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BEEF TALK

Taking stock of your future

Don't risk losing your brand or earmark

Queensland livestock owners are
reminded to renew their annual brand

New biosecurity laws for Queensland

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Welcome to Beeftalk 45

Autumn will have people thinking about oats. You can find the latest varieties and management suggestions to reduce disease in the new *Oats Variety Guide for 2016* on the DAF website.

The end of the summer growing season is also a good time to take stock of pasture and water supplies and adjust stock numbers to get through the year. The *Stocktake Plus* app is a useful tool for both monitoring pastures and calculating dry season forage budgets. It is available free from the app store. Visit www.stocktakeplus.com.au for more information.

To see the impacts of seasons and management on ground cover for your property read about the data freely available to you from the new and improved *FORAGE* program.

Now is also the best time to check that your breeders will be in good condition going into winter and for calving. If they need a boost then early weaning can help them regain condition before calving and improve their future conception rates.

Our industry relies on best practice in biosecurity and freedom from exotic diseases like foot-and-mouth (FMD). Read about the new biosecurity act which starts on 1 July this year. Our chief veterinary officer Dr Allison Crook also asks everyone to learn the signs of FMD, avoid swill feeding and contact your vet or biosecurity officer for suspect cases.

Animal health, welfare and production are just some of the standards covered in the Grazing Best Management Practice workshops. Grazing BMP is now rolling out in South East Queensland so check the contact details in Bruce Lord's article to take part in this excellent opportunity.

Happy reading,
The Beeftalk team.

Early weaning as a dry season management tool

Early weaning is a powerful and cost-effective dry season management option for your cows.

Early weaning refers to calves three to four months of age and 100 kilograms, however calves can be weaned as light as 60 kg in extreme drought conditions where cow health is at risk provided you give the calves a high protein (18 per cent) diet.

Early weaning is the most effective management tool available to help cows hold or improve body condition and fertility.

Dry season early weaning trials show that weaned cows have better body condition scores and considerably higher pregnancy rates than cows that weren't weaned. These trials also show that weaned, supplemented calves perform just as well as calves that are left on cows.

Feeding the lactating cow/calf unit does not benefit cow condition as the nutrition is transferred into milk production for the calf. It is more efficient and cost effective to supplementary feed cows and calves separately, rather than feeding the calf through the cow.

Once a calf is weaned the cow's feed and water requirements decrease by up to 40 per cent and 60 per cent respectively. Weaning the calf and therefore removing the need for lactation in the early dry season is equivalent to giving the cow up to two kg of grain or three kg of fortified molasses every day.

When to wean

Cow body condition is the key criterion for deciding when to wean. Ideally, aim to have calves around three months of age or 100 kg as by this age their protein requirements aren't as high and they are used to grazing. Other key factors to consider are: severity and length of dry conditions, time of year relative to expected rainfall, current pasture availability and availability and price of supplements.

Feeding rates

Calves' dietary requirements change with different stages of growth and they need to be fed accordingly. The feeding rates below are a guide to maintain or give slight weight gains. Calf performance is the best measure of how much supplement they need and their intakes should be adjusted accordingly.

Feeding rate for calves two to four months old (60–120 kg)

Feed unlimited pasture if available or 0.25 to 0.5 kg per head per day of grassy lucerne hay, good quality grass or forage hay. Beware of scouring, particularly on lucerne hay.

In addition, feed one of the following supplements:

- 0.5 to 1 kg/head/day grain mix (3 parts crushed grain, 1 part protein meal, 2 per cent limestone)
- 0.25 to 0.5 kg/head/day protein meal
- calf pellets/crumbles/meals – as per manufacturers recommendations
- free access to molasses plus 12–15 per cent protein meal (beware of scouring).

Feeding rates for calves four to six months old (120–150 kg)

Feed unlimited pasture or hay plus one of the following supplements:

- 1 kg/head/day grain mix
- 0.5 kg/head/day protein meal
- calf pellets, etc. – as per manufacturers recommendations
- free access to molasses plus 12–15 per cent protein meal
- no more than 0.5 kg/head/day whole cottonseed.

Feeding rates for calves over 150 kg

Feed unlimited pasture or hay plus one of the following supplements:

- 0.5 kg/head/day protein meal
- 1 kg/head/day of molasses plus 3 per cent urea and 8 to 10 per cent protein meal
- 0.5 kg/head/day whole cottonseed.

Draft calves according to size and weight. Draft calves that reach the threshold for higher weight into that group to reduce competition and also possibly the cost of feeding. It is important to reduce stress as much as possible.

If practical, train calves to eat supplements before weaning and get them on solid feed as quickly as possible. Avoid sudden changes in supplements because rumen bacteria need time to adjust. Ensure calves always have access to a good supply of fresh, clean water.

Calf health

Vaccinate all calves at weaning with 5 or 7-in-1 to protect against clostridial diseases such as pulpy kidney and tetanus. Young calves are very susceptible to parasites. Treat all calves for internal and external parasites four to six weeks after weaning.

Use feeding racks for hay and troughs for meals, pellets and grain to avoid contamination with dust and dung. Minimise stress wherever possible through weaning strategy, handling, food, water and environment. Closely observe weaned calves for any signs of stress or illness such as scours.

In summary, early weaning:

- is a proactive tool for improving cow condition during the dry season and consequent future conception rates
- decreases the cost of supplements for breeders
- increases the number of suitable females for sale
- improves concentrated calving in continuously-mated herds.

For successful early weaning:

- segregate calves according to age and weight to reduce competition
- start calves on a high quality ration the day they are weaned to reduce stress
- always vaccinate and be aware of possible diseases.

If you are trialling early weaning for the first time, one option is to start with just a portion of your herd. Consider weaning just your first calf heifers early, as they are one of the most valuable mobs in terms of potential future breeding years and genetics. They can also be the most challenging groups to get back in calf, particularly after an extended dry period. Alternatively, another priority mob for early weaning is your oldest breeders.

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Linking landholders in landscape fire planning



Demonstration sites are being used at seven different properties across the region, here is one site where production, carbon and biodiversity measurements have been taken pre- and post-burn.

Fire is a management tool used extensively in the Eucalypt woodlands of northern Australia. The main reasons for using fire are:

- **production** – woody weed control, manipulating pasture composition, controlling stock grazing distribution and improving stock growth
- **biodiversity** – enhanced landscape features for fire dependant species and mosaics of burnt and unburnt areas to cater for all species needs
- **improved carbon dynamics** – controlled burning and wildfire mitigation, to reduce greenhouse gas emissions.

While there is little recorded information about fire dynamics in the grassy box woodlands of southern Queensland, much information resides with practicing landholders. As landholders retire and fire use decreases due to public pressure, we risk losing this valuable, practical knowledge.

A federally-funded project, based in Southern Queensland's Maranoa region, is on track to achieve several objectives regarding the use of fire as a management tool and documenting current and historical fire practices of landholders.

The project is led by the Queensland Murray-Darling Committee and managed by its Regional Climate Change Officer Rhonda Toms-Morgan. The aims of the project are to:

- assist landholders to develop whole property and landscape fire plans. These plans will help landholders communicate their objectives and intentions to family, business partners and associated government organisations, e.g. Forestry and local government
- document landholder knowledge and information on fire use and outcomes at the paddock and land type scale. This will be for use by, and education of, current and prospective fire practitioners

- research and document the outcomes of fire management on production, biodiversity and carbon sinks
- develop products that will be useful for fire practitioners into the future.

The research is taking place on several commercial cattle properties in the region where landholders are tackling the big issue of woodland thickening in box and pine country with the judicious and skilful use of fire.

The project is also gathering information on the knowledge and understanding that landholders have in relation to fire use through a short on-line or phone survey. You are invited to do the survey and contribute to this important project – please visit www.qmdc.org.au/climatewaste-energy-and-fire/qmdc-fire-project-.html and complete the survey.

For more information contact Rhonda Toms-Morgan on 0428 759 235 or email rhondat@qmdc.org.au

Don't risk losing your brand or earmark

Queensland livestock owners are reminded to renew their annual brand, earmark and tattoo registration details with Biosecurity Queensland.

Livestock owners are legally required to renew their brands and earmark registration details annually to avoid cancellation. If a brand return is not completed for three consecutive years, the registered brand, earmark and/or tattoo may be cancelled.

Registration ensures owners have valid documentation of proof-of-stock ownership which is important if livestock are sold, lost, displaced or stolen. By keeping your records current and submitting an annual return, you can ensure the integrity of your registered marks are maintained.

Owners can submit their brands return online at www.biosecurity.qld.gov.au, by phone on 13 25 23 or in person at their local Department of Agriculture and Fisheries office.



Editorial committee

Roger Sneath, Damien O'Sullivan, Felicity McIntosh, Rebecca Farrell, Megan Gurnett (DAF) and Carli McConnel representing the South East Queensland Regional Beef Research Committee.

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Ross Bigwood (SEQ Catchments) demonstrates some simple soil tests people can do on property.

Grazing BMP up and running in South East Queensland

Graziers in the Brisbane, Lockyer, Bremer and Logan River valleys are benefiting from a new program recently extended to South East Queensland (SEQ) that will help improve pastures, soils and waterways.

Known as Grazing Best Management Practice (BMP), this voluntary program offers graziers an opportunity to benchmark their management practices against industry standards and access information and support to enhance the profitability and sustainability of their grazing business.

So far, more than 70 graziers have participated in the Grazing BMP program in SEQ, with some

very positive feedback about the value of the sessions, covering grazing land management, soil health, animal production, animal health and welfare, and people and business, across a range of different grazing operations.

Christine Aitken, a fourth generation grazier from the Eskdale district, found the Grazing BMP workshops extremely useful: 'There was certainly some great information in these sessions and I am sure that all of us who attended are much more informed on lots of different aspects of running a successful and sustainable grazing enterprise and being good stewards of the land.'

With the region supporting almost a third of Queensland's beef cattle enterprises, the team delivering Grazing BMP in SEQ, is encouraging other beef producers to attend the next series of workshops and field days to be held across the region in 2016.

The Grazing BMP partnership includes Fitzroy Basin Association, AgForce and the Queensland Department of Agriculture and Fisheries (DAF), through funding from the Queensland Government's Department of Environment and Heritage Protection. It is currently being delivered in the SEQ region by SEQ Catchments and DAF staff.

If you are interested in finding out more please contact one of the SEQ Grazing BMP coordinators:

Bruce Lord (SEQ Catchments) on 0427 013 284 or email blord@seqcatchments.com.au

Greg Bath, FutureBeef extension officer, DAF, 4688 1212 or email greg.bath@daf.qld.gov.au

FORAGE: a new tool to help you manage grazing pastures

A new, on-line property-based information system called FORAGE can help you to better assess grazing land condition and manage changes in groundcover and pasture growth.

So, how can FORAGE help you?

FORAGE produces easy-to-access, property-based reports that you can either generate yourself or have developed as part of grazing extension programs to improve grazing property management.

All you need to get started is the lot-on-plan details for your property. If that's not available there's a link on the request page to help find it.

Synthesised data from a range of sources, including satellite imagery, modelled pasture growth and historical climate information are used to develop the property-based reports.

FORAGE products were developed collaboratively with stakeholders so that graziers' feedback helped make it directly relevant to their businesses. Other stakeholders included the Department of Agriculture and Fisheries, industry groups and extension providers.

FORAGE gives useful land condition indicators which help with a thorough baseline review of a property and decision making.

Historical data in FORAGE reports allow you to get indicators such as ground cover levels over time, as well as pasture growth and climate information for your property. For example

you can track ground cover over time for your dominant land types for comparison with the same land types within a 50 km radius.

The FORAGE tool provides a valuable resource for the Grazing BMP Program. Its reports help landholders assess and monitor impacts of management practices, such as the impact of stocking rates and events such as rainfall and fire, on groundcover and pastures for different land types, and support an assessment of overall land condition over time.

The suite of new and enhanced reports available for all of Queensland, supported by the best available science, includes:

- land type mapping
- regional ground cover comparison
- rainfall and pasture by land type
- regional climate projections
- foliage projective cover mapping
- erodible soils mapping (Burdakin Dry Tropics only)
- rainfall and pasture growth outlook.

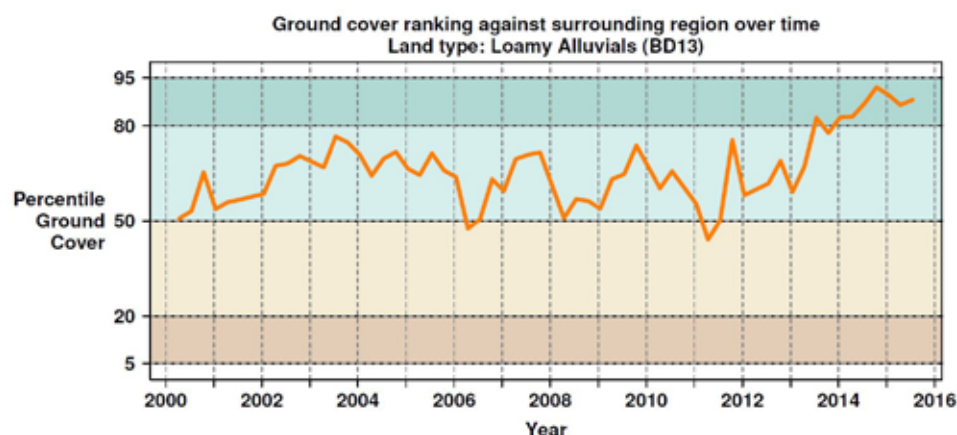
FORAGE was presented to graziers and extension officers at the Wambiana Field Day in August 2015. There was a lot of interest in the product with more than 100 graziers

from properties covering 1.4 million hectares attending the day.

More than 50 per cent of workshop participants evaluated FORAGE and rated it as 'above average' in usefulness for managing grazing. In the following month visits to the FORAGE website more than doubled with almost 400 requests for the tool.

For more information, contact Peter Bramwell on 3330 5652 or email coordination.reefproject@ehp.qld.gov.au.

The FORAGE project was funded by the Department of Environment and Heritage Protection's Reef Water Quality program as part of its science program to develop tools for catchment agriculture to reduce pollutant run-off. The work enhances the Department of Science, Information Technology and Innovation's earlier version of the FORAGE information system.



Graziers can monitor the effects of factors like grazing management, seasons and fire upon ground cover for a given land type within a 50km radius. The ground cover graph is an extract from one of a number of reports freely available from FORAGE.

Livestock industries urged to be FMD prepared

Key points

- Foot-and-mouth disease or FMD is the single greatest disease threat to our livestock industries.
- Preventing FMD is a shared responsibility between government, industry and community.
- It is important for livestock owners to check their animals regularly and to be able to recognise the signs of FMD.
- If you suspect your livestock may have FMD, contact your local veterinarian immediately.
- Learn more about preventing FMD at www.biosecurity.qld.gov.au/FMD.

Help prevent FMD

FMD is the biggest single threat to Queensland's livestock industries.

Queensland is particularly vulnerable to the threat posed by FMD given our livestock industries' heavy reliance on the export of livestock commodities.

Our beef exports alone are worth \$3.46 billion annually and are bought by around 80 countries.

FMD has not occurred in Australia since 1872, but it is common in some countries in the Middle East, Africa, Asia and South America.

The illegal importation of contaminated food, especially salted or cured meats, is the most likely means by which the virus could be introduced to Australia.

FMD is a serious and highly contagious viral disease affecting cloven-hoofed animals. This includes livestock such as cattle, pigs, sheep, goats, deer and camelids including camels, llamas and alpacas. Horses are not susceptible to FMD.

The social and economic impact of an FMD outbreak would be severe and prolonged.

A recent study by the Australian Bureau of Agricultural and Resource Economics and Sciences estimates that a large, multi-state FMD incident could cost Australia more than \$52 billion in lost revenue over 10 years.

The impact on the Queensland economy, our livestock sector and rural communities would be catastrophic.

This is why Queensland has implemented a Biosecurity Preparedness Program for FMD.

The program is designed to reduce the risk of FMD being introduced, establishing and spreading in Queensland.

Recognising the signs of FMD

Given the significant impacts of FMD it is important that everyone, particularly those working with and or around livestock, can recognise the signs of FMD.

FMD can cause severe disease, including blisters in the mouths and around the hooves of infected animals. This produces lameness and excessive salivation (particularly in cattle), reduced milk yield in dairy cattle and fever.

The disease is extremely contagious and multiple animals within the herd or flock are likely to be infected at the same time.

Prolonged or permanent production losses may result and in some young stock, the disease may be fatal.

There are other diseases which involve the formation of blisters and may result in clinical signs similar to FMD. As a result, FMD may be confused with some diseases commonly found in Australia as well as various other exotic diseases like swine vesicular disease.

It is important for livestock producers to regularly check their livestock and contact their veterinarian immediately if they notice clinical signs consistent with FMD in their livestock.

Confirmation of FMD requires laboratory testing of samples taken from livestock.

Suspected cases of FMD must be reported to Biosecurity Queensland on 13 25 23 or the Emergency Animal Disease Watch Hotline on 1800 675 888.

You can find out more about how to prevent FMD and the Queensland Biosecurity Preparedness Program at www.biosecurity.qld.gov.au/FMD.

Dr Allison Crook, Chief Veterinary Officer Biosecurity Queensland, Department of Agriculture and Fisheries, Brisbane



New and improved forage oat varieties for Queensland growers



Two new forage oat varieties are now available to Queensland and New South Wales growers and are profiled in the new *Forage oat variety guide 2016*.

The guide contains a comprehensive list of forage oat varieties including information on growth habit, speed to grazing, maturity, reaction to diseases and where seeds can be purchased.

Queensland Department of Agriculture and Fisheries (DAF) Senior Plant Breeder Bruce Winter said that forage oat growers in central and southern Queensland and northern NSW should begin planning ahead for their crops this year.

'Growers should try to adopt recommended management practices aimed at increasing forage growth,' Mr Winter said.

'Our newly released guide can assist growers in this exact process, suggesting management practices and strategies to reduce diseases.'

Mr Winter said that while leaf rust remains the major disease problem in forage oats, this is less likely to be a problem in drier years.

'To reduce the risk of leaf rust infection and poor establishment in 2016, growers should only plant oats from mid-March through to June,' Mr Winter said.

'The optimum soil temperature for the establishment of oats is between 15°C and 25°C, and this occurs during those months.'

Forage oats will again be an important source of feed for fattening cattle in 2016. Continuing high beef prices mean that cattle producers are looking to improve liveweight gain in autumn and early winter.

Further information on planting, nutrition, diseases and treatment is available in the new guide, which is available online at www.daf.qld.gov.au or by calling DAF on 13 25 23.



New biosecurity laws for Queensland

Biosecurity is about managing animal and plant health, and the risks and impacts of animal and plant pests and diseases, weeds, pest animals, marine pests and contaminants.

When new laws are introduced on 1 July 2016, biosecurity in Queensland will be everyone's responsibility.

You will need to understand and manage your day-to-day biosecurity risks, and industry will play a more active role in management, reporting and response. Biosecurity Queensland will also have greater capacity to respond to and manage a biosecurity emergency.

The new *Biosecurity Act 2014* (the Act) will replace a lot of legislation you might be familiar with. The Act deals with pests (such as wild dogs and weeds), diseases (such as foot-and-mouth disease) and contaminants (such as lead on grazing land).

Decisions under the Act will be made on a case-by-case basis and will depend on the likelihood and consequences of the risk. This will mean risks are managed more appropriately.

All Queenslanders need to take an active role in managing biosecurity risks under their control. Under the Act, individuals and organisations whose activities pose a biosecurity risk will have greater legal responsibility for managing them. The Act defines this responsibility as the general biosecurity obligation.

The general biosecurity obligation means that people must:

- take all reasonable steps to ensure they do not spread a pest, disease or contaminant
- minimise the likelihood of the risk causing a biosecurity event and limit the consequences of such an event
- prevent or minimise the adverse effects the risk could have and refrain from doing anything that might exacerbate the adverse effects.

Information will be available for many common pests and diseases to provide guidance on reasonable and practical measures that a

person can take to meet the general biosecurity obligation.

In some cases, the new Biosecurity Regulation will include specific provisions for meeting the general biosecurity obligation for a risk because of the likelihood and seriousness of the consequences. They may include arrangements for treating pests, diseases, contaminants and carriers, restrictions on movement of materials inside or outside a biosecurity zone or mandatory codes of practice directed at reducing risk.

You will not need to know about all biosecurity risks; however you will be expected to know about the risks associated with your day-to-day work and your hobbies.

For example:

- If you are a commercial producer of animals, you will be expected to stay informed about pests and diseases that could affect or be carried by your animals, as well as weeds and pest animals that could be on your property. You will also be expected to manage them appropriately.
- If you are a land owner, you will be expected to stay informed about the weeds and pest animals (such as wild dogs) that could be on your property. You will also be expected to manage them appropriately.
- If you transport agricultural produce, you will be expected to check whether the transportation could spread diseases or pests. If it could, you will be expected to manage this appropriately.

You will need to report unusual events that might be related to biosecurity, for example abnormally high mortality or morbidity rates in animals, or sudden, unexplained falls in production. There will also be obligations for registering some animals and reporting their movements to allow for disease tracing.

More information about the Act is available from the Department of Agriculture and Fisheries. To learn more visit www.biosecurity.qld.gov.au or call 13 25 23.



Low interest rates announced for Sustainability and First Start Loans

Queensland's beef producers will continue to benefit from low interest rates provided by the Queensland Government's Sustainability and First Start Loans, with new rates recently announced.

Fixed interest rates for loans drawn down from 1 January 2016 are 3.39 per cent for one year, 3.38 per cent for three years and 3.56 per cent for five years.

QRAA has been a long-term financial partner of the Queensland beef industry, with the state's beef producers traditionally having high uptake of QRAA's low interest loans – and this financial year has been no different.

Queensland's beef producers consistently turn to QRAA to access much needed financial assistance in the form of low interest loans to improve the productivity, sustainability and viability of their farming operations.

Over the past five years, QRAA has approved more than \$154 million to over 470 beef producers across Queensland in Sustainability and First Start Loans.

This trend has continued with more than \$20.8 million having been approved to 58 beef producers this financial year alone.

Producers are seeing the benefits of undertaking development work in fencing, improving water infrastructure and improving grazing land management practices to increase their carrying capacity – ultimately building a sound platform for succession or enhancing enterprise growth.

Queensland primary producers can access Sustainability and First Start Loans of up to \$650,000 to improve the viability of their primary production enterprise.

The loans have no set up or exit fees, no hidden costs and repayment terms of up to twenty years. The option of joint lending with commercial banks is also available for producers who need additional finance beyond the maximum productivity loan amount of \$650,000.

Do not self assess – QRAA Client Liaison Officers are available across Queensland to meet on-farm to discuss the loan criteria, terms and conditions and assist with the application process.

For further information visit www.qraa.qld.gov.au or Free call 1800 623 946.

The Sustainability and First Start Loans are initiatives of the Queensland Government's Primary Industry Productivity Enhancement Scheme administered by QRAA.



Leading Sheep

— a proactive network, progressive producers and sheep and wool businesses leading the way

Welcome to the first edition of **Flock talk for 2016**. By the time this edition has gone to print, the next phase of Leading Sheep (2015–2018) will be well underway with more than 590 participants at 13 events already run and others in the planning stages.

These events focused on sheep health and diseases, predator control and financial management, which align with the priorities of Leading Sheep:

- pest animal management
- health/nutrition
- business performance
- beneficial technologies
- young people.

Leading Sheep is also planning a number of new initiatives including:

- a pilot youth mentoring program for young people (18–39 years) either involved in or wanting to be involved in the industry
- a sheep challenge where competitors identify an industry challenge and develop an innovative solution
- promotion of existing industry educational opportunities and resources for schools.

If you want to find out more about Leading Sheep or keep up to date with upcoming events and activities, please sign up to our monthly e-newsletter at www.leadingsheep.com.au.

Leading Sheep is a joint initiative of Australian Wool Innovation and Department of Agriculture and Fisheries Queensland, and is supported by AgForce.

Nicole Sallur
 Department of Agriculture and Fisheries
 Senior sheep extension officer
 Leading Sheep project manager
 Flock talk editor



Electric fencing the obvious choice

When town dogs killed \$25,000 worth of stud sheep in a single night, Kym Thomas, her husband Greg Dunsdon and son, Tony Reid, knew they had to take action to improve the state of the boundary fencing on their south western Queensland operation.



Greg Dunsdon, Tony Reid and his partner Francesca inspecting the electric fence on 'Kahmoo'

Located eight kilometres from Cunnamulla, they run 7,000 Australian White Dorper-cross ewes on their 83,000 acre property 'Kahmoo'.

The pair presented on their experience with electric fencing for pest animal control and relieving grazing pressure at a recent Leading Sheep field day at Charleville, attended by 164 people.

The main goal for all at 'Kahmoo' when researching different fence types was bang for their buck. After trialling a number of designs, including mesh and seven strands with barb both top and bottom, electricity became the clear choice.

'We had little success with other designs as kangaroos and dogs just pushed through. The task certainly needed some creative thinking and learning at times and everyone in the family was involved in the project,' Ms Thomas said.

They decided to go with electric fencing because it would not only act as a barrier but would educate kangaroos, dogs and sheep to stay away from the fence line, thus limiting damage and maintenance.

Weighing up the cost of doing nothing or installing fencing, the choice became obvious.

'The cost of electric fencing was \$2,000 per kilometre (materials only, excluding end assemblies and gateways) which we compared with the annual losses in pasture degradation by kangaroos – it was clear the electric fencing was a smart move,' Ms Thomas said.

There were also the added management benefits of having fencing that was close to 100 per cent reliable.

The key to success was in the planning and understanding how the system worked. The family worked closely with fencing reps to plan out the fence, the materials to be used, and earthing and power requirements to ensure the fence had a consistent power along the 70 kilometre boundary.

The 1400 mm high fence consists of 10 wires, of which four are hot and mainly located at the bottom of the fence where predators, such as dogs, are most likely to push through. Poly droppers were used, because they were quicker and easier to install and cost effective.

The fence is fully solar powered, which Ms Thomas believes is breaking new ground in electric fencing by powering the energiser with solar panels.



Greg Dunsdon holding an earth wire of the electric fence on 'Kahmoo'

'The electric fencing was not without problems to start with and we nearly gave up on it, but we learnt that the problem was our lack of knowledge and understanding. We are so pleased we stuck with it as the results mean so much to our bottom line and productivity', Ms Thomas said.

'The success of the fence is dependent on the ongoing support being provided, and my advice to anyone investigating electric fencing is to understand the system and know where to go for help and support.

'In the 12 months since its construction the only animal to breach the fence that we know of is a lone dingo and the odd large kangaroo, making us confident electric fencing is the best option for our circumstances.'

They now plan on constructing a further electric boundary and internal fencing as well installing a digital monitoring system that will provide SMS alerts to faults in the fence line.

Top five tips for electric fencing design:

- Plan it completely before you start building anything – start from the energiser and work outwards
- Fence line preparation matters – clear the line well to either side, level the line and design the fall to shed water
- Implement a good monitoring system
- Power up as you go, it will help identify any faults in each section
- The right equipment makes the job easier.



Editorial committee

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Brucellosis in rams

By Dr Noel O'Dempsey BVSc (Hons)
'Linallie', Texas

Brucellosis in rams has been the subject of much discussion and is often blamed for low lamb marking percentages. For some, this may be the case. For most, brucellosis will not be solely responsible for the low percentages.

Why? The reasons lie in the nature of the disease and the fact that brucellosis has been around in sheep flocks in Queensland for a long time. In some ram flocks, it has been evident at very high rates.

Simply finding brucellosis in your ram flock does not mean it's the cause of low lambing. Pregnancy testing is important to validate any suspicions of a joining-related problem.

Over the last thirty years, as a veterinarian working in the sheep industry in western Queensland, I have seen two or three similar peaks of concern with brucellosis. Removing brucellosis from your ram flock is good management but people can spend a lot of time and effort and still not be addressing the issues that have caused their low lambing problem.

Brucellosis is a disease of rams of all breeds and has two main costs:

Infertility – the fertility of infected rams is reduced. In individual rams, this can range from partial to total infertility. Where the incidence of brucellosis in a flock is low, the ram joining percentage is high and the length of joining is prolonged (2 to 3 per cent and 8 to 12 weeks), the overall pregnancy rates will not be affected. Where producers are using lower ram percentages (1 to 1.5 per cent) and a joining period of 5 to 6 weeks, brucellosis is more likely to be a problem with reduced conception rates.

Premature culling – annual ram replacement costs can increase if brucellosis-infected rams have to be culled and replaced prematurely. The Brucellosis Accreditation (BA) scheme has been in place for many years. All replacement rams should now be brucellosis-accredited free. If not, you should ask your ram supplier 'Why not?' or get a new ram supplier.



Dr Noel O'Dempsey palpating a ram's testicles

When brucellosis is contracted by a ram, the bacteria can localise in the epididymis and cause an infection and tissue reaction that blocks the tubules (epididymitis). The epididymis then swells and hardens. Swellings are most common in the tail of the epididymis but can occur anywhere along its length. The period from initial infection to the appearance of detectable lesions can be 8 to 12 weeks. However, not all infected rams will develop palpable lesions.

In the early stages, semen can be abnormal having a high proportion of dead and dying sperm. The development of a total blockage takes some time and until this happens, viable sperm can be shed. When the blockage becomes total, sperm cannot be passed. In the majority of rams only one testicle is affected with the other being able to function. The longer that brucellosis-affected rams remain in the flock, the more rams will be affected and more will have lesions in both testicles.

Brucellosis is not the only cause of epididymitis but is the primary cause. Epididymitis can also result from injury and infection by a range of other bacteria.

Brucellosis in ewes is rarely a significant problem but can establish in the placenta and cause abortion or the birth of small weak lambs. Ewes carrying the infection will throw it off after lambing.

Brucellosis can spread in rams:

- At joining. Ewes are commonly served by more than one ram at each cycle. If an infected ram serves a ewe, then rams that subsequently join with that ewe can become infected. Ewes will not normally carry the organism through to the next cycle.
- With homosexual and dominance related activities in rams.
- At shearing or whenever rams come into contact with infected semen.

When palpating rams it is very common to see groups of rams that run together, all with the disease.

Manual palpation is an effective and practical way of identifying rams with testicular disorders. Both testicles should be the same size, firm and without any swellings or hard lumps. When examining rams both testicles are palpated feeling for differences.

When palpating, start as high up the cords as possible. As you come down to the top of the testis, feel for hard swellings. Next, gently squeeze the testicles feeling for size and testicular tone (firm, not hard). At the same time, with your thumb, feel along the body of the epididymis for lumps and swellings. The tail of the epididymis should be firm, not hard and the same size on each side.

Annual (preferably bi-annual) palpation and culling, before ordering replacements and before joining, will reduce the incidence of brucellosis and other ram faults to manageable levels and let you plan your ram replacements.

To eliminate brucellosis from your ram flock:

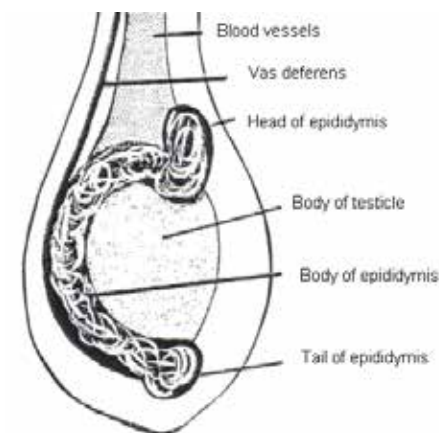
- Blood testing by your veterinarian normally requires a number of rounds of testing and palpation due to false negatives and on-going spread
- All newly purchased rams should be accredited brucellosis-free and palpated before purchase or at delivery. All non-accredited rams should be quarantined and tested at delivery

- Stags (with one testicle retained) can carry and spread brucellosis and should be identified at marking and removed from the flock
- Rams should never be run with the killers, black sheep or a few ewes to keep them happy.

After the ram flock is free, on-going monitoring with at least annual palpation of all rams is required. This helps prevent re-infection or at least alert you to a problem if there is a breakdown, such as rams getting in from neighbours.

Good fences around the ram paddock and with neighbours can help reduce this possibility. Most Merino studs are now Brucellosis-Accredited free. Some of the newer prime lamb breeds do not offer the same level of assurance. If your ram supplier cannot guarantee their rams, get a new supplier or quarantine and test all rams at delivery.

Figure 1 illustrates the anatomy of a ram's testicle. The head of the epididymis curves around the top of the testis. The body runs down the inside finishing at the tail which forms a distinct knob at the bottom of the testicle (tail).



Want to find out more?

Watch a **recorded webinar** on ovine brucellosis at www.leadingsheep.com.au

Participate in a **Bred Well Fed Well** workshop, find out more at www.makingmorefromsheep.com.au

Join a **Lifetime Ewe Management** group, visit www.lifetimewool.com.au

