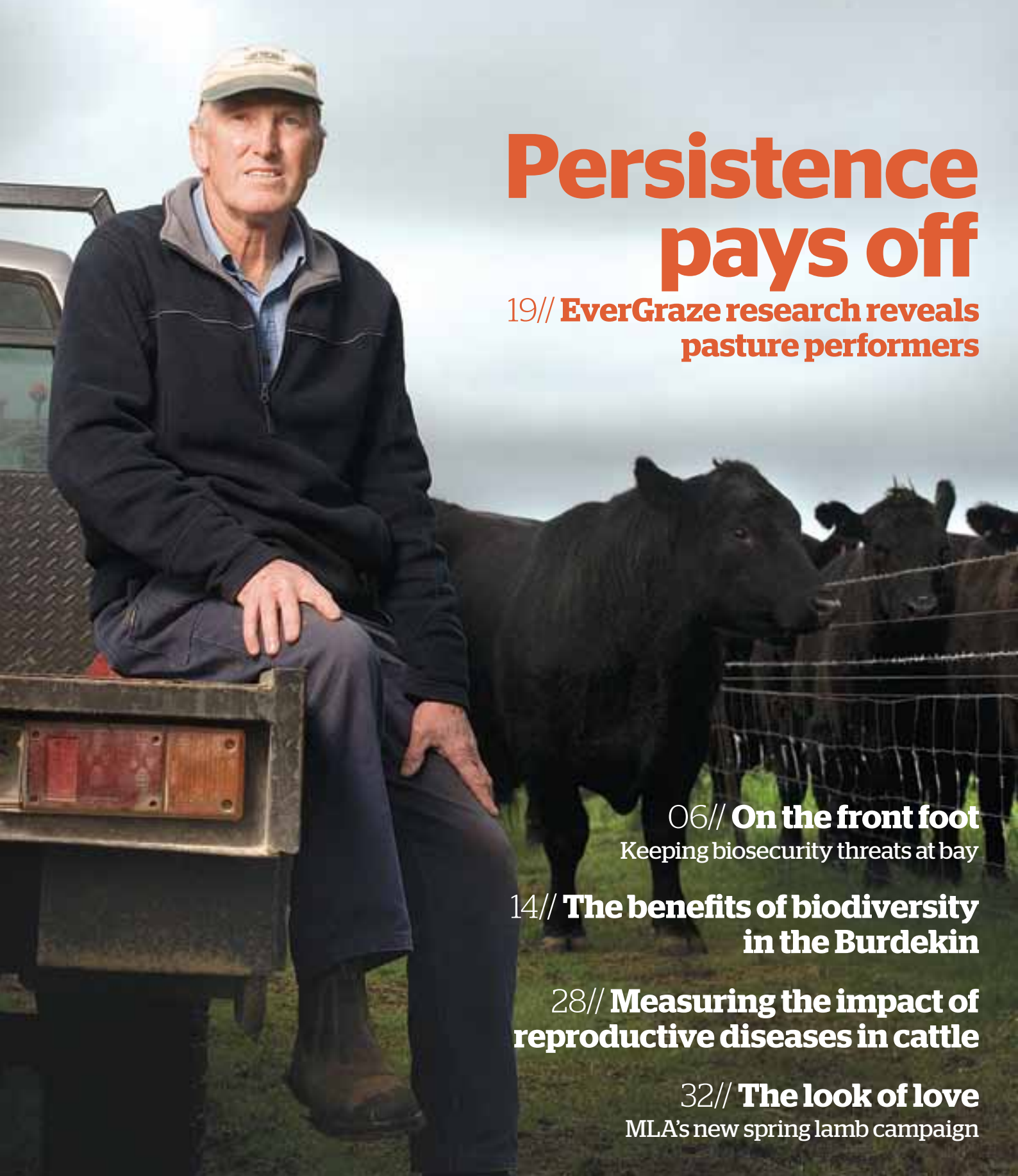
mla Your levies at work // October 2013

Feedback



Persistence pays off

A note from the MD...

I recently met with producers in north Queensland where the drought continues to bite towards the end of what has been a tough year, especially for the northern grazing areas.

A poor end to winter in the south and the generally hot start to spring saw supplies of cattle onto the market increase in the first weeks of September and add to the price pressure. Some heavy falls across the south east helped ease some pressure on supplies and provided some relief to the eastern states cattle market.

However, continued dry conditions in Queensland and western NSW have seen the return to higher than average slaughter volumes, as large numbers of stock normally held until next year are offloaded. Eyes are now turned towards the north in anticipation of the upcoming wet season.

We have recently had external eyes looking over our process for investing levies on your behalf. Page 11 of this edition of *Feedback* features an overview of the review we commissioned on our systems for on-farm R&D investment to tell us how to improve what we do and get more value from the investments we make on behalf of industry. We commissioned this review because we are constantly looking for ways to lift the bar and now we intend to act on it. Of the 11 recommendations, a number have already been actioned or are in progress and we are currently working with the industry on those that require a broader consultation process - to make sure we get the implementation right.

I welcome your comments
managingdirector@mla.com.au

Scott Hansen
MLA Managing Director

Contents

Cover: John Kelly, sheep and cattle producer of Euroa, Victoria. Image by Paul Jones.

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Co-existence checklist for landholders

A practical checklist has been developed to help landowners negotiate co-existence agreements with mining companies and other third parties.

The checklist is part of a Rural Industries Research and Development Corporation (RIRDC) research report titled *Principles for Negotiating Appropriate Co-existence Arrangements for Agricultural Landholders* which was commissioned by industry peak bodies and co-funded by MLA.

MLA Market Specialisation Manager, Sylvia Athas, said the checklist would provide a practical starting point and included key questions agricultural landholders should address when negotiating with a new land use proponent.

"The checklist was drawn from the lessons learned in the report's case study analysis of real co-existence examples, along with best practice and online tools," Sylvia said.

The checklist has been divided into 'negotiation processes', 'conduct on farm', 'compensation payable' and 'principles applicable to landholders'.

Sylvia said MLA chose to co-fund the research after consultation with industry peak bodies identified an increasing need for producers to co-exist with other sectors, such as mining and energy generation and transmission.

The industry bodies included the National Farmers' Federation, Cattle Council of Australia, Sheepmeat Council of Australia, Australian Lot Feeders' Association and the Red Meat Advisory Council.

They provided evidence suggesting that the compensation received by agricultural landholders for this co-existence was widely variable.

"Landholders were being required to take into consideration the costs, benefits, disturbances and inconveniences they could experience in the short, medium and long terms, but there were few, if any, guidelines or tools available to assist them in undertaking these negotiations," Sylvia said.

Landholders can access the new *Principles for Negotiating Appropriate Co-existence Arrangements for Agricultural Landholders* by downloading the report from the MLA or RIRDC websites:

www.mla.com.au/industryissuesresearch

https://rirdc.infoservices.com.au/items/12-114

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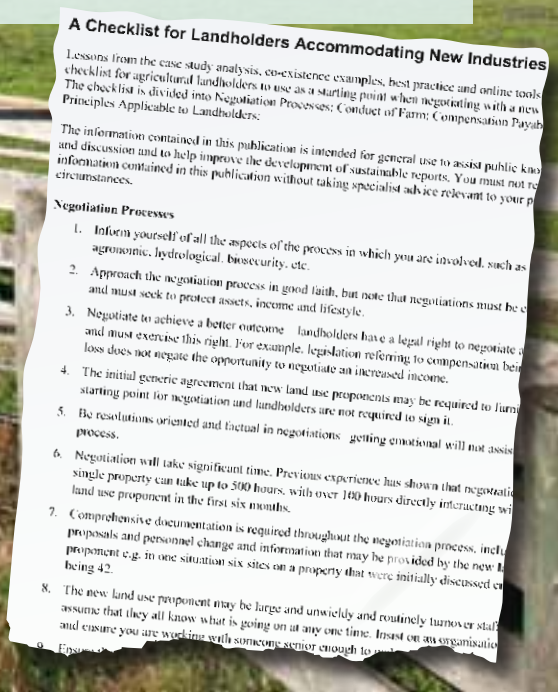
A Checklist for Landholders Accommodating New Industries

Lessons from the case study analysis, co-existence examples, best practice and online tools checklist for agricultural landholders to use as a starting point when negotiating with a new The checklist is divided into Negotiation Processes; Conduct of Farm; Compensation Payab Principles Applicable to Landholders.

The information contained in this publication is intended for general use to assist public kno and discussion and to help improve the development of sustainable reports. You must not re information contained in this publication without taking specialist advice relevant to your p circumstances.

Negotiation Processes

1. Inform yourself of all the aspects of the process in which you are involved, such as agronomic, hydrological, biosecurity, etc.
2. Approach the negotiation process in good faith, but note that negotiations must be and must seek to protect assets, income and lifestyle.
3. Negotiate to achieve a better outcome – landholders have a legal right to negotiate and must exercise this right. For example, legislation referring to compensation bei loss does not negate the opportunity to negotiate an increased income.
4. The initial generic agreement that new land use proponents may be required to furn starting point for negotiation and landholders are not required to sign it.
5. Be resolutions oriented and factual in negotiations – getting emotional will not assis process.
6. Negotiation will take significant time. Previous experience has shown that negotiati single property can take up to 500 hours, with over 100 hours directly interacting wi land use proponent in the first six months.
7. Comprehensive documentation is required throughout the negotiation process, incl proposals and personnel change and information that may be provided by the new L proponent e.g. in one situation six sites on a property that were initially discussed c being 42.
8. The new land use proponent may be large and unwieldy and routinely turnover staf assume that they all know what is going on at any one time. Insist on an organisatio and ensure you are working with someone senior enough to

Negotiations for a single property can take up to

500 hours

Ready or not?

Hamilton, Victoria, will host an MLA Meat Profit Day (MPD) on Wednesday, 19 February, 2014 with a theme of '2025: Ready or not?'

Hamilton MPD Committee Chairman, David Jenkin, said the MPD will provide insights and motivation to beef and sheepmeat producers in the district by looking at issues such as key market forecasts and consumer trends, and cutting edge technology.

www.mla.com.au/HamiltonMPD

Location, location

Have you ever wondered where your closest MSA-licensed butcher, supermarket, restaurant or café is located?

Do you know which abattoirs are licensed to process MSA beef and lamb? An 'MSA locator' has been developed and is available at **www.mla.com.au/msalocator**

Munro's Butchery at Wilberforce.

Animal welfare on YouTube

Target 100 and the Australian Lot Feeders' Association have developed a series of videos outlining how the feedlot industry applies the 'Five Freedoms of Animal Welfare' principles.

The videos were produced to show the community first hand the importance the lot feeding industry places on animal welfare and the hard work that goes into ensuring cattle are well cared for in feedlots.

The videos start with an introduction to the Five Freedoms by Professor Andrew Fisher, Melbourne University's Chair of Cattle and Sheep Production Medicine. They feature interviews with feedlot managers and a feedlot veterinarian, who discuss how they apply the principles when caring for cattle.

The freedoms outlined are:

1. Freedom from hunger and thirst: by ready access to fresh water and a diet to maintain health and vigour.
2. Freedom from discomfort: by providing an appropriate environment including shelter and a comfortable resting area.
3. Freedom from pain, injury or disease: by rapid diagnosis and treatment.
4. Freedom to express normal behaviour: by providing sufficient space, proper facilities and company of the animal's own kind.
5. Freedom from fear and distress: by ensuring conditions and treatment that avoid mental suffering.

Watch the videos at **www.youtube.com/Target100AUS** or **www.youtube.com/australianfeedlots**

Beyond the gate

The red meat supply chain tour for MLA members

LAUNCESTON, TAS – 19 NOVEMBER
ADELAIDE, SA – 21 NOVEMBER

Beyond the gate gives MLA members the chance to follow their products through the supply chain to consumers' plates – meeting with processors, wholesalers, butchers and executive chefs. Take part in an exclusive beef and lamb MasterClass, get a behind the scenes look at restaurant and foodservice operations and dine at one of the city's best restaurants.

* The tour will be subsidised by MLA but there will be a charge of $95 per person.

Bookings and more information: **1800 675 717 (option 4) or www.mla.com.au/BTG-Launceston www.mla.com.au/BTG-Adelaide**

Launceston, Tasmania

Gene patent withdrawn

MLA was part of a consortium which defended Australia's livestock industries by opposing a potentially damaging gene patent application lodged by the US animal biotechnology company, MetaMorphix, and multinational Cargill.

MLA's On-farm Commercialisation and IP Manager Amanda McAlpine said the patent, which has since been withdrawn, would have affected the use of most DNA-associated genetic tests.

"If successful, this patent could have brought Australian animal genetic research to a standstill," Amanda said.

"Our ability to improve our animals' meat quality, disease resistance and feed efficiency could have been severely impeded, greatly affecting our international competiveness," Amanda said.

Of particular concern was its potential impact on Australian livestock industries' use of the 50k SNP chip and associated Estimated Breeding Values, a multi-million dollar investment developed by MLA, Australian Wool Innovation (AWI), the Beef and Sheep CRCs, the sheep genomics program and research organisations.

Also under threat were the Beef CRC-developed molecular breeding or prediction equations, soon to be licensed to the University of New England's Agricultural Business Research Institute and Zoetis (formerly Pfizer Animal Health).

Amanda said gene patents remained controversial, with many arguing that because genes are naturally occurring they are a discovery not an invention, and accordingly, should not be patented.

"We don't want to stop companies from conducting their commercial business but when MLA became aware of the patent application during a Freedom to Operate evaluation, we had to act for the greater good of the entire industry," she said.

The consortium that opposed the application consisted of MLA, AWI, Dairy Australia, Dairy Futures CRC, and the Beef and Sheep CRCs.

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Play it safe

Ross Keane
Chairman
safemeat

With drought affecting significant areas of rural Australia, particularly through Queensland, SAFEMEAT – the industry/government partnership which oversees and promotes sound management systems to deliver safe and hygienic product to the marketplace – urges producers to be aware of chemical residues when using supplementary feeds.

Some supplementary feeds may have been treated with agricultural chemicals and could potentially lead to livestock residue concerns. Such contamination could lead to significant financial losses to producers and processors through the loss of export markets.

SAFEMEAT advises producers that, when purchasing fodder specifically grown for livestock consumption, a Commodity Vendor Declaration (CVD) should be requested from the seller.

If producers are buying fodder not originally grown for livestock consumption, such as vegetable waste, producers should request a By-product Vendor Declaration (BVD). Both documents provide details on the chemical residue status of the feed.

Most purchasers of slaughter livestock require a completed Livestock Production Assurance National Vendor Declaration (LPA NVD). There are questions on the LPA NVD that require producers to know the history of the feedstuffs fed to stock and this becomes especially important during drought conditions.

The CVD and BVD are available from the MLA website and producers should also check the Australian Pesticides and Veterinary Medicines Authority website for the most recent updates to label directions, including export label information.

www.mla.com.au/feed-and-fodder-declarations

The Australian Pesticides and Veterinary Medicines Authority: **www.apvma.gov.au**

SAFEMEAT: **www.safemeat.com.au**

Ask the boss

A single electronic gateway has been created to provide sheep producers with information on parasites, flies and lice.

The site, **www.paraboss.com.au**, brings together three existing specialist websites – WormBoss, FlyBoss and LiceBoss.

ParaBoss provides advice on a regional basis, allowing producers to access information suited to individual properties.

The new site follows two years of work by the Sheep CRC (funded partly by MLA) and Australian Wool Innovation to create a common format and single web directory.

Sheep CRC Chief Executive Professor James Rowe said all recommendations on the site had been peer-reviewed by referencing the science behind them and the on-the-ground practicalities with experienced practitioners.

"It is much easier having just one database to update as new chemicals are developed and conditions of use change over time," he said.

www.paraboss.com.au
To subscribe to the ParaBoss newsletters go to the 'Managing Subscriptions' tab at the bottom of the homepage.

Endemic diseases

Border security

Fast facts from the 2001 FMD outbreak in the UK:

Length of outbreak:
221 days

Overall number of infected properties:
2,026

Number of animals slaughtered for disease control purposes:
More than
4 million

Number of vets deployed during outbreak:
More than
1,800

Cost to government:
More than
£3 billion

Source: National Audit Office and Department for Environment, Food and Rural Affairs

Dr Johann Schröder
MLA Project Manager for
Animal Health and Biosecurity

Australia exports about 60% of its livestock production and enjoys a trading advantage, thanks to the freedom from many diseases that occur elsewhere in the world. An outbreak would close many markets until the disease was contained or eradicated.

MLA's Project Manager Animal Health and Biosecurity, Dr Johann Schröder, said foot and mouth disease (FMD) was regarded as the biggest biosecurity threat to Australia's red meat industry due to its infectivity, wide host spectrum and proximity to our borders.

"An FMD outbreak would see the immediate and prolonged closure of major export markets for affected livestock and products," he said.

The most recent ABARES study (2011) estimated a small outbreak taking three months to contain would cost the industry $7.1 billion. A large outbreak (taking 12 months to contain) would cost $16 billion – indicating producers could lose their income for a year.

"As well as eroding this valuable income stream, an outbreak would take its toll through lost productivity, livestock mortality, treatment and control measures to regain freedom from the disease, and eroded domestic sales from negative public perception – not to mention the social cost to impacted producers and communities," Johann said.

Avoidance strategies

MLA, along with government, animal health authorities, livestock industries and emergency management organisations, is part of the charge to maintain Australia's biosecurity safeguards – investing around $6 million a year in projects to detect, diagnose and manage diseases.

The biosecurity frontline is underpinned by Animal Health Australia (AHA) which manages the Emergency Animal Disease Preparedness program and the Australian Veterinary Emergency Plan (AUSVETPLAN) disease strategies and response policy briefs. These are available at **www.animalhealthaustralia.com.au**

Johann said biosecurity could not succeed without producer participation.

"Nationally, biosecurity refers to safeguarding Australia against the incursion of exotic diseases, but it starts at the enterprise level with programs for parasite control, preventative treatment, maintaining fences to control stock movement and strict quarantine measures when introducing new livestock," he said.

"Vendor declarations and health statements are also vital to trace the movement of stock to saleyards, abattoirs or other properties and contain potential outbreaks."

Hit list

MLA invests in research to prevent and contain outbreaks of diseases which threaten livestock industries through lost export revenue, lost production and disease management. Diseases include:

Foot and mouth disease (FMD): FMD is caused by viruses that infect cloven-hoofed animals. It spreads through dust and wind-borne organic particles. It produces painful blisters that cause animals to stop eating. FMD can be fatal if there are complications, such as secondary bacterial infections.

MLA invests in surveying neighbouring countries for prevalent virus vaccines, ensuring that Australia's vaccine bank has the appropriate vaccine seed stocks, and improving Australia's diagnostic capability in the event of an incursion. Read more about FMD in our profile on Kat Ferme opposite.

Bluetongue disease: This disease is caused by viruses transmitted by biting insects of the genus *Culicoides* (midges). It is most harmful in sheep. Affected animals lie down, stop eating and may die if their heart is affected. Bluetongue virus in cattle is regularly isolated, mainly in northern Australia. It has not yet caused disease in Australia's sheep flock.

MLA contributes to developing molecular diagnostic tools for quicker and more accurate identification of the virus, its vector and hosts; and developing a model to predict the spread of a potential outbreak, for use by biosecurity agencies.

Johne's disease: This chronic bacterial infection of the small intestine interferes with digestion and leads to weight loss and diarrhoea. When infected sheep, cattle and goats excrete the bacteria, the environment is contaminated and the disease propagates.

MLA investment includes searching for safer, more effective vaccines; developing more efficient methods for faster, more accurate diagnosis of disease; and developing molecular tools for predicting the course of an infection and identifying resistant host animals.

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Disease Watch hotline: 1800 675 888 (toll-free), for advice and assistance if you suspect an outbreak

Farm Biosecurity website:
www.farmbiosecurity.com.au

Farm Biosecurity for Livestock Producers brochure: **www.farmbiosecurity.com.au/wp-content/uploads/2013/06/Farm-Biosecurity-for-Livestock-Producers.pdf**

In profile | Endemic diseases

Kat Ferme // *Senior Policy Officer Sheepmeat Council of Australia*

Diagnosing foot and mouth disease in a Nepalese village was a world away from 'Crystal Brook', the South Australian farm Kathleen 'Kat' Ferme grew up on. Here, the veterinarian and Sheepmeat Council of Australia Senior Policy Officer shares her experiences.

You recently gained an international perspective on foot and mouth disease (FMD); why was this so important? The Department of Agriculture, Fisheries and Forestry commissioned the Food and Agriculture Organisation of the United Nations to deliver FMD training tailored to more than 80 Australian vets and stock handlers in Nepal – where FMD is endemic.

I participated in the one-week program in November 2012. It was a real-life opportunity to see the signs, take samples for diagnosis, talk to villagers and farmers to trace outbreaks, and practise response and containment.

Each year, the trade of livestock through Nepal brings epidemic waves of FMD and other animal diseases. Generally, there are minimal biosecurity measures, so the disease moves quickly between villages. No textbook can compare to a real-life FMD outbreak.

Was there a danger of bringing FMD back to Australia? We wore biosecurity suits, changed gloves and hosed down our suits and boots with disinfectant between farms. We washed, disinfected or discarded everything before returning to Australia. Customs processes were strict and we signed a declaration to say we would stay away from livestock for seven days after returning to Australia.

FMD in Australia – what would happen? I hope I never have to put into practice what we learnt in Nepal. A diagnosis of FMD or even a strong suspicion of FMD anywhere in Australia will result in a national livestock 'standstill', which means no movement of any susceptible species for at least 72 hours. A confirmed diagnosis would close export markets and affect price, productivity and, potentially, tourism.

What would be the role of you and other vets if FMD was ever discovered in Australia? Local vets would diagnose livestock and support local disease control centres, along with stock agents and producers. I'm trained as an industry liaison officer and as a sheep industry representative to the Consultative Committee for Emergency Animal Disease, so I would be involved in providing technical advice and implementing AUSVETPLAN strategies.

How does a vet from regional South Australia end up developing national policy? Growing up on a mixed farm influenced my decision to study veterinary science. After graduating, I worked in the dairy industry in Victoria and a mixed vet clinic in South Australia, and completed additional study in cattle and sheep nutrition. I love working in rural communities but I wanted to focus on preventative health, so I applied for this job two years ago as an opportunity to contribute to animal health and welfare at a national level.

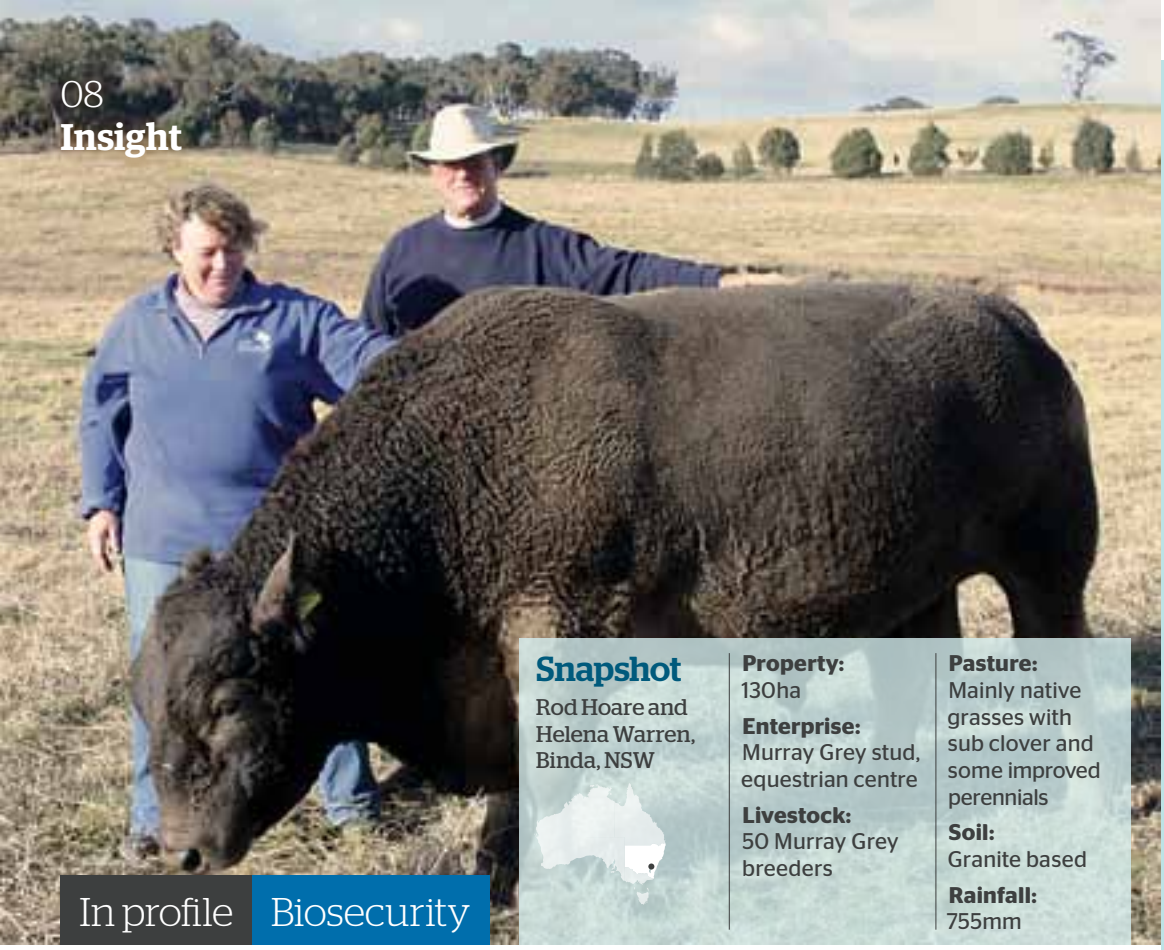
Above: Australian vets and stock handlers walk between FMD-infected villages in Nepal.

Kat Ferme // E: kferme@sheepmeatcouncil.com.au

Read more about FMD prevention activities:

Industry Liaison Officer training: **www.animalhealthaustralia.com.au/training-centre/industry-liaison-officer-ilo-training-project**

Modelling FMD and other disease outbreaks: **www.daff.gov.au/animal-plant-health/animal/modelling/fmd**



In profile Biosecurity

Snapshot

Rod Hoare and Helena Warren, Binda, NSW

Property: 130ha

Enterprise: Murray Grey stud, equestrian centre

Livestock: 50 Murray Grey breeders

Pasture: Mainly native grasses with sub clover and some improved perennials

Soil: Granite based

Rainfall: 755mm

Helena Warren and Rod Hoare with a Murray Grey bull at their Binda property, where biosecurity is paramount.

Rod Hoare // *Biosecurity Farmer of the Year*

Veterinarian and cattle producer Rod Hoare has a robust biosecurity strategy at his 130ha property 'Cadfor', at Binda on the NSW Southern Tablelands. This commitment to protecting his Murray Grey herd, and the horses in the equestrian centre he runs with partner Helena Warren, resulted in Rod being named the Biosecurity Farmer of the Year (livestock) at the 2012 Australian Farmer of the Year Awards.

How have you made your property biosecure?

We bought 'Cadfor' as a blank canvas and developed it exactly how we wanted, with infrastructure like laneways and isolation paddocks. Double-fencing is a central biosecurity strategy to prevent spread of diseases like pestivirus or strangles through nose-to-nose contact, while tree lines provide a windbreak to minimise weed seed spread.

What was the cost of the infrastructure?

Biosecurity doesn't have to be a big expense. Some of the most effective biosecurity measures are very inexpensive, such as delineating driveways to prevent visitors accessing paddocks or putting up signs on the front gate. We have a free Farm Biosecurity sign, requesting visitors to contact the farm manager on entry, as well as signs directing cars and horse floats. The key is to control movements of visitors and livestock.

What practices do you enforce to protect livestock?

We run a closed Murray Grey stud herd – any introduced bulls are carefully selected from studs with similar biosecurity strategies. We use drenches strategically and apply other disease control measures to take into account our individual circumstances. For example, we run cattle on improved pastures, so we vaccinate every three months with '5-in-1' or '7-in-1' to cover for pulpy kidney. Our herd is pestivirus and leptospirosis free (making it more susceptible) so we vaccinate for these diseases.

How do good biosecurity practices help in the marketing of your stud stock?

Record management is pivotal to our biosecurity. We use CattleLink to record our cattle, submit breed society registrations, Breedplan data, record weights and scans, health treatments, mob movement, paddocks grazed, NLIS tags, client details and photos etc. Biosecurity strategies give our clients confidence they are buying healthy stock backed by quality systems.

What role do producers play in biosecurity?

The diagnostic acumen of producers should not be overlooked, as they are the first to notice anything out of the ordinary. If you do notice anything unusual, monitor those animals and inform your vet if their condition gets worse. Knowledge is a powerful management tool, so get a vet to diagnose illness or mortality – it might turn out to be a one-off event like a snake bite or it could be something much worse.

Checklist: is your farm biosecure?

- Are animals fit for transport, and have you completed a National Vendor Declaration and stock health statement?
- Are your transport provider's cleaning and hygiene practices satisfactory?
- Are new and returning livestock from shows or sales isolated for 10 days to monitor for signs of sickness and avoid transferring diseases?
- Is purchased feed free from weeds, soil and pests and stored correctly to avoid contamination?
- Do you have quarantine and washdown areas for people, animals, vehicles and equipment entering a property?
- Is organic fertiliser (eg animal manure) thoroughly composted to destroy weed seeds and diseases?

For biosecurity tips, check out **www.farmbiosecurity.com.au**

Refer to the SAFEMEAT article on page 5 about residues that can be associated with supplementary feeds.

You were an Industry Liaison Officer during the 2007 equine influenza outbreak. What lessons can other livestock industries learn from the horse industry about biosecurity?

- Have the relevant AUSVETPLAN in place and be prepared to defend it against political interference.
- Commit local, regional and national resources to prevent/control outbreaks.
- Communicate simple advice so people can easily implement it.
- Monitor social media and commit resources to provide answers and manage expectations.

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Biosecurity

Footrot research steps up

Footrot fast facts:

The annual cost of footrot in Australia is

$18 million

Footrot is a contagious bacterial disease of sheep and goats

Virulent footrot is severe and debilitating

Footrot spreads in cool, moist environments

Footrot incidence declined during the drought of the late 1990s/early 2000s but has been rising since 2010

Figures presented to National Footrot Workshop, March 2012:

- → 41 infected flocks in NSW (up from 18 in 2009)
- → 16 new cases detected in Victoria in 2011
- → A random survey of 80 South Australian flocks found 6.25% were infected with virulent footrot and 20% with benign footrot
- → 24 infected flocks in Western Australia (58 in 1999, down to 17 at one stage)

Early stage footrot on a sheep. Image provided by the Faculty of Veterinary Science OLIVER database at the University of Sydney, courtesy of Professor Peter Windsor.

An MLA-funded research project aims to develop a vaccine for all variations of the footrot bacterium.

Researchers from Monash University and the University of Sydney, with a 25-year track record of collaboration on footrot research, are working on the project, which began in July.

Project leader Professor Julian Rood said the project aimed to develop an effective vaccine candidate by August 2016.

"We hope to have a validated candidate that provides cross-protection against all variations of the footrot bacterium – something previous vaccines have not been able to achieve," Julian said.

"The laboratory-based work is being undertaken at Monash University, while the pen and field vaccine trials will be carried out at the University of Sydney, starting later this year."

The search for a potential vaccine is building on work begun in 2003 by the Monash-based ARC (Australian Research Council) Centre of Excellence in Structural and Functional Microbial Genomics.

In 2006 the ARC Centre was involved in the determination of the entire genome sequence of the footrot bacterium, providing valuable information for researchers seeking ways to fight the disease.

Working with funding from the ARC Centre, Julian and his team created a shortlist of genes encoding for proteins with potential as footrot vaccine candidates.

In that work, 99 genes were identified, 89 were cloned, and 63 tested in field trials funded by Australian Wool Innovation. Six potential vaccine candidates were identified before the project ended.

The current MLA-project will allow the remaining 26 cloned genes to be tested, and all potential vaccine candidates to be assessed in pen and field trials.

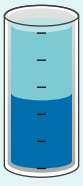
"The pen trials will see sheep vaccinated with the potential vaccines before being exposed to footrot under conditions that soften their hooves and enhance the chance of infection," Julian said.

"These studies will be followed by field trials, which will consist of natural exposure and disease transmission in paddocks contaminated by experimentally infected sheep, showing significant footrot lesions."

All animal research undertaken by the University of Sydney must be approved by the University's Animal Ethics Committee in accordance with state government guidelines.

Project dashboard: Footrot vaccine

Financial contributions to the project:
$940,492



MLA levies: **50%**

Government: **50%**

Length of project:
3 years

Project is part of MLA's objective to:

Create opportunities to minimise the threat and impact of exotic, emerging and endemic disease on Australian livestock enterprises.

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Research and development

An update on MLA's R&D

MLA's latest update of its R&D investments shows that initiatives to increase productivity continue to take the lion's share of funding.

MLA's R&D investments are focused on four strategic imperatives:

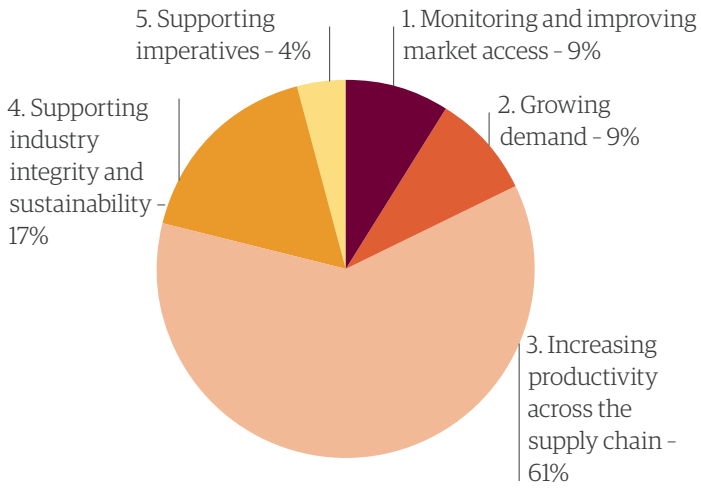
1. Maintaining and improving market access
2. Growing demand
3. Increasing productivity across the supply chain
4. Supporting industry integrity and sustainability

There are also two supporting imperatives which account for stakeholder engagement and support and management services.

In 2012-13 MLA and the MLA Donor Company (MDC) invested $79.6 million in research and development programs which included $38.3 million in matching funds provided by the Australian Government.

Figure 1 shows the relative R&D investments between the strategic imperatives (this does not include levies that fund marketing activities).

Figure 1 **MLA's R&D investment in 2012-13, by strategic imperative**



Source: MLA

The largest investment area is 'increasing productivity across the supply chain', which includes research to improve on-farm productivity and support industry to improve animal health and biosecurity. The proportion of R&D spend in this area has increased from 47% in 2009-10 to 61% in 2012-13.

Current program areas to improve on-farm productivity include:

- → Providing genetic and genomic evaluation tools and information for cattle, sheep and goat breeding enterprises.
- → Developing new technologies and management programs to increase growth, feed efficiency, grazing performance, reproduction and reduce mortality rates in grazing and feedlot systems.
- → Developing new cultivars and/or agronomic practices to improve persistence and/or quality attributes of forage plants.
- → Investigating and improving the management of key feedlot animal health problems.
- → Making investments in priority endemic diseases to reduce the cost of endemic diseases (compared with 2005).

The Australian Bureau of Statistics (ABS) reporting system divides research into five categories. Part of MLA's reporting requirements to the Department of Agriculture, Fisheries and Forestry is to identify the allocation of R&D investments against the following criteria:

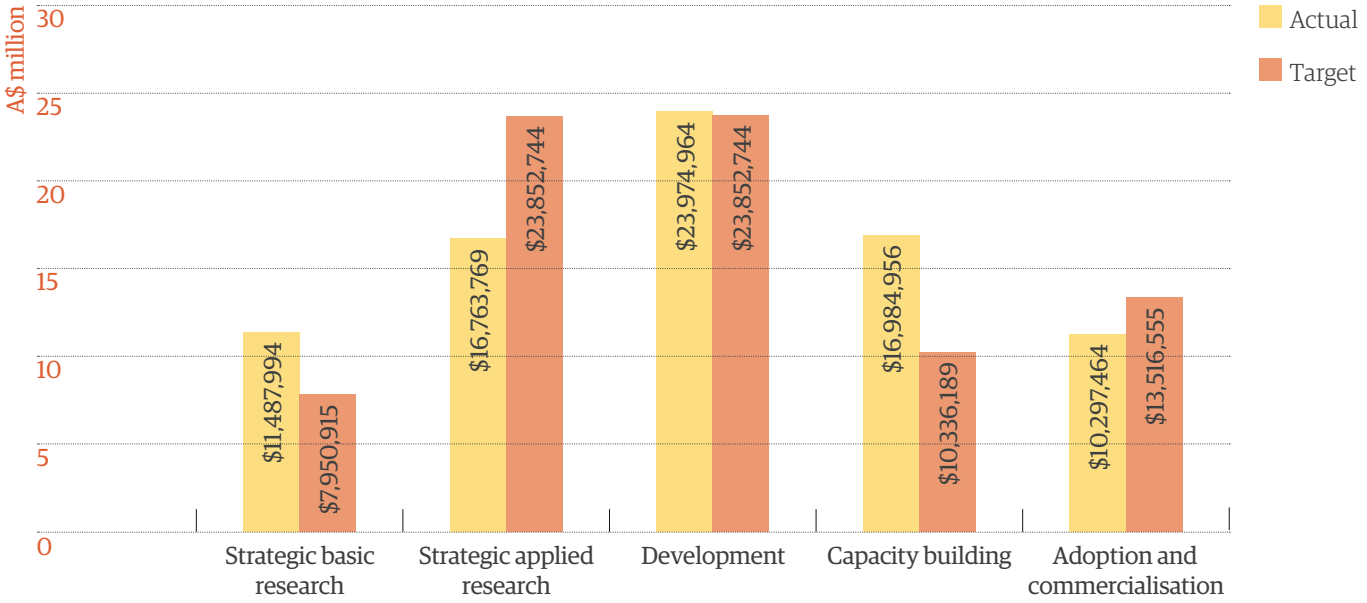
1. Strategic basic research (blue sky)
2. Strategic applied research
3. Development
4. Capability building
5. Adoption and commercialisation

Additionally, the MLA Board sets annual targets for the proportion of investment it wishes to see against these categories.

Figure 2 shows how MLA's R&D investment in 2012-13 was balanced across a varied portfolio of long and short term projects with a strategic, development, building capability or adoption focus.

Read MLA's Corporate plan for more information on the strategic imperatives at **www.mla.com.au/corporateplan**
Read MLA's 2012-13 Annual Operating Plan for more information on the AOP objectives at **www.mla.com.au/annualreport**
Final reports relating to MLA's completed R&D projects can be viewed at: **www.mla.com.au/Research-and-development**

Figure 2 MLA's targeted and actual R&D investment in 2012-13, by research category



Source: MLA

MLA on-farm R&D systems review

Earlier in 2013 MLA commissioned an independent review of the systems we use to invest in on-farm R&D programs and projects. The review was commissioned by MLA to get recommendations on ways to improve how we perform our research and development role, and to find ways to extract maximum value from the research community for the grassfed beef and sheepmeat producer levy investments they receive.

The key drivers for the review were the recent changes in the R&D landscape - with the national RD&E strategies being in play, the continued reduction in state government R&D resources and the wind up of the Beef CRC. Prior to its wind up, the Beef CRC accounted for a major percentage of R&D investments MLA made with cattle levies, so there was a need to determine how MLA should go about investing in on-farm R&D projects into the future.

Given these significant changes in the operating environment, it is critical that as the R&D service company, MLA ensures it is focused on the efficient and effective investment of industry R&D funds.

MLA asked the review panel to identify areas for improvement in the framework for making investments in on-farm R&D projects, and to advise what MLA should be doing to achieve international best practice.

The review sought to:

1. Clearly identify and document the current capacity, skills, policies, procedures and practices with respect to the R&D planning, investment, management and extension processes.
2. Have the capacity, skills, policies, procedures and practices reviewed by an external committee to ensure they are appropriate and best practice (benchmarked against other RDCs; R&D business units in commercial organisations, Australian Research Council) and to identify weaknesses, gaps and areas for improvement.
3. Suggest improvements to current capacity, skills, policies, procedures and practices to more effectively and efficiently manage the R&D process and recommend how these improvements are implemented.

Presentations have been made to both Cattle Council of Australia (CCA) and Sheepmeat Council of Australia (SCA) on the review and its recommendations. A committee has since been formed with representation from CCA, SCA and MLA to work through the recommendations with a view to developing a R&D framework that will meet the future needs and expectations of the industry.

The committee will provide guidance and advice on actions required to progress the recommendations and the responses to the recommendations as they are developed.

To view the recommendations or obtain a copy of the review visit **www.mla.com.au/systemreview**

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Reproductive efficiency

Planning for reproductive gains

Facey Group members Dr Megan Gooding, Audrey Bird and Dr Kelly Pearce, who are developing guidelines for optimum Dorper ewe and progeny performance. Photo courtesy of Caitlyn West, Farm Weekly.

The sheepmeat and wool industries have teamed up to create a Sheep Reproduction RD&E Investment Plan, which aims to deliver research, development and extension projects enabling industry to boost the national flock's reproduction rates by 10% in the next five years.

MLA Sheep R&D Project Manager Richard Apps said reproductive efficiency has been identified as a priority area by both the wool and sheepmeat industries, following the shift from a wool-dominated sheep industry to a dual-product industry.

"The increased emphasis on lamb production has driven an increase in the breeding ewe proportion of the flock, largely at the expense of Merino wethers, and a rise in the importance of reproductive performance to the overall efficiency of the sheep industry," Richard said.

"There is also concern about national lamb survival rates, with the national lamb weaning rate showing little improvement in the past 30 years." (Table 1)

The plan's development involved broad industry consultation, overseen by a Reproduction Steering Group, and an open call for project ideas.

The successful projects have been used as the basis for the investment plan, which is defined by four priority areas:

- → Conception and early embryo mortality
- → Ewe and lamb survival
- → Early reproductive success and weaner performance
- → Genetics and biological mechanisms

Three of the successful projects are outlined opposite.

Lucerne was cut and fed to ewes in pens so intake could be controlled, as part of Dr Susan Robertson's research project.

Project: Nutritional management to reduce embryo mortality in short-term flushed ewes

This project is investigating the effect on embryo survival of feeding ewes at higher levels for a week prior to mating to increase ovulation and whether feeding to days seven or 17 of pregnancy makes a difference.

Dr Susan Robertson from Charles Sturt University (CSU) is leading the project, which looks specifically at lucerne pasture. It aims to provide guidelines identifying a safe level of lucerne intake around joining to avoid increased embryo mortality and to optimise the number of lambs born. The study has been approved by the CSU Animal Care and Ethics Committee.

The project will involve a replicated pen-feeding experiment on 360 Merino ewes over two breeding seasons, finishing in January 2015.

"The risk of elevated embryo mortality is a significant barrier to the adoption of short-term flushing of ewes on lucerne pasture," Susan said.

"A greater understanding of the level of feeding at which embryo mortality may occur has the potential to reduce this barrier to adoption and lift lambing rates across the sheep industry."

Project: Stocktake of the Australian sheep flock

West Australian researcher Kimbal Curtis is looking to provide a detailed snapshot of the current state of Australia's sheep population.

Using figures from the Australian Bureau of Statistics census and survey data, plus MLA and Australian Wool Innovation sheepmeat and wool surveys, Kimbal will document benchmarks for the reproductive performance of the sheep industry now – the start of the Sheep Reproduction RD&E Investment Plan.

"This information will assist the RD&E plan by providing a clear understanding of the opportunity for improved reproductive performance, and so help prioritise RD&E funding," Kimbal said.

"It will also form the baseline to measure performance of the industry, how much it improves and – to a certain extent – where the improvement takes place."

The stocktake will include the number of producers, sheep and breeding ewes, by region and flock size, and the distribution of marking rates by region, year and breed.

Table 1 Current levels of Australian sheep reproduction and potential production increases under the RD&E Investment Plan's top three pillars

	Merino-Merino		Merino-Terminal		Maternal	
	Current	Potential	Current	Potential	Current	Potential
Conception and early embryo mortality						
Scanning %	120	160	130	175	140	190
Lamb and ewe survival %						
Singles	75	92	78	95	80	97
Twins	45	85	50	87	55	90
Ewes	94	98	94	98	96	99
Early reproductive success (ERS) and weaner performance %						
ERS 12 months	20	70			40	100
ERS 24 months	50	100	55	110	60	120
Weaner survival %	92	98			94	98

Source: Sheep Reproductive RD&E Investment Plan

Project: Optimising reproduction in Dorper ewes through nutrition

Producers and researchers are teaming up to develop guidelines for optimum Dorper ewe and progeny performance.

The project will assess the impact of Dorper ewe condition score and different feeding strategies on conception rates, lamb survival and growth, and success of future joinings. It will also determine the most efficient use of feed resources for reproducing Dorper ewes and their lambs.

The two-year project is being undertaken by West Australian producer group, the Facey Group, led by Dr Megan Gooding and Murdoch University Research Fellow Dr Kelly Pearce. It is being carried out on the property of Dorper producers, Audrey and Peter Bird.

"We hope to determine if the Merino targets established by Lifetime Wool apply to Dorpers, and how we can minimise supplementary feeding without compromising the ewe or her lamb," Kelly said.

Improved management is expected to result in a 10% increase in net reproduction rates in 25% of Dorper ewes.

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Ewes being fed a control maintenance pellet in pens for Dr Susan Robertson's project investigating the effect of short-term nutritional flushing on embryo survival.

Research at work

The latest on-farm strategies emerging from MLA's investment in research

In this issue

Biodiversity in the Burdekin

Preserving Australia's biodiversity involves more than national parks and conservation programs as Australia's grazing lands host a range of flora and fauna. An MLA-funded project aims to shed light on the impact of grazing regimes on biodiversity.

14 million ha
make up the Burdekin region
(Source: ABS)

57%
of privately owned land in Burdekin is used for cattle production

961 people
are employed in cattle production in the region

A frill-necked lizard (Chlamydosaurus kingii), sighted during biodiversity surveys at Wambiana.

Sustainability

A rare snake, about one hundred bird species, and marsupials such as spectacled hare-wallabies have been found on a north Queensland cattle property during an MLA-funded assessment of how grazing intensity affects biodiversity.

The Lyons family property, 'Wambiana', has hosted the state's largest grazing trial since 1997. The trial monitors the impact of different grazing regimes on animal performance, pasture composition, land-condition and runoff.

MLA has invested $57,000 in a new three-year James Cook University (JCU) project to measure how five grazing strategies influence biodiversity on land and down-stream, and to assess the drivers of wildlife population.

JCU's Professor Lin Schwarzkopf said the research was unique, as biodiversity grazing projects usually compared grazed and ungrazed areas and focused on plants, not fauna.

"This project builds on two previous fauna surveys at Wambiana and will value-add to the grazing trials by looking at trends and how management strategies impact biodiversity," Lin said.

"We know biodiversity tends to be higher on ungrazed land compared to grazed, but that is not really helpful information for producers, so this project will provide guidance about the best grazing program to maintain biodiversity."

Since data collection began in April, an emerging message is that producers can graze land in a biodiversity-friendly way.

"Land use for grazing is one of the lesser impacts on biodiversity, compared to cropping, urban development or mining," Lin said.

The Wambiana grazing trial is also quantifying economic outcomes, so the new project aims to also show producers how to balance biodiversity and their bottom line.

"Biodiversity conservation doesn't have to run counter to the interests of producers – they can achieve positive environmental and economic outcomes," Lin said.

To paint a picture of biodiversity at Wambiana, Lin's team has established 24 survey sites, four on sensitive habitats, and four on each of the five trial grazing systems. The systems are:

1. Moderate stocking rate – stocked at the long-term carrying capacity of eight hectares/animal equivalent (AE)
2. Heavy stocking – stocked at twice the long-term carrying capacity
3. Variable stocking rate – stock numbers adjusted in May based on available forage (range from 4–11ha/AE)
4. Southern Oscillation Index – variable – stocking rates adjusted in November based on available forage and seasonal climate forecasts (range from 4–11ha/AE)
5. Rotational wet-season spelling – stocked at long term carrying capacity (8ha/AE).

Biodiversity data is collected using traps for reptiles, amphibians and mammals such as mice, possums and wallabies, as well as bird watching, night-spotting, and turning over logs and bark looking for frogs, snakes and lizards.

Since the project started, 150 conservation and biology students have been to Wambiana for a hands-on experience.

"Many are 'greenies', so exposure to the challenges producers face in balancing biodiversity with business helps bridge the rural-urban divide," Lin said.

"The students love the experience and come away with a realistic perspective about managing biodiversity in balance with production."

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Guidelines for the development of extensive cattle stations in northern Australia: insights from the Pigeon Hole Project contains a chapter on conserving biodiversity. Read more about the Pigeon Hole Project on pages 22–24.

www.mla.com.au/extensivecattleguidelines

Twenty-year-old Rachel Heckathorn's first visit to Wambiana opened her eyes to the potential for biodiversity to work hand-in-hand with grazing.

James Cook University student Rachel Heckathorn with a stripe-faced Dunnart at Wambiana.

"I was surprised at the extent of the biodiversity at the property. Even in the grazed areas, it was amazing," she recalls.

"I assumed you could only have one or the other, but there is a balance of biodiversity and productivity at Wambiana. It shows that if the cattle industry can look after the environment, it will be rewarded, as healthy natural habitats contribute to better long-term outcomes for the land's productivity."

When Rachel left Bundaberg in 2010 to study a Bachelor of Zoology at James Cook University in Townsville, she was able to combine her interests in science and biodiversity.

Field trips to Wambiana during her degree were the catalyst for Rachel's honours project, which started in September.

"I am researching red-backed fairy wrens (who live in the native currant bushes at Wambiana) to determine if their territory sizes and habitat quality are influenced by different grazing regimes," she said.

Rachel hopes to start a career in biodiversity research when she completes her studies in mid-2014.

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The Lyons family call themselves 'grass farmers' first, and cattle producers second – a philosophy underpinning productivity at their Charters Towers property, Wambiana. The result? A sustainable mix of cattle, camels and rare snakes.

Three generations of the Lyons family live and work on Wambiana. John Lyons, who is the third generation of his family to run the property, followed by his son Michael and his grandson, Connor, representing the fifth generation of the family. Photo courtesy of Sharon Howard.

Snapshot

John and Ronda and Michael and Michelle Lyons, Charters Towers, Qld.

Property: 23,200ha

Enterprise: Breeding and fattening

Livestock: 3,000–3,500 head of cattle

Pasture: Mostly native pastures augmented with introduced pastures of Urochloa and buffel plus introduced legumes of stylos and desmanthus.

Soil: Loams on the Campaspe River frontage to grey cracking clays to light sand ridges

Rainfall: 650mm

All creatures great and small

Wambiana has been in the family since 1912. Today it is owned by John and Ronda Lyons and managed by their son Michael and his wife Michelle, who have four young children.

"Our focus on grass production is critical as it determines how many cattle we can run," Michael said.

"In good years, we increase our cattle numbers to utilise the abundant feed, but the trick is to reduce the numbers quickly when the dry times come."

For 15 years, Wambiana has been at the centre of a 1,000ha grazing trial, which is testament to the family's long-term commitment to sustainable agriculture. New research by James Cook University (JCU) offers the opportunity to value-add to the grazing trial, and build a better picture of how production affects the landscape.

"We try to manage land sustainably and were interested to see the range of animals on our property, as well as animal populations, under the different grazing treatments," Michael said.

While Michael believes all native animals have a role to play in the ecosystem and doesn't want to see any species disappear, he maintains a realistic approach. The Lyons manage the population size of pests and predators of their cattle such as dingos, and control feral pigs that damage riparian areas and reduce biodiversity.

Looking after more than just cattle

Herd management at Wambiana has developed to preserve and promote biodiversity by:

- → managing stock to maintain a high level of groundcover, which promotes soil health for plant and animal biodiversity
- → maintaining pastures dominated by perennial grasses for reliable stock feed and to provide cover and food for native fauna
- → rotationally grazing pastures to generate a rest period to replenish plants and provide greater food for all animals
- → introducing animal biodiversity in the form of camels as a successful biological control for the woody weed, Parkinsonia.

The Lyons use pasture budgeting at the end of the wet season to match cattle to available grass, and rely on the Southern Oscillation Index to guide selling decisions.

Michael hopes the impact grazing for biodiversity has on business profitability and productivity will become evident by looking at the results from the grazing trial together with the JCU trial results.

"Results from the first ten years of the grazing trial show management that maximises long-term profitability also gives the best biodiversity outcomes," he said.

"The JCU project will test whether this indeed holds in the longer term."

Spreading the word

The Lyons showcase their sustainable practices through the Target 100 initiative, and open Wambiana to up to 1,000 school and university students (local and international) each year. They invested in catering and accommodation facilities to diversify income and give visitors the opportunity to experience day-to-day life on a working property.

"It puts a human face to the grazing industry, and when the students graduate and go out in the world we hope they will have a better understanding of and empathy for land managers," Michael said.

The family were awarded the national MLA On farm Sustainability Award at Beef Australia 2012.

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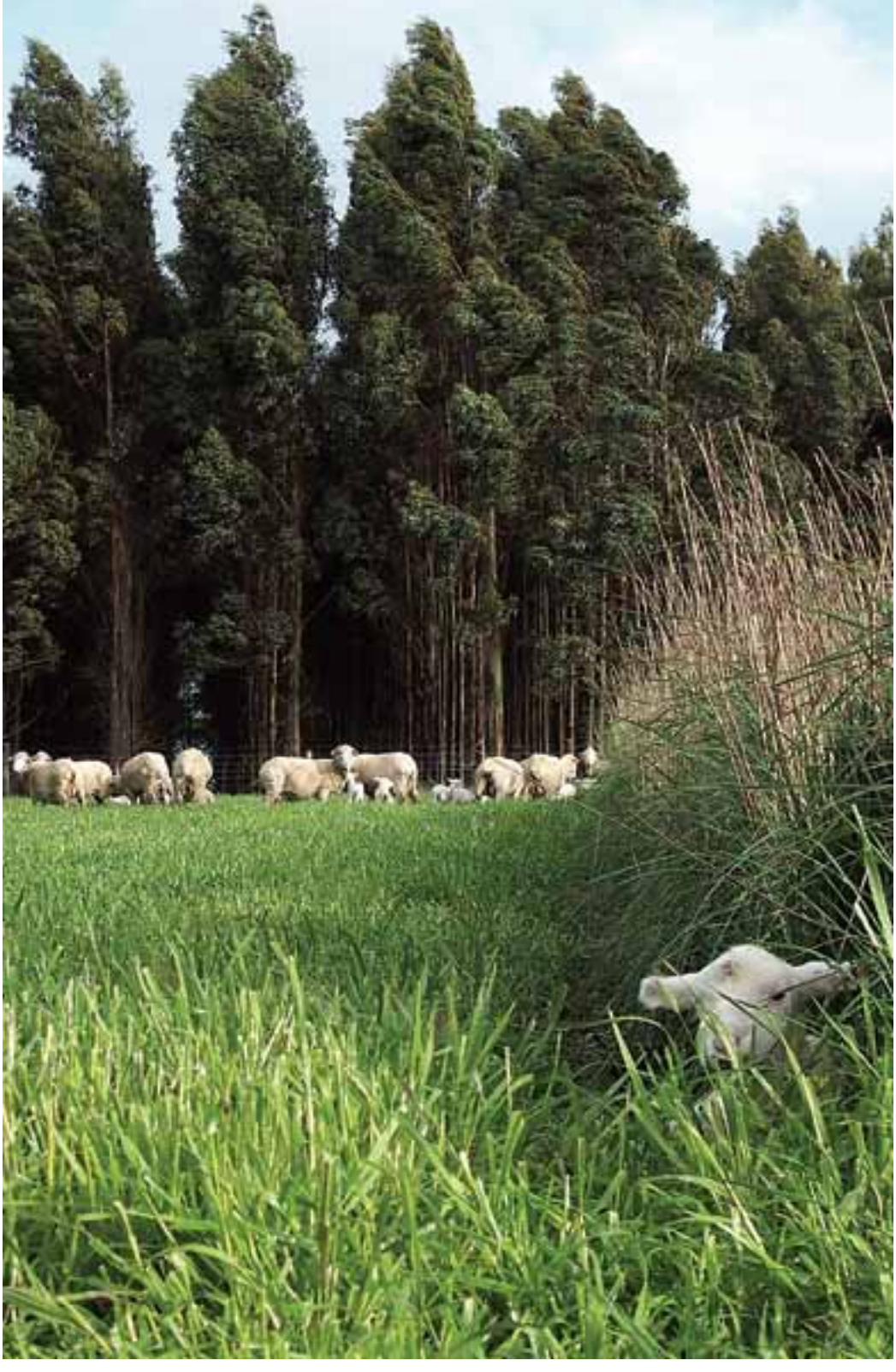
www.target100.com.au/Farmer-stories/The-Lyons-family

Shelter me

Lamb survival during late winter and early spring is a critical issue for producers in Victoria's south west, with twin-born lambs most at risk. A project at the EverGraze Hamilton site is offering ways for producers in a high-risk area to improve weaning percentages where less than 40% of twin lambs survive.



The use of perennial grass hedgerows increased twin lamb survival by 15% and overall survival by 30%, for lambs of average birth weight who were singles, twins or triplets.

The hedgerows were set up running north-south, at right angles to the prevailing westerly winds.

"In between the hedgerows, we planted perennial ryegrass with sub-clover pasture to provide high-quality feed. This provided 'maternity wards' for lambing ewes," EverGraze research team leader Dr Ralph Behrendt said.

The experiment showed how the shelter affected the survival of lambs derived from Coopworth Composite and Merino ewes, and from single and multiple births.

Ralph said the perennial grass hedges proved effective shelter for the lambs, with wind speed reduced by up to 99% and the number of days with poor lambing weather (chill index greater than 1,000) cut by more than half (from 10–13 days a month down to 3–4 days).

He said the benefits of shelter varied with the degree of wind chill and therefore with the location.

"EverGraze is developing a new cost-benefit calculator to help producers decide if shelter is worth the investment in their environment," Ralph said.

Left: Grow your own shelter for improved lamb survival.

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The calculator is due to be completed in coming months and will be housed on the EverGraze website. **www.evergraze.com.au**

To watch a video about the EverGraze hedgerows project and how a producer has established hedgerows on his property go to **www.mla.com.au/hedgerows**

Reproductive efficiency

Examining sheep social networking

To socialise or to mother? A sheep's behaviour at lambing could soon be an identifiable genetic trait, which could boost reproductive performance.

A new MLA-funded Producer Demonstration Site is examining how ewes and young rams react to being separated from the mob, and how that behaviour relates to their mothering ability or, in the case of rams, that of their female relatives.

The project builds on research by former NSW Department of Primary Industries Livestock Officer Bob Kilgour from the Trangie Agricultural Research Centre in the 1990s.

The Trangie research revealed that a 10-minute arena test could identify ewes of superior maternal ability. The ewes were presented with choices similar to those at the birth site: stay with the lamb or rejoin the flock.

The test measured the reaction of sheep to social isolation. It found that ewes from the research centre's Fertility Flock - selected for their ability to raise lambs to weaning - moved around the arena and bleated less than ewes from the Random Flock, when separated from their mob.

From an early age

The research also showed the behaviour was repeatable and could be measured in ewe and ram lambs as young as six months.

"The fact that we observed the behaviour in young ram lambs is the really exciting part," Bob said.

"It means it may improve the accuracy of selecting young rams for the reproductive performance of their daughters, resulting in faster genetic progress. Ewes could be culled before their first joining, rather than having to wait until they've had their second lamb to assess their reproductive performance.

"Using a current ASBV index with moderate weighting on reproduction, the increase in the number of lambs weaned is in the order of 3-4% over 10 years. We anticipate this research could improve the selection accuracy."

Now an independent researcher, Bob has teamed up with Sydney University postgraduate student Edward Joshua to verify and further develop the Trangie findings.

The pair have tested 600 mature ewes and 400 yearling rams at four Central West NSW sheep studs, as well as the Information Nucleus Flock at Cowra. Breeds being assessed include Dorper, Dorset, Merino and Border Leicester.

Each flock has extensive pedigree information, so the behavioural results are being analysed in relation to individuals' known reproductive performance or, in the case of the rams, the performance of their female relatives.

On-farm testing

The demonstration phase is also looking at how far the test can be shortened.

"Our goal is to come up with a very short test procedure, possibly three minutes per sheep, that producers can use easily," Bob said.

"We're also working with the stud owners to develop a vocabulary for producers to describe the behaviours."

A selection of test subjects' vocalisations will be analysed, in collaboration with Macquarie University, in a bid to increase the accuracy and possibly shorten the duration of on-farm tests.

The project will conclude in December, with plans to produce a handbook containing the research results and a guide for assessing behaviour on-farm.

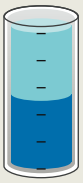
How the arena test works

- A 13m x 3m arena has a pen at one end, containing 10-12 sheep.
- The sheep are taken from the pen and placed in the arena one at a time.
- A person is seated in the arena, directly in front of the pen, thus presenting the sheep with an attraction-repulsion situation.
- The floor of the arena is marked out into 39 numbered squares, each measuring 1m x 1m.
- The movement of the sheep is measured over 10 minutes.
- The number of bleats is counted.

Above: Arena testing with Tooraweenah Prime Lamb Marketing Cooperative Chairman JB Tancred in the chair and project leader Bob Kilgour (seated on the scaffold) recording data.

Project dashboard: Ewe and ram isolation

Financial contributions to the project:
$39,463



MLA levies: **50%**

Government: **50%**

Length of project:
7 months

Project is part of MLA's objective to:
Create opportunities through research and extension to improve reproduction efficiency in northern beef (by five percentage points) and maternal sheep breeds (by two percentage points).

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Pastures

Persistence pays off

For John Kelly, crossing off the perennial pasture varieties that don't perform on his property is just as important as finding the ones that do. →

Snapshot

John and Mary Kelly, Euroa, Vic.

Property: 494ha

Enterprise: Beef and prime lamb production

Livestock: 200 Angus breeders , 1,000 first-cross ewes

Pasture: Annuals, phalaris, clover

Soil: Loam, sand

Rainfall: 525mm

Left to right: John Kelly, son Shaun and employee Haiden Berry.

A pasture demonstration plot may not sound like the latest 'must have' agricultural accessory but, according to John Kelly, it is one farming tool he can't do without.

The Euroa sheep and cattle producer, who's also a sowing contractor, is acutely aware of the importance of pasture, and the difficulties of finding locally relevant information to help deliver more meat production per hectare.

"Pasture renovation is an expensive caper. Demonstration plots give you a chance to see how a variety will perform in your soil types, rainfall and livestock system," he said.

"In our district, we have a lot of variation in soil types and rainfall. Even within 15km there is 250mm difference in the annual rainfall, so it makes it very difficult to form generalisations about what works. Now that I've got a demonstration plot established, I don't think I'd ever get rid of it."

John and his wife, Mary, are members of the Euroa Grazing Group. From 2009 to 2012 they hosted a trial of perennial pastures, based on the EverGraze principles, which was funded by MLA and the Victorian Department of Environment and Primary Industries (see trial information on page 21).

Weaner cattle, weighing 280kg-300kg, were rotationally grazed on the plots from April, weighed at the end of each rotation (often weekly) and turned off in December at 550kg.

"We had some fairly trying seasonal conditions at times. For instance, 2009 had low but timely rainfall but we had 40-plus degree days by October, while 2010 was an extremely wet year and 2011 was pretty good," John said.

John said the combination of perennial pastures delivered average daily weight gains of 1.5kg/head/day with the weaners gaining 2kg/head/day during July and August and up to 3kg/head/day during August and September.

On the decline

"In the first year, the stock did really well, but it came in dry and we had to get all the stock off the plots so they could seed," he said.

"The second year the stock did really well and in the third year they were going well until June - and then started going backwards (up to 0.6kg/day), even though there was plenty of grass. We drenched them and they still continued losing weight."

The group conducted soil tests and found the nitrate level had fallen from 22 to 10.

"We applied urea and within a week the cattle were back gaining 1.5kg/head/day. It was a really interesting lesson on the need to test soils and monitor nitrate levels," John said.

Weighting it up

Even though the official perennial pasture project has finished, John wants to try other varieties of phalaris for something to provide persistence and production.

"The Landmaster produced great weight gains and gave us a long grazing season, but I'm starting to question its persistence. However it did thicken up after recent rain," he said.

"The fescue, on the other hand, persisted well - but it gets to the end of August and runs to head and loses its palatability, unless you stock it really heavily.

"There might be other varieties that will deliver more weight gain for a longer time, allow you to take more advantage of trade opportunities and not be so difficult to manage."

John said the cocksfoot varieties, chosen for toughness in arid conditions, didn't impress him either.

"We've got quite a few dead plants from the long, hot summer and the brome, which likes a wet summer, also failed to persist," he said.

"The clovers have improved dramatically in the past year, I think the wet summer in 2010 affected its regeneration."

The Kelly's demonstration plot may sound like it has delivered a few failures, but John sees the whole venture as a success, as it is building his pasture knowledge and letting him know what to cross off the list.

"It's such a difficult balancing act getting all the elements right, and this is the only way of finding out what works," he said. "I really hope these past three years are just the beginning - not the end - and we can find more funding to keep measuring the persistence of the plots while pursuing options for better pastures."

Lessons learned

- Try and try again. Even failures improve knowledge and while you're crossing off the pastures that don't work, you're getting closer to finding the ones that do.
- Site preparation (two years in most cases) is essential to establishment success.
- Be prepared to renovate (eg spray out weeds and fertilise) new pastures early on to ensure their persistence.
- Sowing new pastures is expensive so sow down small test areas first to ensure you have the right species for your environment and needs.
- Low soil nitrate levels during winter can negatively impact livestock weights. A urea application, applied two winters in a row, immediately improved weight gains in steers.
- Don't take shortcuts - there aren't any.

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Pastures

Proving the value of perennials

Rotationally grazed phalaris and summer dormant tall fescue are showing promise as some of the most suitable perennial pastures for the plains of north east Victoria, after being put to the test in a commercial situation through an MLA-funded Producer Demonstration Site (PDS).

Out of five perennial grasses, phalaris and summer dormant tall fescue were found to be the most productive in an on-farm demonstration at two sites in Victoria at Euroa and Longwood. The sites were established and managed based on EverGraze principles for cattle grazing.

Average rainfall for the sites is 650mm although had been as low as 350mm in the four years leading up to the trial, which led to poor establishment and persistence of perennials, significant decline in legumes, dominance of annual weed species and poor ground cover.

Undersown with sub clover in 2009, phalaris and summer dormant tall fescue showed off their positive attributes, including strong establishment, persistence in dry conditions and lifting of stocking rates.

The PDS, on John and Mary Kelly's property at Euroa compared the performance of winter-active phalaris (Landmaster), summer-dormant tall fescue (Flecha), summer-active cocksfoot (Yarck), coloured brome (Exceltas) and summer-dormant cocksfoot (Uplands) when rotationally grazed by weaner cattle. Data has been collected and analysed to the end of 2012, and the plots will be monitored into the future to compare persistence.

The stock rotations were calculated with the EverGraze Feed Budget and Rotation Planner using leaf-stage plant recovery and residual dry matter/ha targets of 800–1200kg DM/ha.

Good management

Project coordinator Alison Desmond, of Victoria's Department of Environment and Primary Industries, said the trial not only demonstrated which species performed best, but also how to manage them through robust measurements and monitoring of the pasture and animal performance.

"Most importantly, it reinforced to everyone the importance of good paddock preparation for pasture seed establishment and the need to adhere to basic EverGraze principles for the best chance of success," she said.

"On a more variety-specific level, we found the tall fescue, which was excellent in wetter areas, was very active in winter. However, it went to seed much earlier than the other varieties, dropping quality quickly. As we came into spring, we had to graze it hard and tighten up our stock rotations to get maximum production out of it."

Although feed quality was similar between species in autumn/winter, by late October, fescue dropped in energy to 9.3MJ ME/kg compared to phalaris which maintained 10.7 MJ ME/kg. This meant that holding the growing cattle on the fescue to utilise extra growth compromised livestock production when the other species in the trial were holding their quality. So where there is fescue in the system, it's more productive to run dry cows on it at the end of spring and leave the higher quality pastures for young stock.

"As the fescue requires specific management, especially in spring, it definitely needs to be to be planted as the only grass species in the pasture mix to prevent selective grazing of companion species when it loses quality in spring," she said.

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See the full details of the PDS results and how they managed the site at **www.mla.com.au/EverGrazePDS** or visit **www.evergraze.com.au**

EverGraze Feed Budget and Rotation Planner **www.mla.com.au/feedbudgetplanner**

Growing dollars

A recent investment analysis using the EverGraze Pasture Improvement Calculator indicated perennials sown at the Euroa PDS cost $440/ha to establish (including labour and fertiliser). The average gross margin was $800/ha for 2010-11, compared to the Farm Monitor Program regional average (for cattle) of $364/ha and the top 20% average of $888/ha (see Table 1).

Based on these gross margins and lifting stocking rates from 11 DSE/ha (district average) to over 20 DSE/ha, the return on investment from sowing perennials was 26% for a 10 year pasture life and 31% for a 15 year pasture life. The payback period (including the purchase of extra stock) was six years.

Table 1 Gross margin analysis for Euroa Demonstration Site 2010-2012 compared to Victorian Farm Monitor top 20% benchmark averages for 2009-2011.[1]

	Phalaris 2010–12	Yarck 2010–12	Fescue 2010–12	Uplands 2010–12	Plot average	2009–11 Top 20%
Selling price ($/hd)	2.04	2.04	2.04	2.04	2.04	2.04
Beef sold (kg lwt/ha) weighted average based on stocking rate	539	514	591	282	481	647
Stocking rate (DSE/ha)	21	20	23	11	19	15
Animal health ($/ha)	23	22	25	12	18	18
Contract services ($/ha)	3	3	3	3	3	3
Supplementary feed and agistment ($/ha)	19	19	21	10	17	52
Pasture ($/ha) 100kg MAP	60	60	60	60	60	68
Freight/cartage ($/ha)	32	31	35	17	29	40
Selling costs ($/ha)	40	33	53	25	43	56
Other ($/ha)	8	8	8	8	8	8
Total enterprise costs ($/ha)	194	189	205	135	181	245
Gross margin ($/ha)	906	859	999	441	801	888
Gross margin ($/DSE)	43	43	43	40	42	60
Gross margin ($/DSE/100mm rainfall)	132	125	146	64	117	107

1 The full assumptions underpinning this analysis can be found at **www.mla.com.au/EverGrazePDS**

Productivity

Gearing up

For the past decade, Heytesbury Beef's 'Pigeon Hole' Station has been synonymous with cutting-edge cattle research. A new MLA publication summarises the highlights and key messages from this research.

Mustering on Pigeon Hole Station.

Encompassing 350km² of grazing land with 5,000 cattle, the MLA Donor Company Pigeon Hole project channelled thousands of research hours into sustainably increasing carrying capacity in extensive enterprises.

Now, producers can get their hands on tools and tips for their own development with a new MLA publication of the project's highlights and key messages.

The commercial scale research trial, run on the station in the Victoria River District of Northern Territory (NT), brought together the funding and capabilities of Heytesbury Beef, MLA, CSIRO, NT Department of Primary Industry and Fisheries (NTDPI&F), NT Parks and Wildlife, and the University of Queensland.

NTDPI&F Regional Director Neil McDonald said the Pigeon Hole project demonstrated that paddock carrying capacity could be increased through sustainable pasture utilisation rates and appropriate development of paddocks and watering points.

"Northern Australia has a lot of potential to increase productivity and profitability, but any case for growth requires a good financial and biological model for effective and sustainable implementation," he said.

"Many of the key findings from Pigeon Hole have already filtered through to the industry and we have seen many stations invest in new water points and sub-divide paddocks. Combined with uptake of programs like Grazing Land Management, this research underpins the 3% annual growth witnessed in the NT's beef herd in the past decade."

"The highlights of the project, presented as guidelines for development of extensive cattle stations, provide a foundation for future development, and a sound tool to support investment decisions."

The guidelines from the Pigeon Hole Project give producers strategies to answer critical questions, such as:

- How much of your property is not being grazed?
- What is the sustainable stocking rate?
- Would a different grazing system improve pasture condition?
- Will property development provide a better return on investment than buying additional land?
- What management tools are available?
- How will development affect biodiversity?

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Guidelines for the development of extensive cattle stations in northern Australia: insights from the Pigeon Hole Project, available from MLA at **www.mla.com.au/extensivecattleguidelines**

MLA's BusinessEDGE courses provide planning tools to assess property improvements such as increasing stocking rates, investing in infrastructure and opening up new country: **www.mla.com.au/EDGEnetwork**

BusinessEDGE courses are being run throughout Queensland during October: **www.mla.com.au/events**

A solid investment plan

The Pigeon Hole project identified pathways for long-term investment that producers can implement at their own pace.

Whether you have current or future investment plans, the guidelines help identify strategies to set in motion well before outlaying funds:

- **Budget:** For new infrastructure, maintenance, operating costs, additional stock, foregone sales from breeder retention, cash flow during development, potential climate variability and market volatility.
- **Identify development order:** Develop additional watering points first, then subdivision fencing.
- **Choose investments:** Is increasing carrying capacity through fencing/water more cost-effective than purchasing more land?
- **Identify resources:** More cattle may require more management, extra handling facilities and new pathways to market.
- **Identify suitable grazing systems:** Is rotational wet season spelling required to restore/maintain pasture condition?
- **Assess current/potential carrying capacity:** Identify areas to develop economically.
- **Assess impact on biodiversity:** Will grazing stock in previously underutilised grassland reduce biodiversity?
- **Embrace new management tools:** Telemetry for remote-monitoring of bores and watering points; water medication for supplementation may improve management efficiency and minimise costs; climate response tools.
- **Know the risks:** Will property values affect returns on investment? Do you have a dry season plan to sell/move stock?

CSIRO's Dr Leigh Hunt fitting a GPS collar to record cattle grazing habits during the research.

Scott and Jane Armstrong.

Snapshot

John and Trish Dunnicliff and Scott and Jane Armstrong, Elliot, NT.

Property: 1,054,700ha

Enterprise: Beef production for live export

Livestock: 60,000 Brahman and Brahman-Senepol cattle, including 25,000 breeders

Pasture: Mitchell grass plains, woodlands and low open Coolibah forests

Soil: Lateritic sandy soils and red earths, alluvial plains

Rainfall: 450–650mm

Thinking big

For the past decade, the Dunnicliff and Armstrong families have implemented a daring development plan at 'Beetaloo Station', Northern Territory. In transforming their 1,054,700ha piece of the Barkley Tablelands into a well-watered and sustainably-grazed enterprise, the family has lifted carrying capacity from 20,000 to 100,000 head, while providing a blueprint for northern development.

The improvements are impressive: they are on track to finish 600 watering points by next year (at a cost of $60,000 each), linked by a network of bores, pipes and fences.

While John Dunnicliff - who runs Beetaloo with wife Trish, daughter Jane and son-in-law Scott Armstrong - admits there are times he thinks they were crazy to tackle such a project, he doesn't hesitate when asked if the investment was worthwhile.

"We are in the business of growing grass and selling it as beef, but we can't do that without water. Our business starts and stops with water," John said.

When the Dunnicliffs acquired Beetaloo (encompassing the perpetual pastoral leases of Beetaloo, OT Downs and Mungabroom) in 2002, less than 10% of the land was effectively watered.

"With the exception of heavily-grazed areas surrounding water points, most of the station was in a natural state with large areas that had never been grazed," John said.

These vast areas presented management challenges:

- → Fires before each wet season in ungrazed areas
- → Inability to control grazing intensity and grazing of less palatable areas
- → Costly and inefficient mustering
- → Pasture degradation, contributing to habitat loss for native species

The Dunnicliffs worked with engineer Sid Dyer to develop a strategic network of infrastructure to redistribute grazing pressure.

→

A grid system of fences, complemented by strategic watering points, underpins the development of Beetaloo Station and there are currently 40 paddocks in the rotational grazing system.

The infrastructure changes involved two areas:

1 Establish a water supply system to redistribute grazing:

→ 70 sub-artesian bores, connected by a grid network of 75mm pipe buried to 800mm (to minimise expansion/contraction with temperature change) along fence lines

→ 150,000-litre steel tanks at each fence intersection

→ Concrete troughs in each corner of each paddock gravity-fed by tanks

→ Each bore supplies nine tanks and each tank supplies four paddocks

→ 600 tanks planned by 2014

2 Reduce paddock size to control stock:

→ Initially, paddocks re-fenced to 4km x 4km (1,600ha); more recently reduced to 1,000ha to enhance pasture utilisation

→ There are currently 40 paddocks in the rotational grazing system – groups of 5,000 head are moved every three days to prevent over-grazing and promote pasture growth

John said any property development, regardless of scale, must begin with small steps.

"Infrastructure is expensive and time-consuming, especially in northern Australia where access to resources and labour is difficult," he said.

"If development is currently cost-prohibitive, use the time to develop a budget and an infrastructure plan. As seasonal and market conditions improve, start putting in waters one at a time – each one is a step forward."

Each new watering point delivers benefits, such as:

→ Combining waters and fences allows stock to be controlled to increase pasture utilisation

→ The ability to spell paddocks promotes plant regeneration and soil health

→ Controlled, high-density stocking prevents over or under grazing, so pastures are consumed when their nutritional value is highest

The Dunnicliffs are increasing stock numbers by breeding, rather than buying. This strategy is helped by improved weaning rates, which John credits to improved pasture utilisation and management.

This year, they achieved 65% weaning rates, up from historical rates of 50%.

They have set a conservative 100,000 head goal.

"An intensive grazing system of this size has limited destocking options so we will retain 20% of pasture as a drought buffer," John said.

Challenges

Cost is the biggest challenge, but John said dividing the capital cost by the number of cattle each unit of the investment can support, equates to a $300 per beast area.

Diesel pumps are required to run bores daily for eight hours, to produce 50 litres/head/day for stock. Windmills could not generate the pressure required to fill tanks up to 30km from bores, and a suitable solar system would be cost-prohibitive.

A break-down could be devastating, so every bore and trough has a back-up water supply. Remote switching systems have been unreliable, so a full-time employee manually operates, refuels, services and repairs the system during the dry season.

Looking ahead, the Dunnicliffs will continue to fence and add waters, to ensure their business is efficient and sustainable for the next generation.

Lessons learned

→ Water, plus fences for control, creates better grazing management.

→ Rotational grazing complements other management strategies eg low-stress stock handling.

→ Property development can be slow or quick, but it must align with an over-arching strategy.

→ A property plan, with GPS coordinates for every bore, tank and paddock, is a key tool.

→ Focus on efficiency and simplicity.

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Reproductive efficiency

Lessons learned with ewes now help weaners

Snapshot

Laurie, Sue, Oliver and Xavier Close, Apsley, Vic.

Property: 2,200ha

Enterprise: Self-replacing Merino wool flock and Friesian bull finishing

Livestock: 20,000 sheep and 300–500 cattle

Pasture: Improved phalaris and clovers

Soil: Loam over clay

Rainfall: 520mm

Left to right: Laurie, Oliver and Xavier Close

A drought year highlights the importance of adequate nutrition to drive growth, reproductive performance, robustness and survival in young sheep.

In 2006, a severe drought hit west Wimmera fine wool Merino producers Laurie, Sue, Oliver and Xavier Close in the middle of several drier-than-average years with poor autumn breaks.

Applying the principles of the Lifetime Ewe Management (LTEM) program to assess paddock feed and supplementary feed to fill the gap helped them get through the period with minimal impact on flock productivity.

"We found strong correlations between feed energy, sheep condition score and likely productivity outputs in animal growth, conception and weaning rates," Laurie said.

The proven robustness of the LTEM principles prompted the Close family to continue using them. They took the next step in 2010, joining a local High Performance Weaner (HPW) pilot group.

"We were becoming acutely aware of the benefits of adopting new technology and production information to refine our animal management and improve sheep productivity and survival," Laurie said.

"With improved ewe performance through LTEM, we increased lambing percentages from about 65% five years ago to 75% last year.

"The next step is better weaner management to boost maiden ewe conception rates from about 70% to 85%, and to continue to improve weaner survivability."

In the past few years, weaner survival rates have increased by 10–20% as a result of management changes driven by LTEM and HPW principles.

The Close family's 2011 and 2012 lamb drop had 95% weaner survival rate between marking and shearing.

Laurie said late autumn and winter were the critical months to achieve good weaner growth rates.

Their winter growth rate target for ewe weaners was 50 grams/head/day, to reach at least 80% of mature body weight by the end of spring and a condition score of three by the first joining in autumn.

"Wether weaners for wool production are also gaining weight during the winter months, but ewes are the big focus," he said.

10%
increase in lambing rates

15%
increase in conception rates in maiden ewes

10–20%
increase in weaner survival rates

A sample of ewe weaners is weighed several times during winter and mobs are split into weight groups for grazing management, with the tail end of the mob separated out for preferential feeding.

Laurie said paddock feed on offer (FOO) quality and quantity is tested after the break and supplements provided during winter if feedbase energy and protein don't meet the animals' requirements.

"Economic modelling has shown it is profitable to supplementary feed weaners during winter if FOO is inadequate, and I would do this if necessary," he said.

Over the past two seasons, the Closes have achieved winter FOO levels from two methods.

One strategy was autumn saving of pastures, which involved containing the sheep and feeding them a full ration until the paddock FOO levels reached an acceptable level to graze (1,000kg/DM/ha).

The second method was an application of gibberellic acid to promote winter growth of phalaris-based pastures.

"In good paddocks we saw an increase in FOO of up to 800kg/DM/ha," Laurie said.

Laurie said that while the theory behind the HPW program was sound, a combination of a dry season in late 2012 and 2013, high grain prices and lower sheep and lamb values made it difficult to achieve an economic benefit from the system.

"We will certainly stick with it, as it did allow us to achieve our growth targets for weaners," he said.

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Would you like to undertake the HPW course? Go to **www.rist.com.au/high_performance_weaners**
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Pastures

Coming to a small screen near you... More Beef from Pastures

National MBfP Coordinator Peter Schuster.

Over the past three years 384 More Beef from Pastures events have been held, involving nearly 9,000 producers with 55% intending to make practice change on their properties following the courses. Online delivery is about to make the program even more widely available.

The More Beef from Pastures (MBfP) program provides southern cattle producers with the tools they need for an economic and environmentally sustainable increase in the amount of beef produced per hectare.

National MBfP Coordinator Peter Schuster said grazing management is crucial, yet the average producer only utilises about 35% of the feed on offer.

"The feed is often already there. It is when you graze it and how you graze it that makes all the difference," Peter said.

"Even if we lift pasture consumption by just 10% to 45%, that's an increase in production for a relatively moderate shift."

As well as pasture utilisation, the MBfP program covers herd health and welfare, weaner management, marketing and property planning. It helps producers make sure priorities and resources align, so they can set realistic goals.

Central to the program is *More Beef from Pastures: The producer's manual*, an information package that provides the essential principles and procedures for a successful beef business.

"All of the information previously available through the program has been consolidated, updated and, where required, rewritten to reflect the latest R&D outcomes, particularly the outcomes of the Beef CRC," Peter said.

"This is being made available in an online format in seven user friendly, producer-centric, interrelated modules.

"The updated manual continues to be written by producers for producers, as well as tapping into the best industry experts and R&D in the country. The modules can be a constant reference point for southern beef producers to manage their enterprise."

All pages are printer-friendly so users can easily print out content where required. The online manual also offers interactive tools, so users can enter data and perform calculations electronically.

The MBfP manual is now online at **www.mla.com.au/mbfp**

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How you can join MBfP

MBfP is being delivered through a range of activities depending on producers' interests in a given area. This includes information days, producer groups that may meet several times a year and MLA Producer Demonstration Sites. Contact your relevant MBfP State Coordinator to find out how to get involved in your area, or visit the MLA website to access *More Beef from Pastures: The producer's manual.*

MBfP coordinators

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Snapshot

Michael and Jane Evans, Angaston, SA.

Property: 650ha

Enterprise: Beef cattle and prime lambs

Livestock: 160 Angus and Shorthorn breeders, prime lambs

Pasture: Improved – phalaris, cocksfoot and clover. A portion of natives grasses and barley grass

Soil: Sandy loam over clay

Rainfall: 615mm

MBfP tools underpin decisions

Lessons from the More Beef from Pastures (MBfP) program are helping South Australian producers deal with climate challenges and benchmark their business against the top 20% in the industry.

With a dry 2012-13 summer affecting production, South Australian producers Michael and Jane Evans turned to MBfP tools to help manage stock numbers.

"We've been able to use the Cost of Production (CoP) calculator to work out the performance of our beef enterprise year-on-year," Michael said.

"That helped us to calculate an adaptable feed budget. With destocking it's still a bit rubbery because you just don't know when it's going to rain.

"This system has allowed us to make the decisions on matching our stock requirements to our carrying capacity. It's certainly taken a bit of the emotion out of our business."

As a result, Michael and Jane reduced their herd from 200 to 160 breeders.

Doing the calculations

While MBfP helped the Evans manage lack of rain, it has been the ability to benchmark their enterprise with the CoP calculator that Michael values the most.

"We can compare ourselves against the top 20% in the industry and work out our limitations and what we can do better," he said.

"The real power of benchmarking is doing it over a number of years, to account for market and seasonal variability."

Michael and Jane have increased productivity by 10–20% by concentrating on better pasture utilisation through tactical grazing and fencing – lots of fencing.

"We started out with about 30 paddocks and now we've got 62," Michael said.

"We see a massive amount of grass in the growing season, but it stops growing over the winter and it generally stops again after spring.

"It seems to go from the feast to famine. It is a challenge to efficiently use all the grass in that feast period."

To utilise the 'feast', the Evans are calving and lambing to increase the dry sheep equivalent (DSE) per hectare during September and October. With a short spring in 2012, the response was to sell lambs earlier.

MBfP also reinforced the importance of assessing all pastures regularly.

"Monitor, measure, react – and then do it all again," Michael said.

Michael is in favour of the MBfP program being available on the website as it will make handy tools more accessible.

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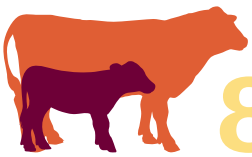
MLA's Cost of Production calculators
www.mla.com.au/calculators

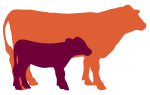
Animal health

Making more from females



87%

pregnancy rate in heifers above 440kg



51%

pregnancy rate in heifers below 360kg

The weight of maiden heifers and the condition of older cows are critical to reproductive performance and profitability, according to early findings from a Central Queensland Producer Demonstration Site (PDS).

The Billaboo CQ Beef Group members established an MLA-funded PDS in 2009 to investigate the impact of reproductive diseases in cattle on profitability.

Supported by staff from FutureBeef, group members have collected and recorded performance and disease data since 2010. Data includes body condition scores, pregnancy rates and losses from pregnancy test to weaning.

Project coordinator, Laura Devlin, said the producers wanted to identify where losses were occurring, determine the risk of reproductive diseases on their properties, and implement the most cost-effective strategies for managing the diseases.

The PDS discovered that all herds in the project had been exposed to pestivirus (BVDV) and so also undertook a cost-benefit analysis of vaccination.

Breeder weight and condition score

"The PDS results have highlighted the importance of managing breeder body condition in achieving good reproductive performance," Laura said.

"Cows in poor condition at calving take longer to ovulate after calving and may not ovulate until weaning. Ideally, cows should be in body condition score three or better at calving." (Figure 1)

The first year's records also revealed the significance of weight at joining for maiden heifers.

Across the group's herds, heifers above 440kg achieved an average 87% conception, compared to just 51% for heifers below 360kg at pregnancy testing. (Figure 2)

Disease management

A critical consideration for the group is managing the key diseases that can cause reproductive losses: vibriosis, leptospirosis and pestivirus.

Vibriosis can be controlled in most situations with a bull vaccination program. Other important measures include culling bulls at seven years and culling empty cows.

Leptospirosis can be managed by vaccinating breeders and bulls. Vaccination also reduces the risk to humans.

Pestivirus outbreaks in Central Queensland have been known to cause foetal and neonatal calf losses of 25–50%.

Blood tests taken in the first year of the project revealed all herds had been exposed to pestivirus. Reproductive losses from the virus are minimised if exposure occurs prior to mating.

A vaccine is available but, once a vaccination program is started, it needs to continue, as the herd will lose all natural immunity.

The two initial doses of the vaccine cost $8.24/head, and the annual booster $4.12/head. Analysis of the cost/benefits of pestivirus vaccination using Breedcow/Dynama software showed that a 2% reduction in foetal and calf losses from pregnancy test to weaning would pay for a whole herd vaccination strategy.

University of Queensland veterinarian Professor Michael McGowan analysed the findings, emphasising that vaccination couldn't be undertaken in isolation.

"Prof McGowan said there would be little point in vaccinating the older cows because they already showed significant levels of disease exposure and therefore had acquired a natural immunity," Laura said.

"He suggested a whole herd vaccination strategy could start with the heifers, eventually building up to the whole breeder herd.

"However, biosecurity measures must be put in place, such as keeping new cattle away from the breeding herd, especially if they're in early pregnancy."

An important outcome of the PDS has been the implementation of record keeping, which enables producers to better monitor reproductive performance. This is critical for the identification and management of reproductive losses.

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Breedcow and Dynama software
www.daff.qld.gov.au/16_6886.htm

Download the *Heifer management in northern beef herds* manual at
www.mla.com.au/heifermanual

in Central Queensland

Pregnancy testing on Ramboda, one of the Billaboo CQ Beef group properties involved in the PDS.

Figure 1 **Breeder body condition score and pregnancy rates – PDS first year results.**

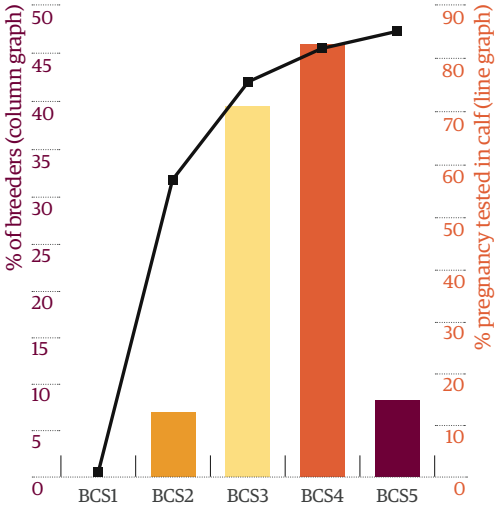
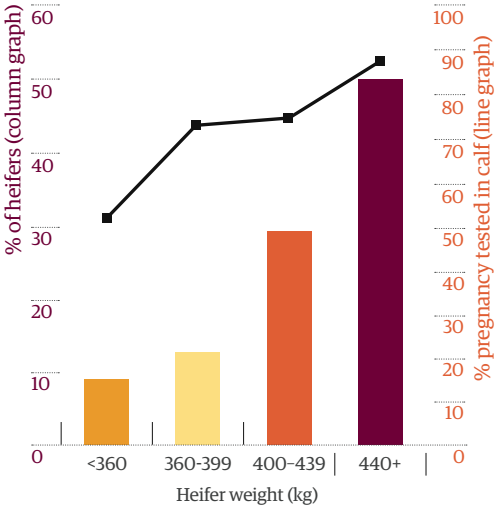


Figure 2 **Heifer weights and pregnancy rates at time of pregnancy testing – PDS first year results.**



Source: Queensland Department of Agriculture, Fisheries and Forestry (QDAFF)

Strategies to increase weaning rates:

- Ensure cows are in body condition score 3 or better at calving
- Stock paddocks according to forage availability
- Wean at the right time and wean early in dry times to ensure cows maintain good body condition
- Ensure maiden heifers are at a good weight for age at joining to increase chance of conception
- Over-mate and cull heifers on the basis of foetal ageing to select the most fertile animals
- Control joining to limit number of calves born out of season and simplify management

Strategies to minimise disease risk:

- Record and monitor reproductive performance
- Vaccinate bulls for vibriosis
- Pregnancy test and cull empty cows to remove potential carriers of vibriosis
- Vaccinate for leptospirosis
- Establish pestivirus status and risk by planned testing
- Use test results to develop disease management plan
- Consider cost/benefit of vaccinating for pestivirus

The herd health check

Springsure producers Bruce and Trudy Roberts are making good use of the lessons they learned from the Billaboo CQ Beef Group Producer Demonstration Site (PDS).

Snapshot

Bruce, Trudy and Troy Roberts, Springsure, Qld.

Property: Callistemon – 11,000ha, Fairways – 2,200ha, Warrigal – 1,300ha

Enterprise: Breeding and fattening beef cattle for EU and MSA markets

Livestock: 1,600 breeders, about 4,000 head total

Pasture: Buffel grass, Seca stylo, small amount of oats at Fairways

Soil: Clay and sandy loam

Rainfall: 650mm, but for past 12 months have received 300mm

Troy, Trudy and Bruce Roberts pictured with breeders at 'Callistemon'.

Bruce, Trudy and their son Troy run three properties totalling 14,500ha in the Emerald and Springsure districts as one enterprise, breeding and fattening for the EU market and targeting MSA specifications with younger animals.

Their base herd is Santa Gertrudis, which are joined to Droughtmaster and Angus bulls.

"We have all our breeders at Callistemon and send weaners to Fairways and Warrigal where they are sold direct to processors," Trudy said.

With their fellow Billaboo CQ Beef Group members, Bruce and Trudy have been recording data on reproductive performance since 2010.

The couple had been pregnancy testing and culling hard for a couple of years before the PDS began, but the new record-keeping regime has allowed them to closely monitor the benefits.

"We select our replacement heifers on size, as well as temperament and conformation, and that alone has lifted their conception rate (in maidens) from 79% in 2010 to 88% in 2013," Trudy said.

"We mate them when they are 12-15 months of age. At weaning time we keep the heifers we don't want to retain as breeders and they are grown out for EU market.

"Since culling hard on non-performing cows, our weaning rate (from pregnancy testing) has lifted by at least 2%.

"This year we are going to mate the maiden heifers three weeks earlier than the rest of the herd to give them extra time to get in calf the following season as we've found there is a lower pregnancy rate in second calf heifers."

The diagnosis

Disease testing undertaken as part of the PDS provided a good picture of the pestivirus (BVDV) situation.

"It proved pestivirus was in our herd and that could explain some of our reproductive results," Trudy said.

As the Roberts' are not aware of the true cost of pestivirus to their herd at this stage they don't consider it economical to vaccinate due to the cost.

"We have an overall conception rate of around 92% and a weaning rate of about 83%. The losses are in the expected range but we may be able to improve," Trudy said.

The Roberts's current vaccination regime involves 5-in-1 vaccination at branding. At weaning, they vaccinate replacement heifers with 7-in-1 – which contains a leptospirosis vaccine – and all other weaners with 5-in-1. All weaners are blooded with 3-germ tick fever vaccine.

Replacement heifers are given a leptospirosis booster prior to mating in November, and all cows receive a leptospirosis booster at branding time.

Bruce and Trudy are keen to implement what they learned about body condition score at mating.

"During the PDS we condition scored our cattle and the breeders that were lighter in condition were lower in pregnancy rate," Trudy said.

"Supplementary feeding prior to mating would definitely be beneficial.

"Since seasonal mating we have also noticed a marked improvement in body condition during winter, and better herd health in general."

Trudy and Bruce Roberts
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Social media marketing

Time to socialise

Planning a beef or lamb marketing campaign is no longer as simple as booking television slots and print media space. Using social media as another marketing platform also needs to be considered and every global market needs a different approach.

Working out how to use social media for the best market reach in each region is one of the challenges of MLA's global marketing team. But it also offers new opportunities to extend the reach and variety of campaigns, and to target programs across global markets.

Almost 12 million Australians use Facebook regularly and popular YouTube videos can capture more than one million views in a matter of days. A Sensis Social Media Report released in May 2013 reported 86% of Australians access the internet. Of that, about 65% use social media and 45% use social media at least once a day. Facebook confirmed in June that worldwide it had about 1.15 billion monthly active users.

MLA's Global Marketing General Manager, Michael Edmonds, said embracing social media was a necessity.

"The mass uptake of smartphones and tablets has provided the opportunity for MLA to use different strategies in each global market to cost-effectively target consumers seeking information about food and meals," he said.

"In markets like Japan and Korea where the reputation of Australian beef is already established – our role is to build loyalty to Australian beef.

"In the United States where the Australian lamb brand is seen in many retail outlets across the country, MLA uses social media in a different way - to educate consumers on cooking with lamb as many mainstream Americans are not confident lamb cooks.

"Globally, consumers can share and discuss beef and lamb information and recipes via social media channels like Twitter, Facebook and YouTube," Michael said.

Michael Edmonds, MLA // E: medmonds@mla.com.au

'Liking' Australian beef and lamb

Social media is taking the story of Australian beef and lamb to markets around the world – in many different forms. While the campaign objectives may change with each region, Australian beef and lamb's reputation for quality remains the same. Here are snapshots of three recent campaigns.

AUSTRALIA

Campaign: 'Throw Another Steak on the Barbie' 2012 summer beef marketing campaign.

Duration: 4–25 November 2012

Estimated reach: 76,000 users reached at height of campaign.

Facebook success: 13 million Facebook impressions (number of times page posts were displayed) and 41,000 new Facebook likes.

Outcomes: The 'Nothing Beats Beef' Facebook page was the engine, driving the campaign's online popularity and achieved a 41,000 (50%) increase in fans over the campaign period, with PTAT ("people talking about this" – Facebook's key measure for engagement) peaking at 76,000 fans. The page was named 'No 1 brand page in Asia Pacific' by Facebook.

Media personality Merrick Watts fronted the campaign, which built on the strong connection Australians have with steak by encouraging them to barbecue more beef.

The accompanying television commercial was launched on Facebook and within five days had almost 700,000 YouTube views, making it one of the 'Top 10 viral ads of 2012'. The campaign primarily featured on social media and directed supporters to sign a Facebook petition to re-make the original 'Throw Another Shrimp on the Barbie' commercial, which attracted 50,000 signatures.

Andrew Cox, MLA // E: acox@mla.com.au

12 million active Australian Facebook users

45% of Australian internet users access social media every day

95% of Australian social media users are on Facebook

7 hours – typical time Australian social media users spend on Facebook weekly

UNITED STATES

Campaign: New York City 'Aussie Lamb Spring Fling'.

Duration: 18–31 March 2013

Estimated reach: 4,635 people

Facebook success: 512 page views during the two-week promotional period.

Outcomes: MLA in North America has increased its online engagement with consumers and foodservice based on the success of the social media element of the Spring Fling campaign.

In North America's Aussie Lamb Spring Fling' marketing campaign, social media played a smaller, supportive role as part of a multi-faceted campaign – with taxi advertising and in-store (restaurant and retail) promotions. MLA's promotion of Australian lamb as part of the 'Aussie Lamb Spring Fling' marketing campaign promoted premium Australian lamb to the restaurant and dining scene of New York City, targeting food critics, online bloggers, chefs and 'foodies'.

Participating chefs featured Australian lamb dishes on their menus and diners voted online for their favourites. People posted their restaurant reviews and dish comments on the 'Australian Lamb' Facebook page, while MLA drove the online conversation with competition highlights, recipe tips and images.

David Pietsch, MLA // E: dpietsch@mla.com.au

MIDDLE EAST/NORTH AFRICA

Campaign: Australian Halal integrity of Australian beef and lamb with Ramadan recipes.

Duration: 24 June–7 August 2013

Estimated reach: 18 million

Facebook success: 25 million impressions (number of times page posts were displayed) and the integrated Fatafeat TV, Facebook 'Win a trip to Queensland' competition scored more than 62,000 Facebook likes.

Outcomes: With more than 62,000 Facebook fans now 'captured', MLA in the Middle East aims to keep them engaged with an ongoing social media presence in future campaigns.

The campaign used social media as its primary method to target consumers in the UAE, Saudi Arabia, Qatar, Kuwait, Oman, Jordan, Lebanon and Egypt during Ramadan to build awareness of Halal integrity and raise Australia's reputation for providing clean, safe and delicious beef and lamb. Social media was the main form of advertising, with daily Facebook posts, sponsored stories and updates on the secondary website **www.lambandbeef.com** backed by the popular 100 Lahma (100MEAT) 30 episode Pan Arab television series (featuring 100 Australian beef and lamb recipes), starring MLA's Middle East executive chef Tarek Ibrahim. Saudi Arabians showed the most support on Facebook, followed by Egyptians and residents of the UAE.

Jamie Ferguson, MLA // E: jferguson@mla.com.au

Dishing up lamb in the season of love

Spring is touted as the season of romance and the message behind MLA's 2013 spring lamb campaign is there's no better meal suited to inspiring love than lamb.

MLA Group Marketing Manager Andrew Cox said the latest marketing campaign encourages people to use lamb to their romantic advantage.

"Spring time is traditionally associated with lamb consumption and retailers and consumers always look forward to lamb at this time of year for its seasonal appeal and quality. By coining the slogan 'Lamb is for Lovers', the campaign positions lamb as the ultimate secret weapon for impressing that special someone," he said.

The four week campaign, launched on 15 September, featured across major television networks, including integration within the popular Channel 10 reality show, *The Bachelor*, and targeted online social media promotion across MLA's consumer-focused 'We Love Our Lamb' Facebook page.

The commercial is fronted by 'Don', a confident Aussie bloke, who attributes his romantic success to the desirable qualities of lamb. Don challenges Australians to put his winning formula to the test by dishing up lamb.

Consumers can see Don put his dating skills to the test with 'real-life' video scenarios through the Facebook page and eligible bachelorettes will have the opportunity to win a date with Don.

The campaign is supported by point-of-sale materials including posters and specially marked 'Lamb is for Lovers' sticker packaging on retail lamb, outdoor poster billboards and recipe-dispensing panels in retail outlets nationwide.

View the 'Lamb is for Lovers' television commercial at **www.facebook.com/weloveourlamb**

The 'Lamb is for Lovers' poster (left) features in supermarkets and butchers nationwide.

Andrew Cox, MLA
E: acox@mla.com.au

Recipes

Bring some romance to the table with these spring recipes.

Steaky breaky heart

Grilled lamb steaks with a warm salad of smashed new potatoes, green olives and fresh herbs.

Ingredients

4 x 125g lamb steaks, trimmed, lightly oiled and seasoned to taste

2 bunches of asparagus

2 large capsicums, deseeded and cut into long chunks

Potato salad

600g kipfler or Dutch cream potatoes, scrubbed, cut into chunks

2 tbs mint, finely chopped

2 tbs curly parsley, finely chopped

2 tbs chives, finely sliced

3 tbs extra virgin olive oil

2 teaspoons lemon juice

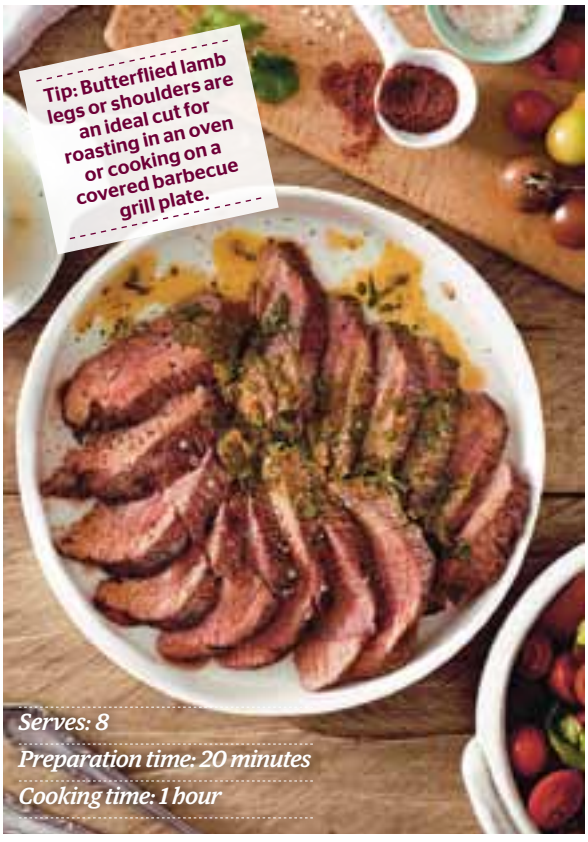
10 green olives, pitted and roughly chopped

Sea salt and ground white pepper

Method

1. Put the potatoes into a large saucepan and cover with cold water. Bring to the boil and cook for 15 minutes or until tender.
2. While the potatoes are cooking, put the herbs, olive oil, lemon juice and green olives into a bowl and stir to combine. Season with sea salt and ground white pepper.
3. Drain the cooked potatoes and place in a large bowl. Roughly smash potatoes with a fork and then stir through herb mixture.
4. In a large frying pan over a high heat, cook the lamb steaks until moisture appears on the top. Turn and cook for a further three minutes on the second side. Transfer to a warm plate, cover with foil and rest for three minutes.
5. Lightly oil asparagus and capsicum and grill for one–two minutes until just cooked but still crunchy.
6. Serve the lamb steaks with the grilled vegetables and a side of warm potato salad.

Pretty pretty butterfly



Butterflied lamb with coriander chermoula and heirloom tomato salad.

Ingredients

1 x 2kg butterflied lamb leg/ shoulder

1 tbs olive oil

2 tbs sumac

Chermoula

6 tbs coriander, finely chopped

2 tbs parsley, finely chopped

2 garlic cloves, crushed

2 tbs lemon juice

1 tsp ground cumin

¼ tsp paprika

¼ tsp chilli flakes

¼ tsp ground cinnamon

¼ tsp sea-salt

¼ cup extra virgin olive oil

2 punnets heirloom tomatoes, halved

20 basil leaves

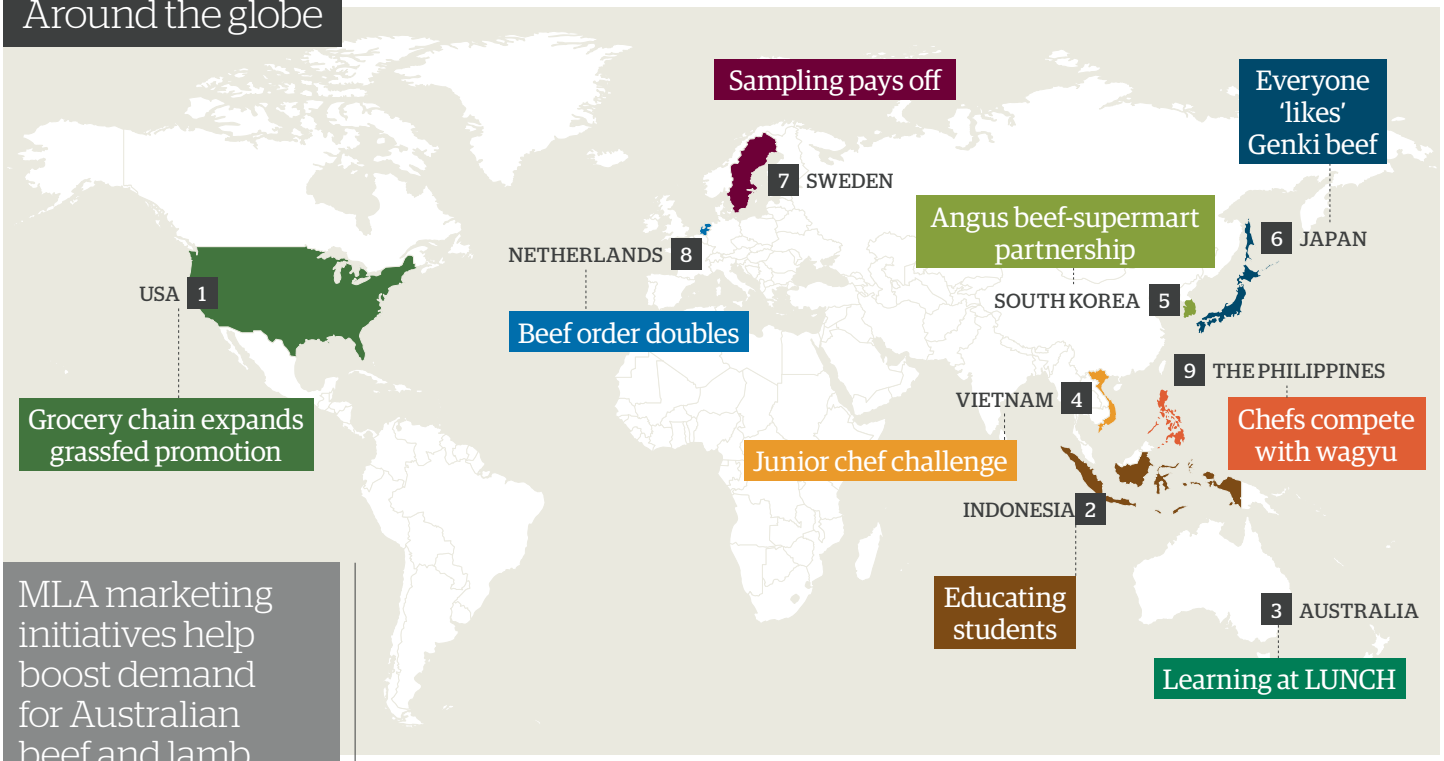
1 tbs red wine vinegar

3 tbs extra virgin olive oil

Method

1. Preheat oven to 200°C. Brush the olive oil over the skin and flesh of the lamb and rub sumac into the meat. Season with sea salt.
2. In a large frying pan heated over very high heat, sear the lamb on both sides. Transfer to a roasting dish and roast in the oven for 45–55 minutes.
3. To make the chermoula, place all the ingredients except the olive oil in a food processor and pulse. With the motor running, gradually add in the oil to form a thick paste.
4. To make the tomato salad, combine the tomatoes, basil, vinegar and olive oil in a bowl. Season with sea-salt and freshly ground black pepper, and toss to combine.
5. Remove lamb from oven and transfer to a warm plate. Cover with foil and rest for 10 minutes.
6. To serve, place lamb onto a serving platter and slice meat into thick chunks. Drizzle chermoula mixture over the top, season to taste, and serve with the tomato salad.

Around the globe



MLA marketing initiatives help boost demand for Australian beef and lamb both at home and in our global marketplace.

1 UNITED STATES

Grassfed growth

An Australian grassfed beef program promoting mince and beef cuts, which first ran in 40 grocery stores in California, has expanded to 1,400 stores across the US (this is about twice the number of Coles outlets in Australia). The program is expected to continue to grow as more Australian grassfed cattle become available. MLA helped develop point-of-sale materials such as case dividers, consumer brochures and vacuum packaging under an Industry Collaborative Agreement.

1,400
US grocery stores promote Australian grassfed beef

2 INDONESIA

Beef in the classroom

Around 230 students from Citra Alam Elementary School participated in an MLA school

program to learn about the benefits of eating Australian beef. An Indonesian nutritionist explained the healthy qualities of Australian beef and a chef from one of Indonesia's leading five-star hotels ran a cooking competition to give the students hands-on kitchen and cooking experience.

3 AUSTRALIA

Lunchtime masterpieces

Beef and lamb meal ideas for cafés, caterers and quick service restaurants were demonstrated at an MLA masterclass at the new foodservice trade show 'LUNCH', held in Sydney and Melbourne in June and August.

6,000
foodservice professionals attend LUNCH trade shows

MLA masterclasses showed chefs how to make flavoursome and creative menu ideas with non-loin cuts, such as lamb Shawarma wraps (made with lamb shoulder), Vietnamese lamb roll (lamb rump) and cold rolls (flat iron steak).

4 VIETNAM

A challenge for young chefs

More than 100 Vietnamese students aged 10–12 showed off their cooking skills in the Aus-Viet Junior Chef Challenge. The contest was part of celebrations for the 40th anniversary of diplomatic relations between Australia and Vietnam. Contestants cooked with premium Australian beef and lamb and the top seven chefs competed in the final, preparing *bun bo xao*,

a Vietnamese beef and noodle salad. Vietnamese-born Sydney chef Nhut Huynh ran a masterclass for the children, and Australian master butcher Barry Lloyd demonstrated how to cook Australian beef and lamb.

5 SOUTH KOREA

A super beef promotion

To celebrate three years of Australian Angus beef being sold in Lotte Super, a leading hypermarket in Korea, MLA and Lotte Super offered discounts on various Australian chilled beef cuts for one week in July in all its 373 hypermarket stores nationwide. Customers reacted positively, buying 70 tonnes of chilled Australian Angus beef. MLA provided festival banners with the *Hoju Chungjung Woo* 'clean and safe Australian beef' key message to further boost the Australian beef brand image.

70

tonnes chilled Australian Angus beef sold during promotion

6 JAPAN

Taking a 'Genki' pose

MLA launched its online Aussie beef summer campaign, 'Everyone feels Genki (energy) with Aussie Beef!'. It promoted Aussie beef as a great source of energy, which comes from a clean, green, natural environment. Ten Japanese performers and athletes featured in the advertisement, and consumers voted for their favourite 'Genki' pose for their chance to win an Australian holiday. The campaign was promoted through advertisements on Tokyo trains and via social media, where it received more than 5,000 Facebook likes.

7 SWEDEN

Sampling = sales

During a recent two day promotion in Sweden, consumers sampled 22kg of Australian beef including rump tail, oyster blade, chuck ribs, knuckle, rostbiff (a section of rump) and diced beef, leading to sales of 1,000kg of Australian product.

8 NETHERLANDS

'Down under' visit delivers

Following in-store sampling promotions with a Netherlands-based importer and its distributor, MLA assisted in organising for the importer to visit farms, feedlots and processing plants in NSW and Queensland. Following the trip the importer's order of Australian beef doubled.

9 THE PHILIPPINES

Chefs chase culinary status

MLA was one of the major sponsors of World Food Expo (WOFEX) in Manilla, The Philippines' biggest food and beverage show. This set the stage for The Philippines Culinary Cup 2013 (PCC)—the country's only internationally recognised culinary competition. MLA co-presented three cooking competitions during the PCC. Competing chefs cooked with Australian beef and lamb including wagyu knuckle, lamb shoulder and beef blade.

On the ground

Australia

Lachlan Bowtell
MLA Regional Manager
Australia
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Overall, the Australian retail market remains strong but there are some challenges. Seafood is growing in popularity in the foodservice sector, with cheap imports flooding the market. Retail poultry sales remain strong as poultry is viewed as a cheaper source of protein.

Given these challenges MLA continues to defend Australian beef and lamb's position in the retail sector. Beef and lamb have a competitive edge, with superior flavour and versatility and a wide range of meal options to suit any budget.

The trade development team has been working with the retail and foodservice sector assisting butchers and chefs to see the potential of beef, lamb and goatmeat through the Masterpieces program, designed to encourage the adoption of non-loin cuts.

Three paddock-to-plate events were held recently with chefs and butchers to highlight the professional nature and integrity of the production system - from the producer, to grading of carcases at a processing facility, and then to the consumer's plate.

The launch of our winter beef campaign included a new issue of *Entice* magazine, which was a hit with retailers and consumers. The campaign included a new television commercial highlighting the appeal of a warming beef meal during the cooler months. Feedback from retailers was encouraging, with many initial reports stating sales of non-loin beef cuts were stronger than the same period last year.

The winter beef campaign ran throughout June and July, with 83% of independent butchers participating, and 62% of these rating the sales impact of the campaign on their business as good or excellent. The volume of beef sales rose 4.2% in the period and sales of other steak cuts (mainly rump) increased by 21.7% compared to last year, while sales of stir-fry, diced or casserole cuts were stable.

Market observations

Export trends of the 'big three' emerge

The competition between the 'big three' global beef exporters, the United States, Australia and Brazil has always made for interesting viewing. Market share depends on a number of factors – most notably currencies, market access and disease status.

Tim McRae
MLA Economist

The 2012-13 fiscal year saw a significant increase in beef exports for Australia and Brazil, assisted by growing demand from South-East Asia and the Middle East, while in contrast, the US registered a decline.

Australian beef exports during 2012-13 broke the previous record by 40,000 tonnes swt, totalling 1.014 million tonnes swt (Department of Agriculture, Fisheries and Forestry data), while Brazilian beef shipments registered the highest volume since 2007-08, at 1.056 million tonnes swt. In contrast, US beef shipments declined 7% year-on-year, to 776,051 tonnes swt in 2012-13 (Global Trade Atlas data).

For 2012-13, Australian beef exports had much more in common with US shipments, albeit at much larger overall volumes. Both Australia and the US locked in Japan as their largest overseas market, at 298,840 tonnes swt and 173,626 tonnes swt, respectively, while Korea was also the third largest market for both exporters. In Australia's case, second place was the US, while Canada was the second largest market of US exports.

US exports have expanded into Japan and Korea in 2012-13, impacting demand for Australian product, and subsequently, returns to Australian producers for heavy cattle. Accentuating the impact of the increased competition from the US into these two markets has also been the weak US dollar and the strong Australian dollar.

Brazilian exports, which just exceeded Australian volumes in 2012-13, were directed mainly to Russia, Hong Kong and Egypt. Efforts by Brazil to expand market access across the globe need to be monitored, especially through Asia and North America.

However, a large factor that also needs to be remembered when looking across the three nations is that the US and Brazil have massive production volumes, of which the overwhelming majority never leave their own shores. When analysing the international competitiveness of the three nations, one should also keep a very close eye on the demand situation in both Brazil and the US – as any downturn could see a sharp increase in the amount of beef leaving these two nations.

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Sheep projections

And the future looks... global

MLA's mid-year sheep projections, released in August, show the effects of three years of fluctuating weather conditions – from wet to dry – on the sheep flock and how that's playing out on slaughter levels and domestic and export markets.

Historically, the sheep population declines in the dry and increases in the wet, and that has been the case this year. The absence of an autumn break in many areas resulted in higher-than-expected sheep and lamb slaughter, which was one of the major revisions in the mid-year projections, compared to the January forecasts.

The forecast for the Australian sheepmeat industry remains positive heading towards 2014, enhanced by the likely price benefits of a competitive export market.

Assisting price prospects further is the expectation of fewer lambs for slaughter in 2013-14, underpinned by an anticipated improvement in seasonal conditions for the second half of 2013 with the recent poor breeding season in 2012-13.

At 30 June 2013, the Australia sheep flock was estimated at 73.85 million head, down 1.1%, or 850,000 head, on last year (Figure 1). The full extent of the dry conditions can be seen in the record lamb slaughter for January to June 2013. The numbers are expected to reach 20.65 million head for 2013, up 3.2% year-on-year (Figure 2).

Although the slaughter figure is up, total lamb production will not increase as dramatically due to lower average carcase weights. The slaughter figure is expected to reach 450,000 tonnes cwt this year (up 1.1% year-on-year), while average carcase weights of 21.59kg/head (down 2.7% year-on-year) reflect the number of unfinished lambs hitting the market.

With better seasonal conditions expected for 2013-14, the Australian sheep flock is forecast to increase 0.2%, to 74 million head by 30 June 2014. Tighter numbers in the first half of 2014 are predicted to reduce both slaughter and production 2.4% year-on-year, to 20.15 million head and 439,000 tonnes cwt, respectively, in 2014.

Mutton production surged in the first six months of 2013, up 77% year-on-year, underpinned by an 83% increase in sheep slaughter and 4% decrease in average carcase weight. However, an improved seasonal outlook will likely see slaughter for the remainder of the year slow to reach a total of 7.3 million head in 2013, up 20% on last year. If seasonal conditions are favourable, sheep slaughter is expected to tighten further in 2014, down 13% on the forecast 2013 slaughter, to 6.3 million head.

The international perspective

The combination of drought-induced slaughter and record exports for the first six months of 2013 is expected to see total Australian lamb exports reach 197,000 tonnes swt in 2013, up 4% year-on-year. (Figure 3) This would be a record for exports in a calendar year. The

Australian dollar is expected to remain below parity for the remainder of 2013 and support the steady growing demand.

The surge in lamb exports to the Middle East in 2012 – underpinned by large volumes to Bahrain, Iran and Kuwait – is forecast to continue in 2013. Volumes are forecast to reach 56,900 tonnes swt, up 10% year-on-year – the highest exports to any market.

Shipments to China have been strong and are expected to remain high for the remainder of the year. They are forecast to reach 36,000 tonnes swt – up 22% on 2012.

Although lamb exports to the US for the first six months of 2013 have not grown as much as other major destinations, the current level of exports is forecast to continue for the remainder of the year to total 38,100 tonnes swt, up 4% year-on-year. The US is by far Australia's most valuable market, underpinned by demand for high value chilled lamb.

Strong demand from developing markets in South-East Asia and the Pacific Islands was supported by increased production in 2012-13. However, the tight supply forecast for the remainder of 2013 and early 2014 will likely see the smaller, developing, markets lose market share to larger, more valuable, markets. As a result, shipments to South-East Asia and the Pacific Islands are forecast to reach 9,800 tonnes swt (up 1% year-on-year) and 13.4 tonnes swt (down 4%), respectively, in 2013.

The strong export demand, combined with the low value of the Australian dollar for the foreseeable future, is predicted to reduce domestic utilisation of lamb. This is forecast to decline by 2% in 2013 and a further 5.3% in 2014, as more value can be generated in international markets.

A significant increase in mutton production has bolstered total mutton exports for the first six months of 2013, with 96% of mutton exported. In line with production, strong mutton exports of the first half of 2013 is forecast to contribute to total export figures for 2013 of 128,000 tonnes swt, up 20% year-on-year.

The bottom line

The forecast remains positive for the rest of of 2013 and towards 2014, enhanced by the likely price benefits to be delivered by improvements in export competitiveness. The main period of tighter lamb supplies is anticipated for the first quarter of 2014. However, spring rainfall, producer breeding decisions and prices will ultimately determine when the bulk of lambs are marketed.

Jonathan Meggison, MLA
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Read MLA's *Australian sheep industry projections* mid-year update at **www.mla.com.au/industryprojections**

Figure 1 Australian sheep flock

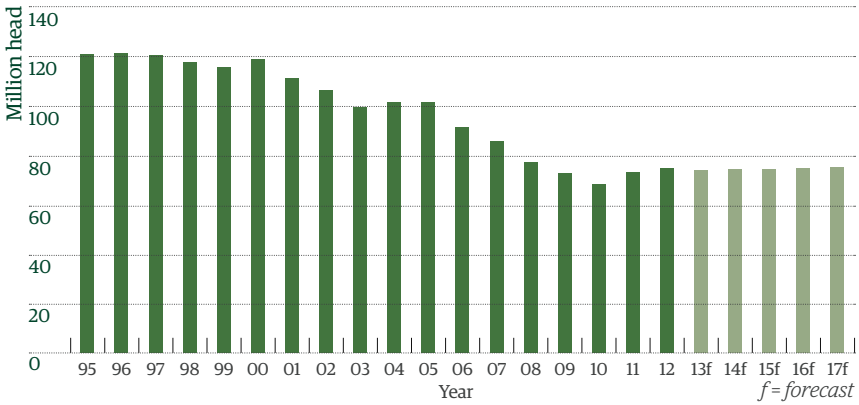
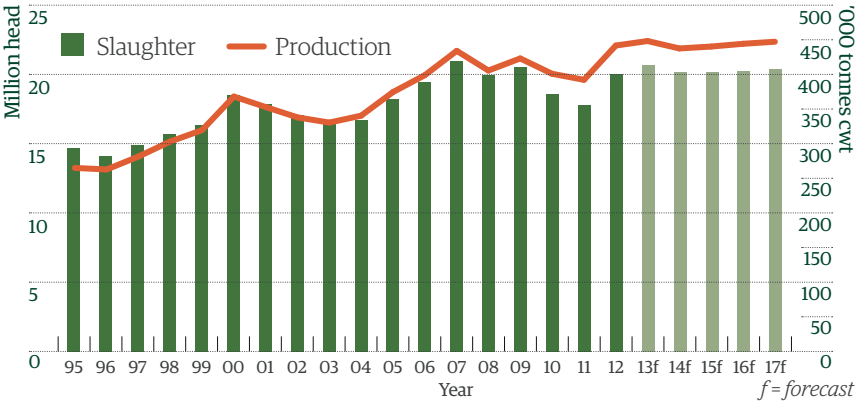
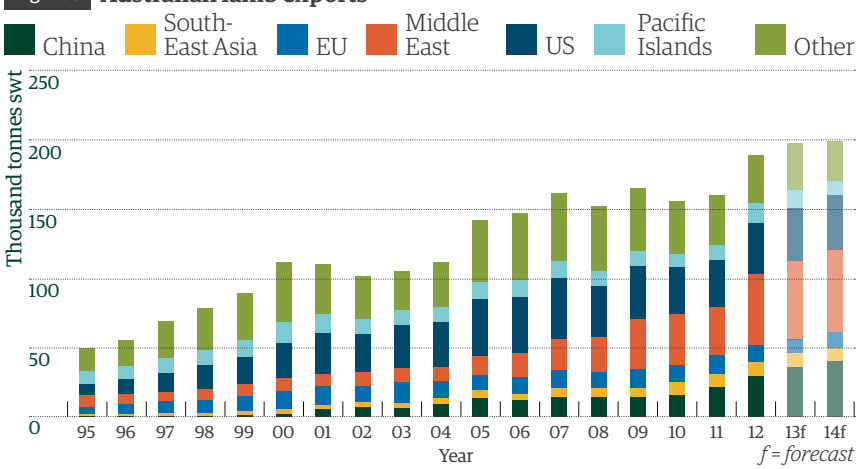


Figure 2 Australian lamb slaughter and production



Source: Australian Bureau of Statistics and MLA

Figure 3 Australian lamb exports



Source: Department of Agriculture, Fisheries and Forestry and MLA

Ron Sevil 'Kenilworth', Mitchell, South West Leading Sheep Coordinator Amy Brown and Graeme Winks 'Tilquin', Bollon, at one of the Queensland workshops.

Queensland//Reproductive nutrition for Merinos

Eighty producers learnt more about the nutritional management of Merinos for optimum reproduction when the Making More from Sheep program, with the support of Leading Sheep, ran workshops at Longreach, Cunnamulla, Bollon and St George during August.

Dr John Milton spoke about sheep nutrition being a major contributor to the reproduction performance of ewes and rams. In particular he focused on feeding for an improved ovulation rate, the importance of pregnancy scanning, feeding for colostrum production and maintaining ewes in condition score three.

Producers found the day informative and many commented that they were going to re-think their feeding regimes and make changes to improve flock reproduction. Participants gave the day a satisfaction and value rating averaging nine out of 10.

One producer said the workshop "will make a huge difference to our sheep enterprise". Another comment was: "fantastic to have the opportunity to listen to such a knowledgeable and respected nutritionist.

More information: Nicole Sallur, Department of Agriculture, Fisheries and Forestry T: 07 4654 4220 // E: nicole.sallur@daff.qld.gov.au

Learning about feedlot welfare

The Australian Lot Feeders' Association ran five MLA-supported animal health and welfare workshops in July and August across Australia with presentations by feedlot industry veterinarians, Kev Sullivan, Tony Batterham and Paul Cusack. Around 170 lotfeeders attended the workshops to learn more about bedding, foot and mouth disease, heat load, euthanasia, internal audits, managing newly arrived cattle, pregnancy and calving management plans, hospital systems and new technologies.

More information: www.feedlots.com.au

Participating in a feedlot industry workshop were Andrew Herbert – Gundamain Feedlot at Eugowra, Brianna Daly – Ladysmith Feedlot at Wagga Wagga, presenter Tony Batterham – Quirindi Feedlot Services and Tara Graetz – Ladysmith Feedlot, at Wagga Wagga.

Speakers from the Pastures Update held in Perth (left to right): MLA's Linda Hygate, Evergreen Farming President Bob Wilson, MLA Challenge participant and producer Marcus Sounness, Department of Agriculture and Food Western Australia's Ron Yates, AgVivo's Paul Omodei and Farmanco's Rob Sands.

Western Australia//Pasture Updates

MLA worked with the Evergreen group to deliver three Pasture Updates workshops to 130 attendees in August. The events were held at Mt Barker, Dongara and a third update (which focused on advisors) was held in Perth. Attendees were informed about MLA's pasture R&D, new pasture varieties, new technologies that have been developed to sow some of the new legumes at a time convenient for mixed farmers, and pasture and dual-purpose crop mixtures. At each event, producers implementing new technologies talked about their experiences of how they developed them to suit their enterprises.

More information: www.evergreen.asn.au

Upcoming events

Find more events and information at **www.mla.com.au/events**

Pasture Updates

Discover the opportunities to improve pastures by hearing from local producers and researchers about the latest pasture research.

When and where:
22 October, Meredith Vic
23 October, Winchelsea Vic
8 November, Bingara NSW

Bookings:
Vic events: 1300 137 550 or office@grasslands.org.au // NSW event: 02 6369 0011 or secretary@grasslandnsw.com.au

Muchea Livestock Centre sheep producer open day

Listen to members of your supply chain on how to prepare your stock for transport, use the centre to maximise your returns, find out what the buyers want and use the MLA market reports to your advantage.

When and where:
22 October, Muchea WA

Bookings and more information:
WAMIA T: 08 9274 7533 // E: wamia@wamia.wa.gov.au with 'OPEN DAY' in the subject line. www.wamia.wa.gov.au

Young beef producers' forum

This forum is hosted by the Future Farmers Network and focuses on providing educational, networking and capacity building opportunities for under 40s with an interest in the beef industry.

When and where:
14–15 November, Roma Qld

Bookings and more information:
Annabelle Woods 0418 440 079
admin@futurefarmers.com.au
www.ybpf.com.au

MEET THE CHALLENGERS...

From one end of the country to the other, six diverse livestock enterprises are putting their businesses through the year-long MLA Challenge. In the last edition of *Feedback* we met two Challengers, John Ramsay and Andrew Miller. Here we introduce two more of the participants.

To learn more about the Challengers go to www.mla.com.au/challenge

'Paper Collar Gully' quick facts

Amelup, WA

Property size: 3,000ha

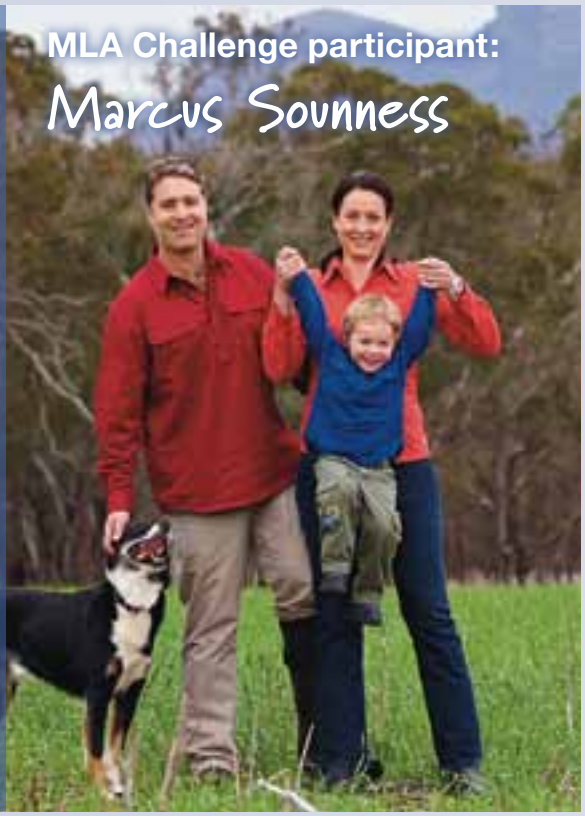
Herd / flock size: 3,000 breeding ewes

Breeds: Merino

Average annual rainfall: 400mm

Soil type: Sandy gravel over clay and sandy loam

Pasture type: Sub-clover and lucerne based



Marcus and Shannon Sounness and their son Preston.

The Sounness family has been farming in the south coast region of Western Australia for five generations and have been on their current property for more than 100 years. For the past nine years, Marcus Sounness has operated the business which grows wheat, canola and barley and runs 3,000 breeding ewes.

What do you hope to achieve in the year?

I'm hoping that the MLA Challenge will help me continually improve the business by providing the opportunity to learn, grow the business and increase my support network at the same time. Continuous improvement is the name of the game. Increasing efficiency, and building new skills and knowledge to better manage the business are my current goals. We want to be in the position to take advantage of opportunities to expand when they come along.

What are some of the targets you're aiming for on your property during spring?

- Feed on offer target for the twinners: 1,200 kilograms a hectare
- Separation of single and twin bearing ewes to reach target condition scores of 3.2 for the twinners and three for the singles
- Lambing percentage of 90% and targeting >20kg lambs at weaning

'Muronga' quick facts

Adelong, NSW

Property size: 560ha

Herd / flock size: 300 breeder cattle

Breeds: Hereford/Angus

Average annual rainfall: 865mm

Soil type: Granite based loams

Pasture type: Predominantly improved perennial

Matthew and Angela Pearce with their sons Sted and Hunter and daughter, Minnie.

Matthew runs a cattle enterprise with his wife Angela and has a degree in environmental science. Matthew is the fourth generation of his family to run the farm, which is home to 300 Hereford/Angus breeders.

What do you hope to achieve in the year?

Our current business goals are to employ best management practices to maximise return while maintaining a focus on good environmental outcomes. We would like to increase scale of operation as our current cow numbers are not justifying a full-time labour unit. We don't have a full appreciation of the limitations affecting business performance but we are aiming to expand and increase scale of production, increase our efficiency and build the skills and knowledge to better manage our business.

What are some of the targets you're aiming for on your property during spring?

- 100% year round ground cover
- Heifer condition score for heifers of three, with a minimum joining weight of 280 kilograms
- 94% calving rate

mla
MEAT & LIVESTOCK AUSTRALIA

MLA MEMBERS HAVE YOUR SAY...

MLA producer forum and AGM –

The Cube Wodonga, Vic

Thursday
14 November 2013

Key action dates

8 November Submit your questions on notice for the AGM at www.mla.com.au/agm

12 November **Return your proxy form or submit online by 2.30pm AEDT**

14 November
8.30am: Red Meat Advisory Council forum
11.30am: MLA producer forum
2.30pm: MLA AGM followed by a barbecue

The Cube Wodonga

For more information visit www.mla.com.au/agm or call 1800 675 717