVDs (National Vendor Declarations) for all sheep movements into the EA. This includes private (i.e. property-to-property) sales, which need to be recorded on the NLIS (National Livestock Identification Scheme) database. The LHPA requires copies of SHSs to be sent to them within 7 days of stock movement.
- ### Responsibilities of producers
- The responsibilities of each producer can be summarised as follows:
- Only introduce sheep into the EA that have an *ABC score of 4 or greater.*
 - Ask for the SHS *before* you buy or agist sheep, and proceed only if the sheep have a score of 4 or more ABC points.
 - Send a *copy of the SHS to the LHPA* within 7 days of sheep moving onto your property from outside the EA.
- Please remember that it's the responsibility of the receiver of stock to record the property-to-property movement on the database within 7 days of the movement taking place. It's also the responsibility of the receiver of the stock to lodge a copy of the SHS with their LHPA.
- use abattoir monitoring of sheep for OJD to ensure that:
 - no disease has been introduced
 - the prevalence of infected flocks in the area is below 0.8%
 - promote the concepts of biosecurity to sheep producers within the Western Division to make sure that they understand EA responsibilities and the benefits of compliance with these responsibilities

NSW OJD Prevalence Areas and Exclusion Area for Implementation from 31 March 2008



Right: NSW Prevalence and Exclusion Areas as of November 2011. Note that these Exclusion Area boundaries may change following advice given to the Minister in response to recent producer survey results.

Improving flock reproduction: selecting within your flock

Sheep can be selected within your flock to improve reproductive performance. To do this you need a plan that is based on sound evidence, as well as information about how your flock is performing now.

Your ewes vary greatly in their reproductive performance: some do much better than others, whereas some ewes can really let the side down.

From research and what's known of commercial flocks in the Western Division and elsewhere, there is a tendency for ewes with better performance in their early years to do better in later life. Those that do poorly one year tend to be less successful in other years. By selecting the better performers and culling your under-achievers, you can improve your flock's reproductive performance.

The variability that exists in flocks is shown in Table 1. A total of 7322 ewes from three flocks run at Trangie Agricultural Research Centre were separated into four groups on the basis of their lifetime NRRs (net reproduction rates). The fertility, fecundity and lamb survival of the four groups are presented.

The top 25% of ewes produced an additional lamb per ewe annually compared with the bottom 25% of ewes. The bottom 25% of ewes produced less than 9% of the lambs that were weaned, whereas the top 25% produced 40% of the lambs that were weaned.

Poor and better performers showed up early in life. Research in 1996 by Lee and Atkins showed that early life performance (at 2 and/or 3 years of age) is an indicator of reproductive performance in later life. This is shown in Table 2. Ewes that were dry at both 2 and 3 years of age averaged 69% lambs

weaned in later life. Those that lambed twice at 2 and 3 years of age averaged a much better 114% lambs weaned in later life.

Lifetime analysis of wool flocks in NSW has shown that dry ewes are more likely to be dry at their next joining and ewes that have reared twins are more likely to conceive twins at their next joining. Ewes that were dry at the previous lambing conceived only 90 foetuses per 100 ewes at the next joining. Ewes that had reared twins at the previous lambing conceived over 140 foetuses per 100 ewes joined.

Culling ewes that have been dry twice after their first two joinings is a practical example of how producers can identify sheep with poor reproductive performance. Dry ewes could be identified by using scanning, or 'wet and drying' of udders at lamb marking. Dry ewes can be identified with a notch out of the ear or a coloured ear tag. Culling ewes that have been dry twice rather than dry once reduces the number of animals you need to cull and is a more reliable indicator of subsequent performance.

Selecting and retaining the top-performing ewes beyond the normal culling age can complement early-life selection. This can improve whole flock performance, because it allows the top performers to have more influence in the flock and reduces the influence of poorer-performing maiden and younger ewes. You will need to consider how age influences fleece weight and micron measurement and mortality rates. Department of Primary Industries researchers are currently investigating this approach in two commercial flocks on the Central West Plains and South West Slopes of NSW.

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and
By Greg Curran
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Table 1. Reproductive performance (poorest to best) in the four ewe groups. This information is adapted from work published in 2009 by G. Lee and co-workers.

Ratio	Lifetime reproductive rank			
	Poorest 25%	2nd quartile	3rd quartile	Best 25%
Lambs weaned / ewes joined	0.30	0.71	0.98	1.37
Ewes lambing / ewes joined	0.56	0.77	0.87	0.94
Lambs born / ewes lambing	1.28	1.33	1.43	1.63
Lambs weaned / lambs born	0.47	0.74	0.83	0.90

Right: Research shows that dry ewes are more likely to be dry at their next joining, and ewes that have reared twins are more likely to conceive twins at their next joining. *Photo by Sally Ware.*



Table 2. Comparison of performances of ewes as 2- and 3-year-olds and again as 4- to 6-year-olds. This information is based on unpublished work by G. Lee.

Performance as 2- and 3-year-old	Performance as 4- to 6-year old (expressed as net reproductive rate)
Dry twice	69%
Dry once/lambd once	97%
Lambd twice	114%

Use of a within-flock selection program can give permanent but slow genetic improvement in reproduction. Unfortunately, the heritability of reproductive traits is low.

Two Western Division flocks that demonstrate the effectiveness of within-flock selection over decades are those at 'Tom's Lake' near Booligal and 'Mt Sturt' near Tibooburra.

Within-flock selection brings benefits that may not be so obvious. First, you're selecting sheep that do best in your country with your management. Second, you end up with a flock of sheep that are better suited to what is usually a tougher environment than where your stud is, and sheep that are best suited to when you join, lamb, and shear. You don't have this opportunity to tune your sheep to your place if the only selection available to you comes from the studs where you purchase your rams.

The better lamb-marking percentages in recent years as a result of good rains and the use of more fertile, newer breeds gives landholders greater numbers of sheep than usual to select from within a flock. After a few years of selection for reproductive traits, you'll

have progressively more sheep to work with, and even faster rates of improvement. It's something of a push-pull operation.

The other benefit you'll see from within-flock selection is a gradual improvement in maiden ewe performance, which is currently a major shortfall in Merinos.

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