

Feedback

Reporting in

This is Stan Watson at Singleton...

07// **Ground cover**

Producing more calves and lambs in the paddock

15// **Remote control**

New technologies for greater efficiency

20// **Sheep measles**

Finding answers to a costly problem

32// **Plating up autumn lamb**

A note from the MD...

Recently I had the opportunity to meet with producers in Queensland and the Northern Territory. A significant issue for almost everyone I spoke to was the pressure of the cost squeeze between input cost rises and prices received, leading to an erosion of capital and increasing levels of debt.

While marketing and promotion to grow demand and extract additional consumer dollars for beef and lamb is vital, finding ways to increase productivity that don't require major capital or labour outlay is also critical.

Economic modelling shows there are significant opportunities, with minimal cost input, for improvements in reproductive efficiency - a key profit driver. This year MLA is investing \$11m levies in research and development to increase on-farm

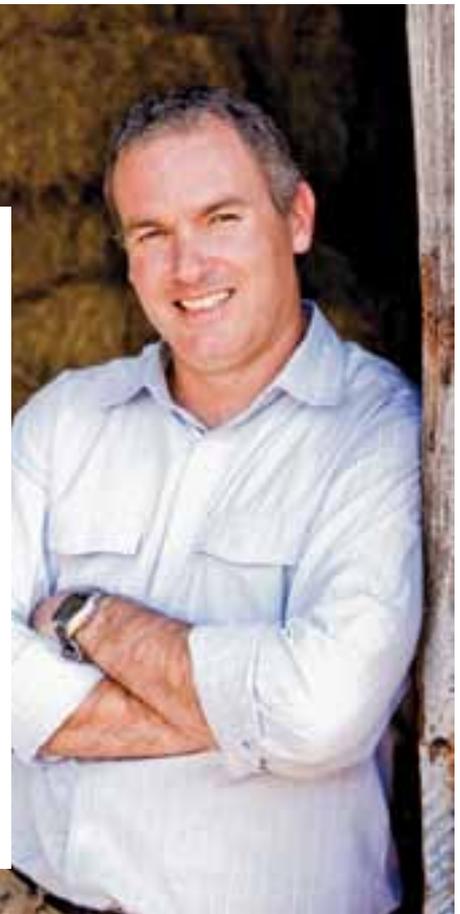
productivity, including a key focus on creating opportunities for producers to improve their reproduction efficiency.

Two specific targets have been set for 2015 - to improve northern cattle reproduction efficiency by five percentage points and maternal sheep breeds by two percentage points.

I encourage you to review the work resulting from MLA investment in this area on pages 7-8, and to consider the potential for it to be utilised in your business.



Scott Hansen
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MLA challenge

You set the targets

We help you get there

Six Australian cattle and sheep producers are invited to take up the challenge to make more from their business. You could be one of them...

The MLA challenge is a new program that will showcase how six producers make positive change in their businesses over the next 12 months and take the rest of Australia along for the journey.

If selected, you will be supported with a business coach, a producer mentor and a wealth of industry information, resources and experts to improve the productivity and profitability of your business.

The aim of the MLA challenge is for you to outperform your current benchmarks while tackling the vagaries and challenges of everyday farm life. And this is the basis for how you compete in the challenge.

"While the main focus is on these six people taking their own path to success, the program aims to challenge every Australian producer to think about how to improve their business performance and - with the support of MLA research and resources and access to industry expertise - act on it to create more profitable, sustainable businesses," said MLA Managing Director Scott Hansen.

"I am excited about this challenge - it aims to not only take those few selected people on a journey to building a better business but I hope it will motivate and inspire others to do the same."

MLA is looking for two northern cattle producers, two southern cattle producers and two sheep producers to take up the challenge and push their businesses further.

Financial and lifestyle rewards

Simon Fritsch and Sam Newsome of consulting firm, Agripath will be two people you'll get to

know well. Agripath will undertake a benchmarking analysis of your business at the start of the journey and help you to design a series of changes over the year to make a big difference to your bottom line.

"If the challenge can be the catalyst to drive your business from performing at the industry's average return, to that of the top 20% over time, there is a lot at stake," Sam said.

For example, a farm in a certain location, with \$10m in assets, can move from 3% to 6% return on assets, this equates to \$300k per annum additional return.

"Benchmarking is simply the measurement of your business so that the key performance indicators and key decision points can be defined.

"Agripath will go through a straight forward process at the start of the challenge, so that you can more easily identify what changes will give you the best outcomes, in terms of your financial, lifestyle and/or environmental goals."

Why run the challenge?

"MLA research discovers new ways to improve the profitability and productivity of Australian cattle and sheep enterprises. Our research has proven benefits. And we want more people to access it," Scott said.



Sam Newsome of Agripath.

Six producers will be supported with:

- a business coach
- a producer mentor
- a wealth of industry information, resources and experts



For more information on the MLA challenge or to apply, visit: www.mla.com.au/challenge

Residue testing shows good results



Australian Government
Department of Agriculture,
Fisheries and Forestry

Jim Derrick
Manager Animal Programs
National Residue Survey
Department of Agriculture,
Fisheries and Forestry



Results of the 2011-12 residue-testing programs have shown excellent compliance to Australian Standards for residues of animal treatments, agricultural chemicals and environmental contaminants.

The overall compliance rates were 99.95% for cattle, 99.75% for sheep and 100% for goats.

The results provide evidence of good agricultural practices by Australia's livestock producers in the use of agricultural and veterinary chemicals and assure Australian and overseas customers of the excellent residue and contaminant status of Australian cattle, sheep and goats.

It is important that producers continue the good work by always following product label and withholding period directions, and complying with the Livestock Production Assurance rules. These on-farm management practices minimise the risk of unacceptable residues and are a vital part of maintaining Australia's access to export markets and to our reputation as a producer of clean and wholesome red meat.

The National Residue Survey (NRS) animal products program monitors the residue status of Australian meat products.

NRS is part of the Australian Government Department of Agriculture, Fisheries and Forestry and its residue-monitoring programs are funded by participating industries. For the cattle, sheep and goat industries, the programs are funded through a component of the relevant transaction levy. NRS works with the peak industry councils to deliver random and targeted residue-monitoring programs for livestock industries.

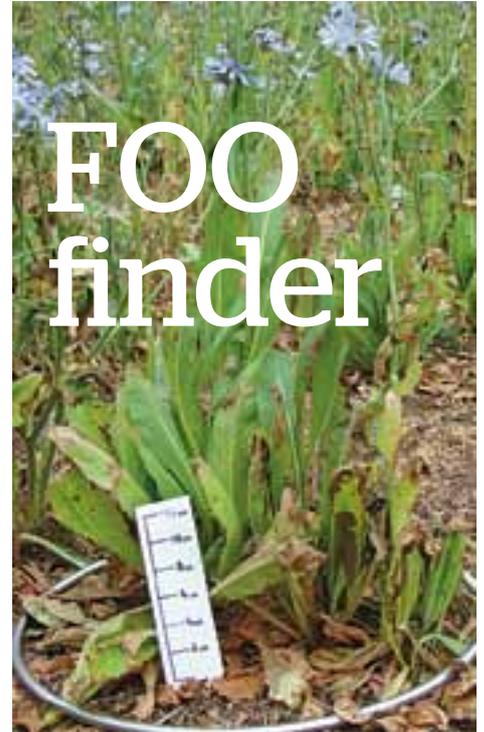
The results of all random monitoring programs for the 2011-12 financial year are available on the DAFF website at www.daff.gov.au/nrs

A new tool from Evergraze takes out some of the guesswork in estimating the food on offer (FOO) in chicory and lucerne pastures.

FOO is the total amount of green and dead pasture available to the animal. It is measured in kilograms of dry matter per hectare (kg/DM/ha).

Estimating FOO can assist with feed budgeting and when used with pasture quality information, can help to predict livestock performance. The guide allows users to look at the height, density and ground cover to find the picture that best matches your pastures, which then gives a guide of the kg/DM/ha.

The guide is at www.evergraze.com.au



Removing the guesswork with chicory measuring.

Welfare guideline input welcomed



Public consultation for the draft Australian Animal Welfare Standards and Guidelines for Cattle and the draft Australian Animal Welfare Standards and Guidelines for Sheep, as well as their associated Regulation Impact Statements, is underway.

The consultation is an important opportunity for producers and the wider community to have a say on welfare issues relating to cattle and sheep.

Draft documents have been in development for some time, through a collaborative and scientifically based process involving government, industry and animal welfare groups.

The standards will replace the current Model Codes of Practice for the Welfare of cattle and sheep, with the main difference being that the new standards are based on the latest knowledge and technology and, once finalised and endorsed by governments, will be adopted into legislation, nationally.

The welfare standards cover the full range of on-farm cattle and sheep management practices where welfare is a consideration and the purpose of the welfare standards is to create improved and nationally consistent rules for the care and management of livestock across all farming enterprises in Australia. Public consultation closes on 6 May 2013.



www.animalwelfarestandards.net.au

Email cattle submissions to

publicconscattle@animalwelfarestandards.net.au

Email sheep submissions to

publicconssheep@animalwelfarestandards.net.au



Fax submissions to: 02 6232 5511 Post to: Animal Welfare Standards Public Consultation, Locked Bag 3006, Deakin West, ACT 2600



Smash hits

Two MLA advertisements made Google's list of Australia's top 10 ads on YouTube in 2012.

The music video parody of Aqua's dance hit Barbie Girl, which saw our Lambassador, Sam Kekovich, rap the merits of lamb on our national day of celebration took out seventh place.

In eighth position was Triple M's Merrick Watts in the 'Throw another steak on the barbie' commercial for the Nothing Beats Beef campaign, which officially finishes at the end of April.



Beef 2015 & beyond



CCA President
Andrew Ogilvie



The Cattle Council of Australia launched the 'Beef 2015 and beyond' strategic plan in February this year.

'Beef 2015 and beyond' is a national strategy that sets industry priorities and determines roles and responsibilities for action into the future. The plan provides a framework for defining and focusing the priorities of the sector and aligns with the framework provided by the wider Meat Industry Strategic Plan. It was formed after extensive consultation with grassfed cattle producers and stakeholders.

The objective was to provide an influential, adequately resourced, professional and unified voice representing beef producers. The plan provides information into the public arena, and to governments and the broader red meat and livestock industry.

In the process of developing these strategies, a number of key priorities have been identified as critical to the grassfed production sector, and the wider beef industry.

These include the need for enhanced coordination in achieving greater market access for Australian beef and live cattle; a stronger effort to reduce impediments placed on the industry through legislation; addressing a lack of suitable infrastructure to support industry competitiveness; and a need to reinvigorate our research, development and extension capacity.

With global beef demand forecast to grow, significant opportunities will open for Australian cattle to gain greater access to existing and emerging export markets.

It is now up to the grassfed cattle producers of Australia, and the organisations that represent and service them, to take ownership of the priorities they have identified and work together to deliver this strategy.



To see the advertisements again go to:
www.youtube.com/lambaustaliaday
www.facebook.com/nothingbeatsbeef



To read more about the plan
www.cattlecouncil.com.au/media_current



Snapshot

Kara and Darcy Knudsen, Mundubbera and Hughenden, Qld.



Property:
7,300ha at Mundubbera, 33,200ha at Hughenden

Enterprise:
Beef

Livestock:
1,500 Santa Gertrudis breeding, 4,000 trade cattle

Pasture:
Mundubbera - native pastures
Hughenden - Mitchell/flinders open downs

Soil:
Forest country, river flats, undulating granite

Rainfall:
650mm at Mundubbera, 450mm at Hughenden

In profile Reproductive efficiency

Kara Knudsen // *Producer and scholar*

As MLA's 2013 Nuffield Australia Farming Scholar, Central Queensland cattle producer Kara Knudsen has set her sights on beefing up commercial genetics to improve the productivity and profitability of Australia's northern beef herd.

Why are you interested in reproductive efficiency?

My husband Darcy and I prioritise education and training to ensure we run a production- and profit-focused business. An MLA BreedingEDGE workshop opened our eyes to how artificial insemination (AI) could increase our herd's performance and reduce costs. We started an AI program four years ago and haven't looked back.

How did you incorporate AI into your management system?

We initially AI'd our heifers, but this year we will AI 60% of our breeding herd. We use semen from our own bulls and also purchase straws to introduce new genetics. We practice fixed-time AI, which involves synchronising the oestrus cycle of our breeders, so the entire breeding herd can be inseminated within a short time frame. It's followed up by joining with bulls.

What gains have you made?

We lifted daily weight gains in our weaners

by at least 30% and shortened the calving interval by up to four weeks. This allows us to wean and brand in one muster. For every week we shorten our calving interval we make an extra \$14/head. As a result of AI we reduced production costs, purchased fewer bulls, increased heifer fertility, increased growth rates and produce an even line of cattle.

Why should northern producers introduce management changes to achieve productivity gains?

Reproductive performance is a dominating factor in farm profitability for breeding operations. Producers cannot fully utilise their investments in disease management, land care and nutrition without also improving genetics.

What do you hope to learn from the rest of the world, as a Nuffield scholar?

I look forward to learning about cutting edge practices in other cattle producing nations that could be adopted in Australia. I will visit countries where AI, embryo transfer, ultrasound and other reproductive techniques are now widely used, including Canada, Brazil, Argentina and the US. South America has very large scale AI operations, which may provide solutions for Australia's northern beef herds.

Photo courtesy of Carly Burnham.

Thinking about increasing your herd's reproductive efficiency? Here are Kara's top tips:

1. Embrace education and training.
2. Adapt technologies to suit your enterprise, land and resources.
3. View reproductive technologies as an investment. Set up costs are low (we spent \$2,500 initially) compared to future returns.
4. Be tough on your bulls as well as cows. We use science when selecting bulls for AI and purchase based on a balanced set of EBVs and visual inspection.
5. Push for performance. We assess our young cattle each year, and tweak our selection criteria to take out the bottom 10%.
6. Combine your tools. We invested in an ultrasound scanner to measure foetal age, and incorporate this with NLIS to identify cows that get in calf early, for consistent management and to cull on performance.



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Follow Kara's Nuffield journey on her blog: Twitter: [@KnudsenKara](https://twitter.com/KnudsenKara), Facebook: www.facebook.com/knudsencattle

Nuffield Australia Farming Scholars:
www.nuffield.com.au

Reproductive efficiency



Pushing to deliver more

Reproductive efficiency in Australian herds and flocks has been at a standstill for 20 years. But with the right management, there is plenty of scope to improve it.

Reproductive efficiency is about increasing the number of calves or lambs that females deliver in their lifetime. But, it's also about ensuring these offspring grow into healthy, productive animals.

There is plenty of scope to improve things. Average branding rates in northern cattle herds appear to have stagnated at around 70% for the past two decades while lamb marking sits at around 83%. MLA has identified opportunities for lifting reproductive efficiency in northern cattle herds by five percentage points and in sheep flocks by two percentage points.

Maternal sheep

MLA's Sheep R&D Manager, Richard Apps, says there's already knowledge on how to improve reproductive efficiency in ewes.

"It comes down to a few key principles: set your lambing date to align your production cycle with seasonal feed production, plan your paddocks for lamb survival, carry out predator and parasite control for lamb survival, provide good management at lambing, have good genetics and manage ewe condition according to how many lambs they are carrying," Richard said.

Richard challenged claims that reproductive efficiency isn't important because it requires spending more on feed or reducing stocking rates.

"Reproductive efficiency is about targeting the needs of individual ewes. If they're carrying twins, their feed allocation needs to reflect it. If they're empty, their feed allocation needs to reflect that," he said.

"There are many examples of producers who have maintained their stocking rate, reduced their supplementary feed bill and increased lambing rates with terrific production, welfare and profit outcomes.

"Courses like Lifetime Ewe Management provide an avenue for producers to learn how to manage ewes in a productive and profitable manner."

Producers who have participated in this course have, on average, increased their marking rates by 11% over three years and raised their stocking rate by 14% in the same period.

MLA, and its collaborating R&D partners, are developing a suite of RD&E projects across four key areas: conception and early embryo mortality, ewe and lamb survival, early reproductive success and weaner performance, and genetics and biological mechanisms. →

MLA activities to increase reproductive efficiency:

In maternal sheep flocks:

- Maintain the Sheep Information Nucleus Flock and Sheep Genetics as the fundamental platform for genetic improvement in the Australian flock.
- 'Bred well. Fed well.' workshops delivering best practice nutrition and breeding advice to sheep producers.
- Research looking at the nutrition impacts on early embryo survival.
- Research examining the impact of mob size and paddock demographics on twin lamb survival.
- Research to shed light on the production challenges of successfully joining ewe-lambs.



→

Northern cattle

There are considerable reproductive challenges in northern Australia - the country is variable, breeding herds are often run on the less productive land types, and Brahman and Brahman-cross cattle can be relatively slow to reach puberty and slow to rebreed, according to MLA's Cattle R&D Manager, Mick Quirk.

"The rule of thumb in the south of producing one calf per cow every 12 months is much more difficult to achieve in the northern half of Australia, especially on the poorer land types and where management is more extensive," said Mick.

Despite these challenges, some producers have greatly improved herd reproductive rates in recent years, using a combination of genetic selection and key herd management practices. The recently-completed northern projects from the Beef CRC confirmed the potential for quite rapid genetic gain in reproduction, as well as finding additional

traits (such as sperm traits and genetic markers) that can be used to aid the selection of bulls that will have more fertile daughters.

In addition, the Cash Cow project has found very wide ranges in reproductive performance of properties within the major land types of northern Australia, and it has confirmed the influence of key drivers such as cow body condition at calving, minimising out-of season calving, and targeted phosphorus supplementation. To build on the Beef CRC and Cash Cow projects, MLA and its collaborating R&D partners are currently developing a suite of projects across four key areas:

1. Increasing the number of bulls available with known genetic merit for reproduction.
2. Improving genomic prediction for fertility.
3. Identifying causes of calf loss between pregnancy testing and weaning.
4. Estimating the economic impacts of various practices for increasing reproductive performance.

MLA activities to increase reproductive efficiency:

In northern beef herds:

- Recently-completed R&D confirmed that annual rates of breeder cow mortality are relatively high (>8%) on properties in the more extensive environments of northern Australia, but also that several key practices (eg. culling for age, phosphorus supplementation, control of calving time) greatly increases the survival rates of cows.
- Refining the remote calving device - a tool that will allow researchers to readily locate and monitor new-born calves under typical extensive grazing conditions, leading to more reliable detection of the causes of elevated levels of calf loss.
- Key findings from the Beef CRC on accelerating genetic improvement in reproduction for northern Australia are being integrated into BREEDPLAN to produce more accurate Estimated Breeding Values (EBVs) for fertility. This includes integration of genomic prediction equations that add value to selection based on measured traits alone. New R&D is planned to further improve and adapt these selection procedures for the range of tropical breeds in common use.
- An epidemiological study of 78 commercial beef enterprises (Cash Cow), located from the West Kimberley to southern Queensland, has provided benchmarks for key measures of reproductive performance, by major land type, as well as the major factors driving variation in performance across properties. The study has confirmed that many properties have significant potential for cost-effective improvements in reproductive rate. New R&D will better define, for different regions and production systems, the economic impacts of various practices for increasing reproductive performance.

Raising performance

Need help to grow more lambs and calves by lifting reproductive efficiency?

Here's a selection of online resources.

Northern beef

Tips & Tools: The accuracy and success of EBVs

www.mla.com.au/EBVaccuracy

Tips & Tools: Buying better bulls

www.mla.com.au/buyingbetterbulls

Tips & Tools: \$Indexes for beef cattle

www.mla.com.au/indexesforcattle

The Heifer management in northern beef herds manual

www.mla.com.au/heifermanual

The Weaner management in northern beef herds manual

www.mla.com.au/weanermanual

The Beef CRC legacy website

www.beefcrc.com.au

Maternal sheep

Tips & Tools: An introduction to LAMBPLAN

www.mla.com.au/lambplanfactsheet

Tips & Tools: 45 x 7 - Joining ewe lambs for more profit

www.mla.com.au/joining-ewe-lambs

Making More From Sheep module 9:

Gain from genetics

www.mla.com.au/mmfs

Or consider undertaking a training program such as...

BreedingEDGE

www.mla.com.au/edgenetwork

Lifetime Ewe

www.lifetimewool.com.au

BredWell FedWell workshops

www.sheepcrc.org.au



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In profile Reproductive efficiency

Joanna Newton // *PhD student***What if there was a way to successfully join ewes months earlier than the traditional 18 months?**

Joanna Newton, a PhD candidate at the University of New England in Armidale, NSW, is on a quest to learn the secrets of early reproductive success in sheep.

Melbourne-born Joanna was introduced to agriculture through friends and a strong agriculture program at high school.

Her PhD study is funded by an Australian Postgraduate Award, topped up with funding from MLA.

What do you hope to achieve with your research?

More breeders are looking at joining their ewes at earlier ages, so there's more data coming into the Sheep Genetics database. Ewe lamb reproductive performance is classified as a different trait to mature ewe reproductive performance - they are correlated, but not identical.

Yearling reproductive performance has variable lambing success rates at the moment. By spending a couple of years looking at it, we should be able to get a better understanding of the environmental and genetic influences.

Why might this be important to sheep producers?

If you're only feeding a ewe for a year or so before it lambs, this can improve your production efficiency through more rapid genetic gain in all production traits, increased turnover rate of ewes and the opportunity to sell off older ewes earlier. When joining ewes at 18 months, you can assume they are all sexually mature. But, if you plan on joining ewes at 6-7 months, your first question will have to be whether these ewes are sexually mature. That's when traits like 'age at first oestrus' becomes important.

If we can develop a breeding value for 'age at first oestrus' it would be a great outcome, but even to find correlations between early reproductive success and other traits would be useful.

How will the project proceed?

I'm currently collecting data with sheep producers across Australia and using existing data from the Information Nucleus Flock.

It will be nearly a year before I can start analysing the industry data, but I should have a couple of publications from the Nucleus Flock analysis in the next few months. I will be looking at the heritability of age at puberty and the correlation of that trait with reproductive performance at yearling and later ages.

What's been the response from the producers you are working with?

I've been blown away. With my advisers from the Animal Genetics and Breeding Unit and CSIRO, we set a target of 4,000 ewe lambs to be joined in 2013 and lamb in 2014, and we wound up with more than 7,000 from 27 producers.

Producers are from all the southern states - a spread across environments and breeds.

I recruited the producers by talking about my project at conferences and workshops and followed this up with hundreds of emails and telephone calls.

I think producer numbers might come back a bit because of drought, but having such a phenomenal response in the first place means this shouldn't be too detrimental.

**Joanna Newton**

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Value adding

MLA is encouraging innovation in the supply chain by investing in a series of projects designed to add value to primal and secondary cuts.

Adding value to Australia's beef and lamb industry

From an automated goat head browner to a bioplastic made from blood meal, the projects are all designed to increase the net value of the carcass at the processing end of the value chain.

"Our primary driver is to increase the profitability across the supply chain," MLA's Manager of Value Adding Science and Technology, Dr Philip Franks, said.

"There's always a flow of benefits in both directions when there's innovation and improvement in productivity in either sector of the value chain."

Some of the projects are highly scientific and speculative in nature, such as the world-first attempt to develop a meat-tenderising enzyme that can be 'turned off', while others are more technical, such as the development of an automated goat head browning oven.

Innovative oven turns heads



33,972

browned goat heads exported by WME in 2012

Never tried goat head?

In many parts of the world it is considered a delicacy. In Caribbean countries, it is consumed in what is called mannish or goat head soup. In a dish originally cooked by the Igbo people, goat head is served in restaurants across the nation in Nigeria as Isi-ewu.

Browned goat heads are not a staple on most Aussie grocery lists, but in other parts of the world they are a mouth-watering delicacy and local processors struggle to fill export orders.

Meeting that demand for browned or 'flamed' goat heads is the goal of a project under way between MLA and Australia's largest goat processor, Western Meat Exporters (WME) in Charleville, south west Queensland.

The project comes under the umbrella of MLA Donor Company research and has been funded by WME and the Australian Meat Processor Corporation, with matching government contributions. No producer levies were invested.

Last year WME processed 520,000 goats for export, with 33,972 browned heads shipped to the United States and European Union.

WME has only supplied browned heads for four years, but Quality Assurance Manager Tony Lofthouse said the market was well established with enormous potential.

However, he said the labour-intensive and physically demanding browning process - which relies on operators using hand-held, LPG-fired torches while other employees turn the heads - was a limiting factor.

"Our biggest issue out here is staffing. Because the browning is an intensive process, we need quite a few people to do it," Tony said.

"The hand-held torches also present a work safety issue, and it's difficult to produce a consistent product."

WME approached MLA with a proposal to develop an automated browning oven.

MLA Program Manager for processing technology Chris Ruberg put WME in touch with equipment manufacturer Wesmartin Leonda.

A prototype machine is due early this year. WME will have first access to the oven, but it will become available to other processors.

The company is now considering another innovation: an oven to brown the entire carcass.



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Turning up the heat on tenderness

An unintended side-effect of High Pressure Processing (HPP) could revolutionise the way beef and lamb is retailed and prove a boon for processors looking to add value to secondary cuts.

MLA has been studying HPP to determine the nature of its impact on texture, and to develop concept products.

Researchers found combining HPP with temperatures of around 60°C caused meat fibres to become brittle and break into short rods of protein, resulting in increased tenderness.

MLA's Dr Philip Franks said an MLA chef is now working closely with scientists to develop concept products utilising 'pressure heating'.

"Some of the products in development include tender chuck steaks, cooked lamb forequarters, pulled beef for sandwiches or a burrito filling and instant ribs," Philip said.

The research, which was undertaken with CSIRO, also found that combining high pressure and heat produced a marked reduction in cooking loss (meat shrinkage during cooking) - another commercially important consideration.

There are an increasing number of HPP units in Australia available for contract processing of meat for clients, which will reduce the cost of market entry for meat processors.

HPP is widely used in the US, Europe and Japan on products such as fruit juice, dips and oysters, and its potential beef and lamb applications include rare roast beef, fresh cooked meals, nitrate-free smallgoods and snack foods.

A secondary cut now more tender following HPP.



What is HPP?

HPP involves applying very high hydraulic pressure to food that has been packed and immersed in liquid, killing pathogens and extending shelf life while reducing or eliminating the need for preservatives.

Blood makes fantastic plastic



Novatein granules and test pieces created by researchers at the University of Waikato. Inset: Measuring spoons made from Novatein, which is best suited to manufacturing techniques such as extrusion and injection moulding.

Imagine an eco-friendly biodegradable bioplastic that can be safely disposed of in landfill, is price competitive with traditional petro-chemical plastics and adds value to a red meat industry by-product.

It may sound too good to be true, but it's close to commercial reality as a result of a project being undertaken by MLA and the developers of a revolutionary bioplastic called Novatein.

Novatein is made from bloodmeal and was invented at New Zealand's University of Waikato in 2007.

The animal protein-based product caught the eye of MLA Commercialisation Manager Dr Duncan Veal about two years ago at a biotechnology conference.

"Commercially, Novatein ticked a lot of boxes for me," Duncan said.

"It creates a new demand for blood and bloodmeal, which increases the value of what is generally considered a low-value by-product.

"It also offers processors an opportunity to process the blood into resin granules using a fairly simple extrusion method. They can then sell the granules to the plastics industry.

"And finally, Novatein's developers see their role as finding product

applications and making the link to the plastics industry, which would be difficult for meat processors."

Late last year, MLA and the developers of Novatein joined forces to develop concept products and seek markets in Australia.

Waikato Link, the commercialisation arm of the university, recently teamed up with a private investor to form Aduro Biopolymers, which will take over the development of Novatein, as well as begin work on turning other novel, natural materials into commercial products.

Darren Harpur, Acting Chief Executive Officer of Aduro Biopolymers, said Novatein had a number of potential uses, including filming and foaming (processes used in the creation of plastic materials), but at this point was best suited to rigid structures with a wall thickness of 1mm or more.

He said market research had showed consumers were more comfortable seeing the product used in horticulture or agriculture, rather than in food contact items.



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Technology

You make me 'appy...

What is rectangular, fits in your pocket and can monitor pastures, predict rain and even help you cook the perfect steak?

New 'smart phone' technology, which delivers advanced computing ability to certain devices, has made the mobile one of the most convenient tools in livestock production.

If you are wary of the touch-screen or feel outsmarted by the smartphone, there is good news: MLA is opening the gate on

easy-to-use mobile technology for livestock producers by supporting the development of applications - or 'apps' - to deliver on-farm efficiency and productivity gains.

Apps provide a cost-effective and efficient means for producers to access information, keep records and use decision support tools at times and locations convenient to them.

Get it 'appening. How do you get an app?

If you have an iPhone or iPad go to www.apple.com/au/apps

If you have any other type of mobile telephone or tablet go to www.android.com/apps/

While you are browsing the app store, check out these handy tools as well:

- **APVMA (free):** Launched by the Australian Pesticides and Veterinary Medicines Authority in October 2012, this app provides access to the database of 10,500 agricultural and veterinary chemicals approved for use in Australia, for information about withholding periods and ingredients.
- **INSolutions (\$1.99):** Developed by the Agricultural Business Research Institute (ABRI) so users can access an electronic herd book of animal and member information from 80 registered breed organisations.

An App a day

If you click with this selection of apps for livestock producers, your smart phone just might become one of your favourite business partners:

Eye on the sky

What: Australian CliMate (Apple: for iPhone or iPad)

Who: A suite of climate analysis tools developed for the Managing Climate Variability Program (of which MLA is a partner).

Why: So producers can make better on-farm decisions based on weather patterns and climate probabilities.

How: Use the app to access and understand the past 60 years of daily rainfall, temperature and radiation data for your location. The app also calculates heat sums and estimates soil water and soil nitrate accumulation to guide crucial decisions such as when to plant. Input 'what if' scenarios to assess options. The app draws on climate data and decision-support tools from the Bureau of Meteorology and other organisations as recommended to producers at www.climatekelpie.com.au

When: Launched December 2012

Price: Free

You need it if you... want to make sense of climate statistics and forecasts.



www.managingclimate.gov.au

Electronic genie

What: Angus app (Apple and Android)

Who: Initially developed by Angus Australia, with funding from the MLA Donor Company, the app now incorporates the ABRI's INSolutions platform. (see page 29 for more on ABRI's INSolutions app.)

Why: To give Angus producers access to stud, cattle and sale information when they are in the paddock or at an auction.

How: Access the Angus database, conduct member searches, download catalogues for cattle, semen and embryo sales, look up comprehensive EBVs and pedigree information for individual animals, and link to the Angus Australia Classic website. A feature of the new Angus app is the ability to use GPS coordinates for Angus members' properties so you can navigate to stud sales.

When: Launched October 2011, new version December 2012

Price: Free

You need it if you... want genetic information at your fingertips.



www.angusaustralia.com.au

Fodder for thought

What: Stocktake+ app (Apple and Android)

Who: MLA and DAFF Queensland joined forces through the FutureBeef program to turn the Stocktake pasture-monitoring program into an app for northern livestock producers.

Why: Designed for producers on-the-go, the app replaces the need for paper-based tools (eg pasture photo standards) and support equipment (GPS and cameras) in the paddock.

How: Stocktake+ guides you through the best management practices of land condition monitoring and forage budgeting, to calculate long-term livestock capacity and short-term stocking rates. The user can access the latest R&D for pasture growth models and land type information, input observations from the paddock, compare results across sites and years, develop rainfall reports and email information. No 3G service? No problem. All the features work in the field without the need for 3G service and the app synchronises information back to a secure website when in range or connected to a computer. The web-based version allows you to access the tool without a smart phone, and YouTube clips and factsheets will guide you through the features.

When: It is due to be launched on 12 April.

Price: Free (some charges for advanced features)

You need it if you... want to be more efficient in measuring pasture and land condition in the paddock.



www.futurebeef.com.au and app website
www.stocktakeplus.com.au

App-etising

Some of our smartphone initiatives for consumers are:

Become a Tong Master

MLA's Beef Essentials free iPhone app takes the guesswork out of cooking beef. Use the 'queue' feature to synchronise the cooking of multiple pieces of beef, learn about the best beef cuts for different cooking styles, or use the cooking timer to cook the perfect beef meal every time. Select the cut, thickness, cooking method and whether you want it rare, medium rare, medium, etc, and the timer will indicate when to turn your meat, remove it from heat, rest it and when it is ready to eat.

Bullseye

Target 100 put social media and app technology on the menu for urban 'foodies' last year by using a dynamic month-long Facebook app on the Target 100 Facebook page. The app featured Sydney chef Darren Robertson from Three Blue Ducks inviting the community to submit their favourite beef or lamb recipe to generate conversations between consumers, producers and chefs to promote beef and lamb production. The app was launched at Taste of Melbourne festival in November 2012, where Target 100-sponsored Sustainable Living feature showcased sustainable food production to the festival's 25,000 visitors.

Aussie lamb, anyone?

MLA's North American division developed this free consumer-focused app to promote sustainable Australian lamb with recipes, cooking times, information about sustainable production and even a map to guide US users to their nearest Australian lamb retailer.

800 steaks
were cooked and sampled
in the development of
Beef Essentials

870 "likes"
for MLA food related apps in
the five days following the
2012 Virtual Farm event.

Left to right: Australian CliMate, Angus app, Stocktake+, Beef Essentials



Research at work

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

In this issue

19// Pain relief projects

MLA invests in research to improve animal welfare outcomes.

20// Sheep measles

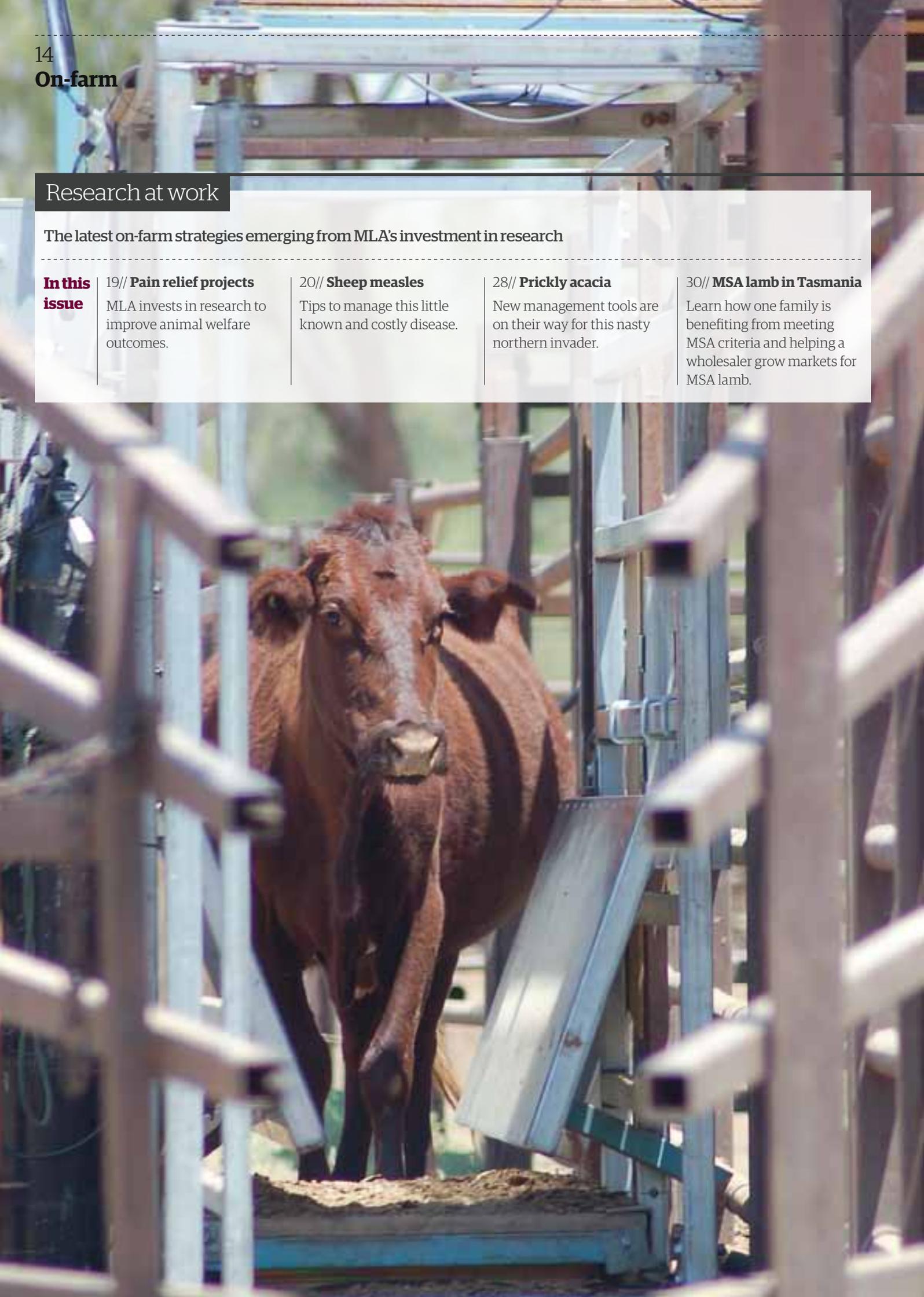
Tips to manage this little known and costly disease.

28// Prickly acacia

New management tools are on their way for this nasty northern invader.

30// MSA lamb in Tasmania

Learn how one family is benefiting from meeting MSA criteria and helping a wholesaler grow markets for MSA lamb.



Labour saving

Remote control livestock

While it might not mean you can run the farm from the beach, cattle producers can look forward to cutting costs, saving time and sleeping a little easier by adopting remote technologies tested in a northern Queensland trial.

A Producer Demonstration Site (PDS) on a north west Queensland property, funded by MLA, is demonstrating the gains and cost savings of walk-over-weighing (WOW) and remote-sensing technologies. The PDS is run in conjunction with a Beef Challenge near Richmond.

PDS Coordinator and FutureBeef Extension Officer in Cloncurry, Rebecca Gunther, from the Queensland Department of Agriculture, Fisheries and Forestry, said the project, while it is not completed until December 2014, had already led to remote management systems now available commercially being refined and further developed.

Precision testing

The Remote Livestock Management System (RLMS) being trialled by the PDS was developed by Alice Springs-based company, Precision Pastoral. Trials have found the system can save cattle producers up to \$68 a head annually.

RLMS combines hardware and software to remotely identify, weigh and draft individual animals and then transmits data via a solar powered unit to a central location. Each time the cattle move through a race to reach a water point, they walk over a weigh bridge, pass an NLIS scanner and go through programmable auto drafting gates.

"The producers could see a plateau in liveweight gain in response to changes in pasture quality, and establish the optimum time to begin feeding dry season lick," Rebecca said.

Rebecca said that in the first year the weights didn't plateau until about six weeks after the neighbouring Flinders Shire Beef Challenge group, which had begun feeding lick based on the traditional visual appraisal. That six-week delay represented a significant saving (figures vary due to the wide variety of supplement methods utilised by producers) in supplement costs, across 1,000 head.

WOW also allows producers to pinpoint other key management triggers, such as marketing and turn off.

"If your agent rings wanting a certain class of steer, or the meatworks price grid is offering a premium price for particular weight range, you can look at the WOW data and know quickly whether you have cattle in that range," Rebecca said.

There are limitations in having just the WOW bridge; the cattle still need to be drafted according to specifications. So, the PDS is now trialling an auto-drafter, also supplied by Precision Pastoral, that can categorise animals of different weights.

"If you want everything over 500kg, for example, you can program the auto-drafter. There is minimal stress to the animals, less bruising and a lot less labour," Rebecca said.

"The initial financial outlay will be paid off over time because you don't need that extra labour to muster and you save time not having to drive around the paddock visually appraising the cattle."

Putting it to the test

The Richmond PDS examined the effectiveness of these technologies:

- Remote Livestock Management System (RLMS) featuring
 - walk over weighing
 - automatic drafting
 - radio-frequency identification (RFID) readers
- Remote cameras
- A weather station with water monitoring

Opposite page:
The automated WOW bridge.



Labour saving



Spear trap yard with automated WOW bridge.

→

Keeping an eye on it

Remote monitoring cameras were installed to visually monitor the water trough levels at the PDS. The cameras used in the PDS trial were provided by William and Hollie Harrington from Harrington Systems Electronics. The couple design and build the uSee remote monitoring cameras on the family cattle station, Olga Downs, north of Richmond.

The camera takes photos five times a day and on demand, and they can be accessed online.

Sending images via the Next G or satellite telephone system, the cameras are used by producers to watch watering points,

especially in hot weather, monitor livestock and to check irrigation channels.

At a cost of \$1,300 a camera, the technology is undergoing continual improvement and the next step will be two megapixel-sized images from the cameras which will allow users to zoom in on the ear tag to identify the animal.

"They are one of the best labour-saving gadgets I've seen," Rebecca said.

"You don't have to drive to the paddock every day to check the water troughs or lay awake at night wondering if the 2,000 weaners out the back have any water."

"By installing cameras at water points, you could reduce the frequency of bore runs from perhaps two or three times a week to only once a week. The savings in diesel and labour costs will cover the camera costs before the end of the dry season."



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Labour saving

Remote management

The Richmond remote technology Producer Demonstration Site (PDS) has helped one station manager develop a plan for technology adoption, to guide investment decisions in the future.

Queensland Gulf cattle station manager, Ray Thieme, was quick to recognise the benefits remote livestock management tools were bringing to the cattle industry.

"I am definitely in favour of anything that reduces labour costs, helps us meet market specifications, reduces manual stock handling and, therefore, reduces stress on the animals," Ray said.

"Walk-over-weighting (WOW) and automatic drafting open up marketing options in that cattle can be out there while we are sourcing a market for them.

"We can set the specifications for certain weight ranges through telemetry and find out what they are drafting in real time. We can get an idea of what the mobs are doing, whether we need or want to sell them, and what percentage will meet the market, without even touching them."

Ray manages 860,000 hectares north of Julia Creek spread over four cattle stations: 'Dalgonally', 'Carrum', 'Canobie' and 'Wondoola'.

The four-station aggregation owned by Australian Agricultural Company (AACo) runs about 84,000 head made up of 34,000 breeders and 15,000-20,000 backgrunder cattle, with the rest being breeder replacements.

The practical reality

Automation such as WOW and auto-drafting require animals to voluntarily pass through a race, usually on the way to water. Large-scale properties often have more than one water point in a paddock - so can this system be practical on a commercial cattle property?

Ray believes it can. He has devised a solution where the cattle would be mustered into large holding paddocks with one water point.

"That way you have only got one handling cost and are not actually yarding up," Ray said.

"That's the way I see the application in areas with multiple waters. Muster or trapping into central points and then implementing it that way."

AACo is testing a WOW unit at Wylarah Station at Surat, Queensland, and its integration into the AACo livestock management system, and has plans to roll out further automation including more WOW and automatic drafting.

Remote monitoring for water supplies is also on the agenda. To manually monitor stock water on a property like Dalgonally which - at 128,000ha - is an average-size property for the area, Ray estimates an annual spend for wages, fuel and vehicle maintenance of \$100,000-\$120,000.

"We've also got bores or waters across river systems that you can't get to over the wet season," Ray said.

"We have to fly helicopters over to start or check them, and we are flying fixed-wing aeroplanes around to monitor them.

"This is certainly not 'pie in the sky' stuff. I think the technology and hardware - while it will all get better - is actually now at a stage where it is usable.

"With AACo being a corporate, publicly listed company, we monitor all our assets including our weights, so live weight monitoring is important to us as part of the inventory management."

Snapshot

Ray Thieme,
Julia Creek, Qld.



Property:
860,000ha in four cattle stations, 'Dalgonally', 'Carrum', 'Canobie' and 'Wondoola'.

Livestock:
Cattle - 84,000 head AACo composite breed

Pasture:
Flinders grass and Mitchell grass, as well as Queensland Bluegrass, Native Millet and Native Sorghum

Soil:
Being on the Flinders River catchment, Dalgonally and Carrum are mainly alluvial, Wondoola is floodplains and Canobie is lighter red Spinifex country

Rainfall:
Carrum 443mm, Dalgonally 500mm, Canobie 560mm and Wondoola 660mm



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Above: Ray Thieme. Photo courtesy of Australian Agricultural Company

Data drives direction

Snapshot

John Finlayson,
Armidale, NSW.



Property:
2,200ha

Enterprise:
Merino wool,
prime lambs, beef
breeding and
fattening

Livestock:
1,000 head cattle
(Hereford and
Angus bloodlines),
5,000 sheep

Pasture:
Predominantly
native pastures
and 350ha of
improved pastures

Soil:
Granite sandy
loam (60%) with
some heavier
basalt soil (40%)

Rainfall:
780mm

We first profiled Hoffman Beef Consulting's Beef Profit Groups in the October 2012 edition of *Feedback*. Here we take a look at the progress of Guyra Beef Profit Group member John Finlayson.

\$1.50 kg CoP
↓
\$1/kg target

Having seen first hand the benefits of successful benchmarking while travelling overseas before returning to the family farm at Armidale in 2004, John saw the Guyra Beef Profit Group as a vehicle through which he could progress his business.

"Because of our enterprise mix we had historically looked at whole farm return per hectare. Learning from the Beef Profit Group about the cost of production (CoP) calculator allows me to breakdown each enterprise and compare enterprises from year to year. We have primarily used the tool for beef, but will look to using it for the wool and sheepmeat component of our business," John said.

John admits that his current CoP is high at \$1.50 but believes it is a realistic view of what it is currently costing him to produce a kilogram of beef. His aim is to get it below \$1/kg.

"Our CoP includes a large amount of capital investment with infrastructure on the

property needing improvement and repair. We will begin to reap the rewards on the money spent on fencing and improving pastures in the next few years," John said.

Calculating the kilograms of beef being produced has also been an important process.

"As we invest in improving country we know that our kilograms of beef produced has to go up. Currently all young and finishing stock are run on the improved country and the breeders and sheep are run together on the native country," he said.

"This makes it quite easy to portion the costs to the different enterprise and then compare them directly. It helps dictate the decision to sell weaners or continue to fatten them for the domestic or feedlot market."

Measuring up

John's analytical approach to his business means that on-farm monitoring is a high priority.

"We aim to measure the kilograms of dry matter removed at each grazing and have benchmarks so we don't graze below

1,200kg DM/ha. Our aim is to collect enough data to calculate the total pasture yield - and this is a powerful figure," he said.

"We can cross reference it to the kilograms of beef we are producing and know exactly how many kilograms of dry matter it is taking us to produce a kilogram of beef."

John works closely with his agronomist to make sure he is making the most of his fertiliser dollar.

"My fertiliser regime is dictated by how many DSEs we have been running and plan to run, so I know how much nutrition I need to put back into the system. This is supported by soil testing annually at 15 GPS monitored sites across the property," he said.



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Calculate your cost of production with the help of MLA's online calculator:
www.mla.com.au/CoPbeef

Animal welfare



The CSIRO's Dr Caroline Lee monitoring a sheep as part of the self-medicating trial.

Animal welfare priorities

In the last decade MLA has invested nearly \$4 million in animal welfare projects. This investment is driven by the industry's desire to improve the wellbeing of livestock, the resulting production outcomes this brings and, more recently, the growing interest from the Australian community in the way animals are cared for. As public consultation is called for the draft Australian Animal Welfare Standards and Guidelines, for both sheep and cattle (see article on page 4), MLA continues to invest in research which will help producers manage any future changes.

The Standards, once finalised and endorsed by governments, will be adopted into legislation, nationally. The legislation could govern how livestock producers perform routine procedures such as castration and tail docking. The development of the new standards and guidelines are "a compelling case for action", according to Jim Rothwell, manager of MLA's Sustainability Research and Development program.

Two three-year projects aim to develop cost-effective methods of pain relief and lay the scientific basis for future research into pain management in livestock.

Learning from the sheep industry

Technology devised as a mulesing replacement may help cattle producers reduce stress associated with castrating older animals.

MLA is funding SVW Technologies director Peter St Vincent Welch to modify the technology, which he has been developing for seven years.

Peter discovered that sodium lauryl sulphate (SLS), injected into a sheep's breech skin, denatured skin protein to remove wrinkles and increase the bare breech area.

He modified the US-developed Pulse NeedleFree system to carry a multi-tube head that injected SLS over a wider area.

For the castration project, Peter is again modifying the NeedleFree system so that it can inject anaesthetic, analgesics or SLS before castration of older cattle.



An applicator similar to this one could provide pain relief for cattle when castrated.

The castration research is still in its infancy, but Peter believes the process will be practical for use by producers wanting to grow out bull calves and castrate them late, after profiting from the growth benefits of testosterone.

Early results have been consistently positive; more trials will be done with CSIRO.

Medication on demand

Can sheep or cattle learn to consume treated feed or water that eases the pain of procedures like castration or tail docking?

A similar concept has worked in studies of poultry. PhD student Danila Marini aims to find out whether it works for sheep and cattle on-farm.

Her supervisor, CSIRO animal behaviour researcher Dr Caroline Lee, said the project has to first answer a scientific question: Can ruminants learn through association to self-medicate?

"Along the way, we might learn about how animals perceive the pain related to husbandry procedures," Caroline said.

"At the moment, we gauge pain by taking external measurements such as the stress related hormone, cortisol. That's a very different approach to an animal telling us directly through its behaviour how much pain it is experiencing," she said.



See page four for information on how you can have input into the draft guidelines.

Read about the changing animal welfare landscape in the May 2012 edition of *Feedback* (pages 6-7) at www.mla.com.au/feedback

The Australian Animal Welfare Strategy at: www.daff.gov.au/animal-plant-health/welfare/aaws
www.mla.com.au/Cattle-sheep-and-goat-industries/Animal-welfare



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Animal health

Getting to the bottom of the sheep measles mystery

Charles Sturt University (CSU) parasitologist Dr David Jenkins is heading a project for MLA to determine the economic impact of sheep measles, as well as the on-farm risk factors for its transmission.

The Senior Research Fellow's work follows surprising data collected by the National Sheep Health Monitoring Project, which showed that more than 96% of lines inspected at WA abattoirs from July 2008 to June 2009, contained at least one sheep with the disease (a line is defined as a group of producer-bred sheep sold to a processor in one lot).

"Recent data has identified sheep measles to occur more commonly in sheep than was previously realised; it's particularly widespread in WA, with medium levels in NSW and Victoria," David said.

"There appears to have been a slight downward trend in prevalence in South Australia, however infection hot spots can still be found, with one SA producer recently losing \$3,000 after 90% of his consignment was found to be infected."

Automatic transmission

Sheep measles are small cysts in muscles (especially the heart) of infected sheep that each contain a tapeworm head. If eaten by a dog, that head develops into a two-metre long tapeworm, *Taenia ovis*.

Infection is caused when sheep eat sheep measles tapeworm eggs while grazing. Infected dogs can pass more than 100,000 eggs in their faeces each day, with the eggs remaining infective for several months (see 'Top tips' on page 21 for ways to control tapeworm eggs in working dogs).

Counting the cost

While the disease is not detrimental to human or animal health, it can have a major economic impact.

In the 1960s, sheep measles led to the rejection of 82,000 cartons of Australian boned mutton by the US and it remains a potential international trade impediment, as well as an economic burden for processors.

"This project began in November 2011 and, from very preliminary data, I estimate the disease is costing

some NSW processors between \$1,200 and \$1,600 a day in labour and waste," David said.

"In WA, the cost to processors is up to three times that much.

"Processors are wearing most of the losses, but producers who sell over the hook can be heavily penalised. If the disease reoccurs, processors will tell their buyers simply to avoid particular producers."

Collecting the data

Processors from NSW, WA and Tasmania are assisting David's research by collecting data from 20,000 sheep, four times a year, to assess the impact of seasonal factors and animal age on the disease.

Producers are also helping out, with 102 answering questionnaires about their on-farm practices and supplying samples of dog faeces.

"I've had a deluge of dog poo come through the mail from NSW, WA and Tasmania," David said.

"We've looked at about 150 samples and seen almost no worms in the dogs at all."

The results appear to confirm David's suspicion that, contrary to conventional wisdom, foxes and wild dogs may also spread the disease.

"We've found *Taenia ovis* in one fox at Jugiong in NSW and I'm hoping to access a lot of fox carcasses through WA's Red Card for Foxes program.

"If it turns out to be a wildlife transmission issue, producers may need to consider vaccinating their sheep against the disease."

A vaccine has already been developed in New Zealand and, according to David, would take about three years to be registered in Australia.





Above: Hardened, mineralised sheep measles cysts in a sheep's heart.

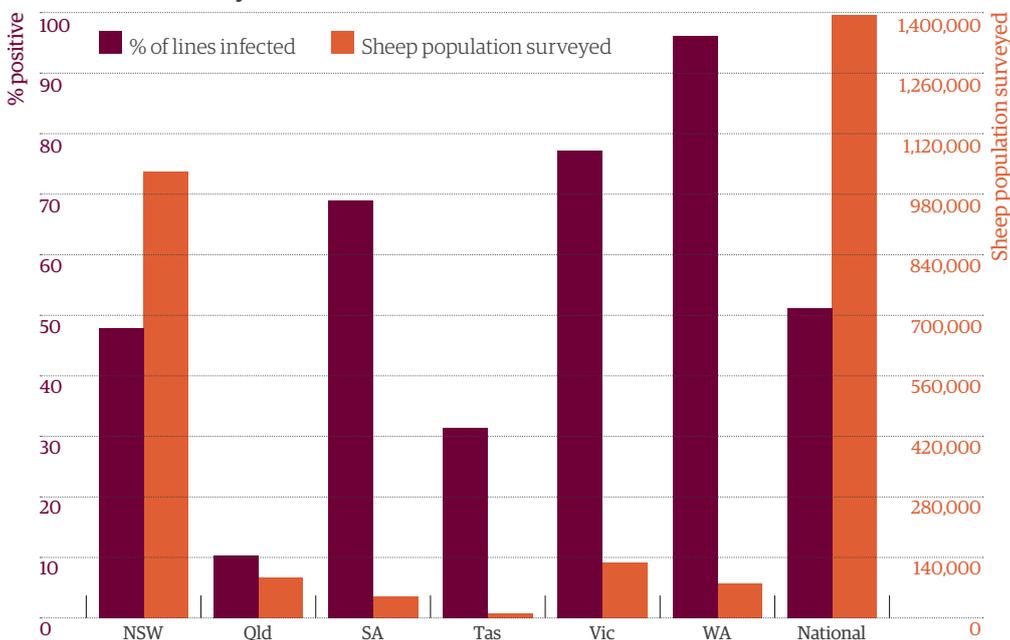
Left: CSU parasitologist Dr David Jenkins suspects sheep measles may be spread by foxes.

Sheep measles is estimated to cost NSW processors

**\$1,200–
\$1,600/day**

in labour and waste

Figure 1 Sheep measles survey. Percentage of lines (as processed) with one or more animals infected, July 2007- June 2008



Source: National Sheep Health Monitoring Project

TOP TIPS: How to manage sheep measles

- Treat dogs regularly with an allwormer containing Praziquantel.
- Feed dogs dry biscuits - if you choose to feed sheepmeat, then cook first or freeze for 10 days in a domestic freezer before you feed it out.
- Don't feed dogs the offal of any species.
- Make sure dogs are secured when not working, particularly at night.

Turn over to read of one producer's experience with sheep measles.

Animal health

A spot of costly bother



In June 2012 lamb feedlotter Stuart and Sharon Oliver were shocked when 90% of a lamb consignment sent to the abattoir was found to have sheep measles.

South Australian lamb feedlotter Stuart Oliver reckons he'll be first in line if a sheep measles vaccine is trialled in Australia.

Stuart and his wife Sharon lost \$4,000 last year when 32 lambs from their feedlot were condemned due to sheep measles infection. They say their experience raised more questions than answers.

Stuart has lived on 'Gumlea', east of Kingston SE, for 30 years and had never heard of sheep measles in the area before.

"I knew about *Taenia ovis*, but I didn't think much about it," Stuart said.

"Technically, we were doing everything right, such as worming our dogs and not feeding them offal. When the infection hit us there was a sense of disbelief."

The Olivers turn off 3,500-4,000 lambs a year from their small paddock feedlot on 'Gumlea'. Ewes lamb over an eight-month period with lambs weaned into the feedlot and sold monthly for a range of markets. The lambs are complementary fed while grazing in 4-6ha paddocks.

"In 2011, we had below-average rain and the season was closing off very early, in September, so I weaned the lambs early," Stuart said.

"I noticed the dung beetles weren't working and the leaf index area was a lot lower. We also had a fox problem.

"So the lambs were grazing a lot earlier and a lot lower, and the sheep and fox manure content in the paddock was going up."

The first indication of a problem came in April with abattoir feedback showing a slight bladder worm infection in the Olivers' lambs.

"Bladder worm is caused by a similar tapeworm to sheep measles, so in hindsight it shows conditions were right for tapeworms," Stuart said.

"In June, we went from zero sheep measles infection to 90% and 27 lambs were condemned.

Snapshot

Stuart and Sharon Oliver, Kingston SE, SA.



Property:
750ha

Enterprise:
Small paddock lamb feedlot, with ewes lambing over an eight-month period. Lambs sold monthly to various markets.

Livestock:
3,200 Border Leicester-Merino and Border Leicester-Merino-Corriedale ewes, with 3,500-4,000 lambs through the feedlot annually. Poll Dorset terminal sires.

Pasture:
Improved pastures sown to balansa clover and Italian ryegrass.

Soil:
Coastal sandy loam

Rainfall:
650mm

Lessons learned

- Don't feed dogs offal or any sheepmeat.
- Pay attention to abattoir feedback, eg if bladder worm is on the rise, conditions are also right for other tapeworms.
- Worm dogs every month with an allwormer containing praziquantel, instead of every three months as originally advised.
- Only feed dogs dry biscuits.
- Quickly remove sheep carcasses and bury them - also cover with shade cloth as foxes still try to dig them up.
- Control foxes whenever possible.
- Seek help - I contacted PIRSA Veterinary Officer Fiona Spurling and MLA which put us in touch with parasitologist Dr David Jenkins.

"In August we pre-warned T&R (abattoir) the lambs were coming and might have a problem, but there was only a 30% infection and five lambs were condemned.

"In September and November we had a 15% infection rate and zero condemned, and we've had no problems since."

Stuart has changed on-farm practices to try and avoid a future outbreak, but believes more research is needed to fully understand the disease.

"(Dr) David Jenkins visited us, but even he couldn't answer all my questions," Stuart said.

"The current information says it's not spread by foxes, but my dogs didn't have *T. ovis*."



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Genetics



Better selection of sheep

Australian Merino breeders have three updated, producer-driven, profit indexes that recognise the breed's versatility and new market opportunities.

The new sheep indexes, developed from responses to an Australia-wide producer survey, aim to improve sire selection for three different production systems and target markets.

For enterprises that produce fine wool and have significant surplus sheep sales (ie no wethers retained), there is the MP (Merino Production) and MP+ indexes.

For dual-purpose flocks that cross Merino ewes to terminal sires there is the DP and DP + indexes.

For super-fine or fibre-only production systems where wethers are retained, the Fibre Production (FP) and the expanded Fibre Production Plus indexes are dollar value indexes that could, according to MLA

projections (by using continuous selection over 10 years) achieve economic gains of up to 53% for key traits (eg fibre diameter).

Producers selecting rams for increased body weight using the MP Index over 10 years could expect a 51% contribution to economic gain, while those selecting for higher number of lambs weaned, using the MP+ Index, could expect an increased contribution to economic gain of 25%.

MERINOSELECT Project Officer Luke Stephen said offering two versions of each index would give producers the best opportunity to meet breeding objectives.

"For example, if a super-fine wool producer wants to focus on the traits most recorded by MERINOSELECT, ie fleece weight, fibre

diameter, body weight and co-efficient of variation of fibre diameter, then they would use the FP Index which only focuses on these traits," he said.

"However, if a producer wanted to improve additional traits in their flock, such as staple strength, worm egg count, curvature and number of lambs weaned, then the FP+ Index would be more suitable."

Making more from sheep

The survey was done in collaboration with Australian Stud Merino Breeders, Superfine, Wool Producers, Sheep CRC and Australian Wool Innovation. It was the first of its kind in Australia. Its 270 respondents collectively owned almost 800,000 Merino ewes and less than 20% were MERINOSELECT clients.

"This was the first time producers have been asked which of the 16 traits included in the survey were most important to them," Luke said.

"Producers fell broadly into three categories, although there were common goals. Everyone wanted higher weaning rates and there was also a huge emphasis on growth."

Medium-strong wool producers showed strong interest in increased muscling in their sheep; fine wool producers were more concerned with improving worm resistance, particularly in higher summer rainfall areas where barber's pole worm and drench resistance have become persistent problems.

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ASBV indexes are tools which weigh up a range of traits to help producers achieve a particular breeding objective.

The new MERINOSELECT FP, FP+, MP, MP+, DP and DP+ indexes are all \$ value indexes that indicate the value of an animal based on its suitability for a particular market. The values are given in real dollar figures and expressed as \$/ewe joined/yr.

For example, a dollar index of 105 indicates that a ram will produce \$5 extra value for every ewe joined compared to a ram with a \$ index of 100. The accuracy of the indexes will improve as more information is recorded.

A condensed version in a sale catalogue of ASBVs and accompanying indexes could present like Figure 1:

Animal ID	Yearling Weight	Yearling Clean Fleece Weight	Yearling Fibre Diameter	Yearling Fibre Diameter CV	FP+	DP+
110492	2.2 90%	5 82%	-1.5 93%	-1.2	130 43%	123 45%
110357	6.2 82%	9.78%	-0.1 92%	-0.8	122 40%	132 42%

In this example, 110492 would be better suited to a production system where wethers are kept as he has better wool quality traits, whereas 110357 has better growth and fleece weight and would be better suited to a dual-purpose production system as he has better genetics for growth and fleece weight.

Meeting market specifications

Russian door opens

The building of the Russian beef herd is driving demand for cattle from Australia.

Southern cattle producers have found the Russian market to offer great opportunities for quality, purebred heifers with traceable genetics.

North East Victorian stock agent Jeff Brindley, of Paull & Scollard said compliance to Russia's market specifications was important.

"In our region, Russian buyers were looking for purebred Angus and Hereford females with good conformation, true to breed type and in excellent health. Once satisfied, several were happy to be return buyers," he said.

Brisbane-based exporter AUSTREX Pty Ltd (Australian Rural Exports) sent almost 6,000 head in two shipments of Angus, Hereford, Holstein heifers and bulls to far-east Russia last year. The company is looking forward to securing further contracts this year.

AUSTREX livestock manager Rohan Hadley said his firm represented multiple Russian clients, all striving to increase herd numbers to achieve their national food security goals.

"Interest has predominately been in purebred Angus and Hereford cattle, which we've sourced through agents from Western Australia, South Australia, Victoria, NSW and Tasmania," he said.

"Previously there has been a premium offered for quality animals, however, this has been partially eroded by our continued high Australian dollar. It's a very competitive market, with buyers also sourcing cattle from New Zealand and the United States."

Rohan said demand was strongest during 2012 for empty heifers, aged 10-16 months, weighing 250-350kg, that were healthy and "weighed well for age".

"Any pregnant females for shipment must weigh a minimum of 400kg and be less than five-and-a-half months gestation at loading," he said.

All vendors are required to produce a category two breed certificate, which can be generated by the appropriate breed society if the animals are sired by registered stud bulls (a maximum of five sires is allowed per sire group).

MLA's Europe and Russia Market Analyst, Ben Larkin, said prospects for the Russian livestock export trade looked strong in the short term, with export numbers jumping from 9,400 head in 2009-10 to 36,500 head in 2011-12.

"Most of this activity has been stimulated by Russia's leading pork producer, ABH Miratorg, which is branching into beef on a massive scale. By next year (2014), the company aims to have 120,000 pure Angus breeders," he said.

Ben urged any producers interested in supplying the Russian market to be vigilant about withholding periods, particularly with any vet medicines or feed additives containing oxytetracycline or chlortetracycline.

"It's vital to preserve Australia's market access by strictly abiding by Russia's export protocols," he says. "If you have any doubts check the SAFEMEAT website (www.safemeat.com.au) for further details."



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Requirements for Russian market eligibility www.safemeat.com.au/FAQRetrieve.aspx?ID=47724

For information on Category 2 Breed Certificate:
www.ilric.com/pdf/Smaller_ACGEA_Standards_English.pdf

Useful website:
www.safemeat.com.au

Russian for



The Paton family of Tooma NSW began supplying heifers into Russia in 2011 and Kazakhstan last year.

Roger and Amy Paton, EU-accredited Hereford breeders, traditionally grow out their steers to feedlot weights and send their heifers through the saleyards.

"It's been a fantastic opportunity for us that just came along at the right time," Roger said. "Unfortunately, it's not something you can plan for. Each time it's been a one-off. That said, we will plan ahead to be in a position next year to grab the opportunity if it comes up."

Roger is a third-generation producer on his 1,250ha family property, 'Coonara', halfway between Corryong, Victoria, and Tumbarumba, NSW. He, wife Amy and four children run 850 Hereford breeders.

For the past two years they have focused on capturing the EU premium, through JBS Swift, which has consistently delivered them about 10¢/kg more than non-EU rates.

Roger and Amy were first introduced to the Russian buyers through Corryong stock agent Jeff Brindley, of Paull & Scollard, and to the Kazakhstan connection by Elders Adelong-Tumut agent, Tim McKean.



Snapshot

Roger and Amy Paton, Tooma, NSW.



Property:
1,250ha

Enterprise:
Commercial Hereford breeders for the feedlot market

Livestock:
850 breeders

Pasture:
Phalaris, clover, ryegrass, native grasses

Soil:
Granite, volcanic

Rainfall:
800mm

"The Russian buyers were quite specific about their needs," Roger said. "They wanted unjoined heifers, 250-320kg (they were happy to accept our weights), that were true to type, with a crest and not too much white. They were very particular about the markings."

"There was a bit of paperwork to fill out, in particular we had to list all the groups' sires, which had to be verified by Hereford Australia, but it wasn't overwhelming," he said.

The animals bound for Russia went into quarantine and were shipped out of Portland. The 110 Kazakhstan-bound heifers, which weighed between 200kg to 250kg, were flown out of Melbourne.

"During quarantine they underwent health checks, pregnancy scans and were checked for freemartins (barren cows). There was only one reject from the Kazakhstan mob. It was sold at the nearest market and we received the proceeds."

The remainder were loaded into airline crates, five at a time, and Tim McKean flew with them to their destination in

Kazakhstan to ensure the transaction went smoothly. Tim reported all arrived safely and in good condition.

Roger said he had considered the long-term ramifications of selling breeding stock to nations committed to self-sufficiency and at the risk of diminishing Australia's longer-term markets.

"I have thought about it, and you'd hate to think that eventually you've shot yourself in the foot. I think in this business it's very difficult to plan for the longer term. It's about making the most of the opportunities that come your way," he said.

Roger said there had not been any feedback from the Russian buyers and no indication of whether the opportunity to supply would be there again, however, the exercise was a valuable lesson in market flexibility and the importance of looking outside the square.

"If we weren't keeping our eyes open and constantly comparing different selling options, we might have missed these opportunities," he said.

Lessons learned

- Look for different markets.
- Read newspapers, talk to people, cultivate contacts.
- Plan ahead to take advantage of opportunities as they arise.
- There is limited, if any, opportunity to build relationships with foreign buyers, however, you can stay in the loop by keeping in contact with stock agents and exporters.
- Kazakhstan was a great opportunity for lighter heifers.
- Don't be put off by the paperwork requirement, it's not too complicated.



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Weed management



A thorn in his side

Julia Creek producer Marc McCowen has had plenty of practice changing tyres.

Snapshot

Marc and Suzie,
Philip and Judi
McCowen,
Julia Creek, Qld.



Property:
32,374ha

Enterprise:
Turn-off 1,200
weaners for
feed-on market,
plus produce
breeders

Livestock:
4,000
Droughtmaster
breeders and
followers

Pasture:
Mitchell and
Flinders grass

Soil:
Black soil

Rainfall:
450mm

Fast facts

- Prickly acacia costs producers at least \$20 million a year in reduced beef and wool production, control costs, increased mustering costs and tyre repairs.
- Prickly acacia covers more than six million hectares. It has the potential to invade 50 million hectares.
- Prickly acacia was introduced into Queensland in the 1890s for shade and fodder.
- Prickly acacia forms dense thorny thickets, interfering with mustering and access to water. It decreases pasture production, out-competes pasture for water, facilitates erosion and threatens biodiversity.
- There are large, established infestations in western Queensland in an area roughly bordered by Aramac, Barcaldine, Winton, Julia Creek and Hughenden. It is also found at several Queensland coastal localities, the Victoria River and Barkly Districts of the Northern Territory and the Kimberley region of Western Australia.

Weed explosion prompts warning

Prickly acacia is one of Australia's worst weeds, costing \$20 million a year in lost production and control, and invading 6.6 million hectares of Queensland grasslands alone.

A 25-30% canopy cover of prickly acacia halves pasture production; a 50% canopy cover prevents almost any pasture growth.

A succession of above-average wet seasons has led to an explosion in prickly acacia seedlings. The weed's National Control Coordinator Nathan March is advising landholders to ensure that ground gained from the weed in previous years is maintained.

"Cattle are the main spreaders of the seed, so producers need to restrict stock access to mature seed pods and to quarantine stock that have eaten the pods," Nathan said.

"Prickly acacia seed can take up to six days to pass through an animal so using clean holding paddocks prior to sale, or after purchase, is a good tactic."

Landholders should also try to eliminate prickly acacia along bore drains, creeks and dams as trees in these locations produce big quantities of seed every year.

Prevention is easier than cure, so Nathan advises cleaning up the least-infested paddocks or high seed-producing trees first.

Once prickly acacia is established, there are a number of recommended chemical and mechanical control techniques, which are used either alone or in combination.

"Basal bark spraying with herbicides such as Starane Advanced® is recommended for stems up to 10cm in diameter, but only when the tree is actively growing," Nathan said

"The cut stump method can be used at any time of year, but herbicide must be applied within 15 seconds of cutting.

Since returning to the family property 14 years ago, Marc has averaged about one flat tyre a week, thanks to prickly acacia thorns.

It's just one of the costs the McCowen family has had to contend with as prickly acacia has gradually increased its hold on their cattle stations, 'Baroona' and 'Caleewa Downs'.

Other costs include increased labour at mustering time because cattle have learned to hide in the thorny scrub, reduced carrying capacity and production because the prickly bush has completely replaced grass in many areas; and the cost of chemical and labour for weed control.

"When my grandfather bought 'Caleewa' 50 years ago there were no prickly bushes on it," Marc said. Prickly acacia was now well established on all the watercourses and is starting to break out on the open downs country.

"We have a couple of paddocks where there's just the odd tree coming up, so we're now focused on trying to keep those clean.

"If we ever get to the stage where we have to spell our cattle before we can sell them, at least we'll have a paddock or two clear."

'Baroona', 20km away on Julia Creek, has a much heavier infestation of prickly acacia, particularly along the bore drains, exacerbated by a run of good wet seasons.

"We also went out of sheep about seven years ago and I believe this has contributed to the increase, as the sheep used to graze the small seedlings," Marc said.

The fight

In the past, Marc has used a front-end loader to clear trees along the bore drains, but they've grown back so thick that "in some places you can't ride a motorbike through them".

He's also used a mixture of the herbicide, Access™, and diesel applied to individual trees using the basal bark method and has poisoned trees after cutting them for fodder. However, he says once the mature tree is gone, 30 or 40 seedlings quickly replace it.

He's found his best success with another herbicide Graslan™, applied in pellet form.

"Graslan seems to be the most effective because it kills the seeds in the ground for several years," he said.

"It costs about \$18,000/tonne and we use two to three tonnes a year just trying

to keep fences, roads and main water points clear.

"We've been doing that for five or six years - and we're failing."

After the mature trees die and new seedlings appear he plans to apply Graslan via helicopter at a rate of 10-15kg/ha over an area of about 100ha, with a sweep of 15m either side of each bore drain.

Lessons learned

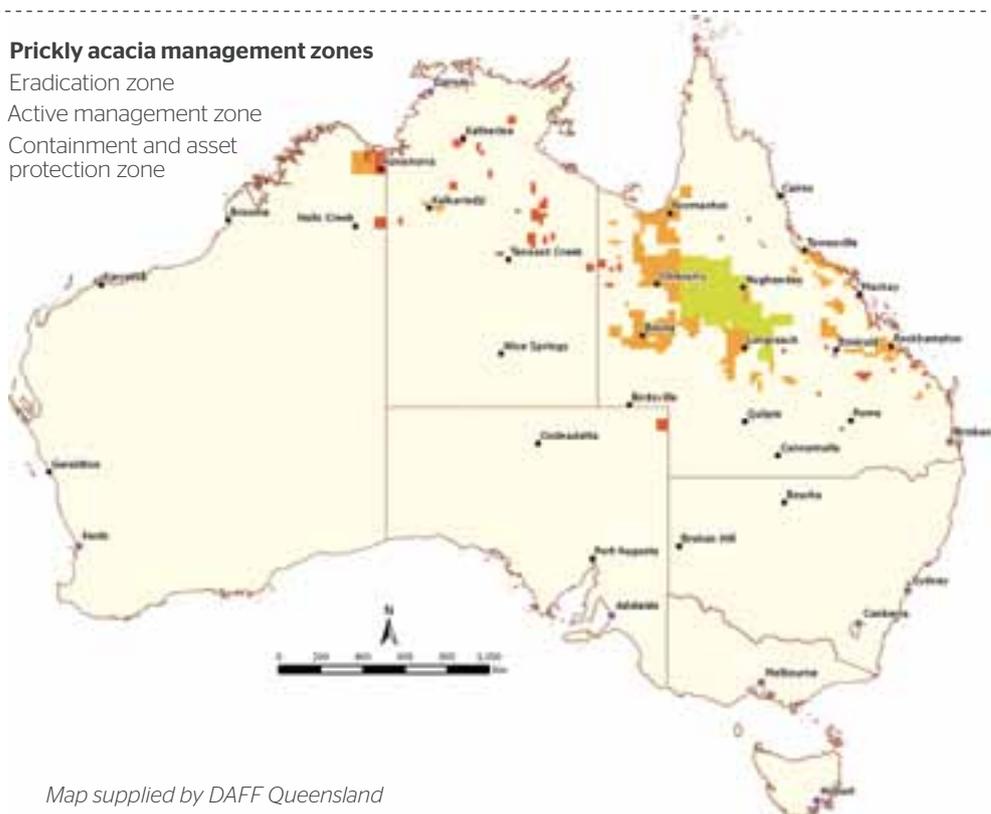
- Work on controlling small breakouts first, so you keep some paddocks clean.
- Target fences, roads and main water points.
- Use different herbicides with different modes of action.
- Sheep can be useful in controlling plants as seedlings.
- Be consistent and proactive.



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Prickly acacia management zones

- Eradication zone
- Active management zone
- Containment and asset protection zone



Map supplied by DAFF Queensland

"Alternatively, soil-applied herbicides such as Graslan® and Velpar L® can be used to reduce time and labour effort."

Pushing and double chain pulling is useful for those with medium- or high-density infestations but, again, timing is crucial.

Management tips

1. Map and prioritise prickly acacia areas on your property.
2. Eliminate prickly acacia along bore drains, creeks and dams.
3. Clean up least-infested paddocks and/or high seed-producing trees first.
4. Incorporate strategic fencing to contain prickly acacia.
5. Quarantine sheep and cattle for at least six days when moving from infested paddocks to clean areas.
6. Progressively reduce larger infestations working on a paddock-by-paddock basis.
7. Maintain competitive pastures.



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Prickly acacia fact sheet:
www.daff.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-Prickly-Acacia-PP9.pdf

Weed management

Tackling a prickly invader

A multi-pronged attack on prickly acacia could see new on-farm control measures available within two years.

Photograph supplied by Vic Galea.

University of Queensland (UQ) researchers have established field trials using native fungi to develop a bioherbicide that will induce dieback in prickly acacia, while the Department of Agriculture, Forestry and Fisheries Queensland is searching India for insects that feed on the plant.

UQ plant pathologist Associate Professor Vic Galea said MLA funding had enabled the move from preliminary investigation to large-scale field trials in just two years.

He said it took six years to reach the same point in his parkinsonia research, with the bioherbicide Di-Bak Parkinsonia due for commercial release in 2014.

It is hoped a prickly acacia bioherbicide will be commercially available by late 2015 or early 2016.

"In 2010, a two-year MLA-funded project conducted preliminary investigations of natural prickly acacia dieback," Vic said.

"We were able to isolate more than 150 fungal strains from various locations across north Queensland and, after laboratory screening and glasshouse tests, identified several isolates that produced dieback symptoms in young plants."

UQ and BioHerbicides Australia took over the research late last year, appointing PhD student Ahsanul Haque to continue the work.

Ahsanul is conducting glasshouse experiments and field trials on the effectiveness of several isolates, both singly and in combination, as well as the potential for combining chemical herbicides with the biocontrol agent to induce a stress response in the plants.

Vic will conduct large-scale field trials this year, and has been approached by several prickly acacia affected producers keen to help with the research.

"The constructive capital and goodwill we developed with the parkinsonia work has paid off in terms of bringing other people to the table for the prickly acacia work," he said.

Looking for leaf eaters

Meanwhile, efforts to control prickly acacia by releasing exotic insect species are ongoing, with researchers investigating a scale insect (*Anomalococcus indicus*), a green leaf-webber (*Phycita* sp. B) and a leaf-feeding weevil (*Dereodus denticollis*) as potential biological control agents.

Following a lengthy quarantine process, the insects have all been imported from India,

which is the native range of Australia's prickly acacia populations.

Project leader and Biosecurity Queensland principal entomologist Dr Kunjithapatham Dhileepan said testing of another leaf-webber, *Phycita* sp. A, was abandoned last year after the insect was found to feed on species other than prickly acacia.

Researchers have recently imported a leaf-feeding weevil and a green leaf-webber to establish colonies of these agents in quarantine.

The search for suitable biological control agents has been going on since the 1980s. Six insects have been released, but only two have been established in the field and with limited impact.

Fast fact

University of Queensland researchers hope to have a prickly acacia bioherbicide commercially available by late 2015 or early 2016.



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Genetics

The genetic pay back

Selecting bulls with the genetics to boost profitability is a necessity, not an option, to help keep productivity ahead of costs, according to Dr Rob Banks, MLA's Program Manager, R&D Strategy and Evaluation.

"I've calculated that using a bull that gives you financial gain of \$2.50/DSE annually will return you (over 500 cows at 20 DSE/cow with a base profit of \$3.95/DSE) \$7,412 additional profit a year in today's terms or \$111,173 over 15 years," he said.

"The herd might stay as productive as it is today, but the Consumer Price Index will have risen steadily, diminishing profitability.

"On the other hand, buying a bull which does not provide you with productivity gains and with CPI taken into consideration, could lead to you going backwards," Rob said.

Fortunately, Rob said, the tools of genetic selection were readily available and, as is the case with ABRI's INSolutions mobile phone app, increasingly easy to use.

Using INSolutions, producers can choose to use \$Indexes to rank sires on a range of key profit traits, or target a specific trait (carefully balanced with other traits) to address a deficiency in their herd.

Snapshot

Roy and Nan Robertson,
Wollomombi, NSW



Property:
3,830ha

Enterprise:
Santa Gertrudis stud, beef cattle, Merinos and meat sheep

Livestock:
130 stud cows, 4,500 sheep

Pasture:
Improved (fescue/ cocksfoot/clovers) and native

Soil:
Basalt and trap

Rainfall:
1,025mm



Stocking up the genetic tool belt

Constant genetic refinement of his cattle is one of the most effective strategies Roy Robertson has for staying ahead of declining terms of trade.

Roy and wife Nan run Fishington Santa Gertrudis stud at 'Wanderriby', east of Armidale, NSW. They are quick to adopt new technologies and so were keen to road test another tool to give them a genetic edge.

ABRI's INSolutions app has helped them merge subjective and objective assessments into a single seamless operation.

Through the app, statistical genetic merit can be checked while the live animal is being inspected for conformation, ensuring a rounded picture of the animal's worth inside and out.

Recently, Roy noticed a favoured heifer had dropped a bull calf with very low birthweight. There in the paddock, he used INSolutions to check performance figures and assess whether a potential new sire had just hit the ground.

At bull sales, Roy uses the app to crosscheck bulls without figures by reviewing their bloodlines to see how key genetic traits add up.

Roy's attention to breeding values has helped him drive up the stud's fertility and weight gain performance, his two main profit drivers.



View a video of Rob's presentation 'Using genetics to increase farm profit' from the Southern WA Meat Profit Day, www.mla.com.au/MPD-SouthernWA

Other sources of information on genetics:

BREEDPLAN: <http://breedplan.une.edu.au>

Australian cattle breed societies - listed on the Australian Registered Cattle Breeders website: <http://arcba.une.edu.au>

More Beef from Pastures - Module 5: Genetics: www.mla.com.au/morebeef

Animal Genetics and Breeding Unit: <http://agbu.une.edu.au>

A click away...

The livestock records stored in the databases of Australian breed societies can now be held in the palm of your hand.

The Agricultural Business Research Institute (ABRI), developer of the pedigree and performance recording systems, has produced the INSolutions mobile phone and tablet app so producers can look up, sort, rank and compare the records of any pedigree animal in the cattle breed societies' records.

The \$1.99 app also provides a convenient way to access sales and semen catalogues, or look up members of registered breed organisations.



INSolutions can be found on the iTunes App Store or Google play for \$1.99. Search for 'insolutions'.



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Meeting market specifications



MSA lamb bonus

The paddock-to-plate journey of a Tasmanian Royal lamb begins in the island state.

Allan and John Perry with some of the lambs on forage rape.

Tasmanian father and son team Allan and John Perry are profiting from meeting Meat Standards Australia (MSA) requirements with their lambs.

"Most of the time there is a 5-10¢/kg premium for MSA lambs," Allan said.

The Perrys run 600-800 lambs consistently through autumn, winter and spring with an annual turnover of about 3,000 lambs.

Numbers are kept fairly consistent by buying store lambs whenever lambs are sold to processors. The majority of the lambs come from the local markets, Quoiba near Devonport and Killafaddy at Launceston, with about 20% bought directly from farms in the Midlands.

"We try to buy forward store lambs out of the fat pens that are not quite there or need shearing," Allan said.

"They need to be something with a bit of breed and a good frame so we can stack a bit of meat on them. We like second-cross lambs, so they are predominantly by a Poll Dorset and White Suffolk out of crossbred ewes.

Dollars and sense

The Perrys target the trade market with 18-24kg lambs. Allan has done his sums and believes the increased returns from the heavier lambs are not worth the extra inputs.

"We reckon we can run more of those smaller lambs in the 18-24kg weight range and turn them around a bit quicker than heavier, export lambs," Allan said. "Those big lambs take a lot more feeding."

The Perrys also have a herd of Hereford steers which go through their on-farm feedlot and are sold MSA-graded to Woolworths at a rate of 15 a fortnight, all year round.

"It is not a big operation but it's constant," Allan said.

"We got involved with MSA-graded lamb after we started supplying lambs to Kerry Melrose through the processors at Devonport." (See Tasmanian Royal story on page 31).

Allan said a challenge for some producers in meeting MSA lamb criteria was the limitation on the time animals were off feed and water before delivery.

"It's not a problem for us because we are only half an hour's drive to the processor," he said.

"You have to have consistency of lamb. We weigh every lamb before we sell to keep within the weight guidelines. You also have to be on the ball with your fat scores."

Learning about MSA

"At an MSA workshop last year we were told buyers liked three score lambs. That's the ultimate lamb. Keep between two and four score and you go pretty well.

"As often as we can, we like to go to the processors and watch our lambs come through. Even afterwards, when they are in the chiller, we like to go through with the buyer and have a look at the lambs hanging up.

"Like anything, you learn from mistakes, so it's always good to follow those lambs through and check the bodies out."

Snapshot

Allan and John Perry,
Sassafras, Tas.



Property:
180 ha

Enterprise:
Prime lamb, steers and cropping

Livestock:
600-800 prime lambs, 170 Angus and Hereford steers

Pasture:
Permanent pastures of ryegrass and red and white clover; some annual grasses

Soil:
Majority red basalt with some loam

Rainfall:
875mm



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For more information on MSA sheepmeat or to find out about MSA producer workshops visit www.mla.com.au/msa
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A right royal idea

Following the success of beef brands which are underpinned by MSA, lamb is treading the same path.

The Melrose name and the meat industry share a long history which dates back to 17th century Scotland. The family continued in the meat trade since arriving in Australia in 1883. Today, the family operates wholesale business Melrose Meats in Brisbane.

The current generation of Melroses - Dominick, who runs the foodservice arm, Kerry, who looks after wholesale, and Transport Manager, Tyrone - retain a great passion for meat, and their desire to provide a consistent quality product has seen the rise of a premium lamb brand, Tasmanian Royal. Developed two years ago, Tasmanian Royal has grown from selling 500 to 1,100 carcasses a week. Since mid-2012 the brand has been underpinned by Meat Standards Australia (MSA).



Red Hill Melrose butcher shop in 1950.

500 to 1,100

increase in two years in the lamb carcasses sold weekly under the Tasmanian Royal brand

Dominick and Kerry Melrose with Tasmanian Royal lamb carcasses.

Available through higher-end, quality butchers and restaurants, Tasmanian Royal guarantees a consistent eating experience using only Tasmanian lamb that conforms to the MSA eating quality program.

Dominick said the foodservice business identified the need for a lamb brand that signified a consistent, high-quality product.

“MSA was one of the catalysts in promoting a brand as it put a bit more rigour behind the brand name. It’s a great tool. The science behind it is probably the best thing that’s ever happened to the industry for guaranteeing the eating quality of product the butcher wants to sell,” Dominick said.

Kerry said they chose Tasmanian lamb because of its reliable, consistent quality.

“We have a premium weight range and offer a little bit better than market price for 19-24kg lambs. Our preference is for second-cross over first-cross lambs and our brand doesn’t use Merino lambs at all,” he said.

Sourcing MSA lambs

JBS abattoir in Devonport provides the lambs through its MSA producer base. Lambs are processed in Devonport on Thursday and distributed to butchers from Tweed Heads to Townsville on Monday. Lambs are processed again on Monday for

MSA

- MSA sheepmeat involves all sectors of the production supply chain, from farm to plate, to provide an assured eating quality product.
- MSA sheepmeat standards are created from the analysis of 90,000 consumer test results, combining tenderness, juiciness, flavour and overall liking scores.
- MSA sheepmeat labels advise the correct cooking method for every cut of sheepmeat.

distribution on Thursday and Friday. Ageing lamb for five days before sale further improves the eating quality.

“The fact that butchers are prepared to pay a premium is evidence enough that consumers will pay for quality,” Kerry said.

“The Sam Kekovich program brought lamb up to the stage where it has become a desired and consistent product. Our slaughter numbers don’t vary much over the whole year.”

In January this year, the Tasmanian Royal brand became part of an agreement with the Norman Hotel (profiled in the June 2012 issue of *Feedback*), which claims to be Brisbane’s worst vegetarian restaurant. The Norman now offers lamb sausages, an MSA lamb mixed grill and MSA lamb T-bone as an alternative to a steak meal.



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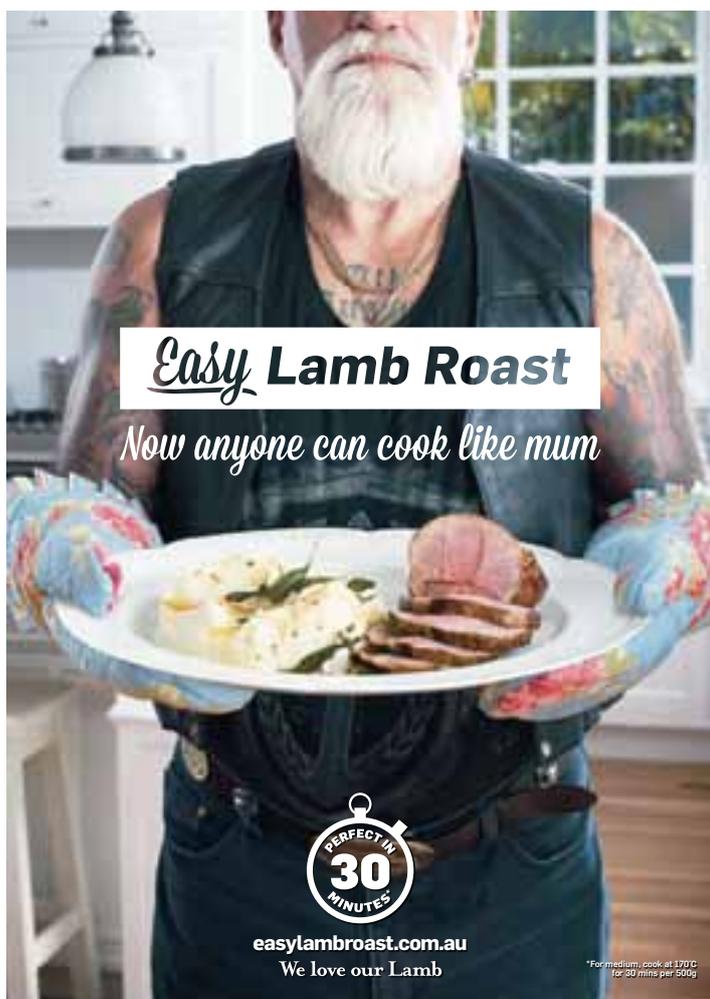


www.mla.com.au/msa



Autumn campaign

Easy lamb roast – now anyone can cook like mum



MLA's latest marketing campaign is promoting a lamb roast just like mum's - but the 'easy' lamb roast allows you to do it in 30 minutes.

Launching mid-April, the campaign features a television commercial with an unlikely character - a biker - breaking away from his stereotype to become a more warm and motherly type after cooking an 'easy lamb roast'.

"Lamb roast is often synonymous with the lazy Sunday dinner at mum's house. However, there are many cuts that can be roasted in around half an hour, making easy lamb roast a good mid-week choice for people with busy lives," MLA's Group Marketing Manager Andrew Cox said.

The commercial will feature in prime viewing slots for most of the one-month campaign. A cut-down billboard version will air repeatedly for one week during Channel 7's *Deal or No Deal* program, where viewers will be shown the various stages of the lamb roast cooking process so they get a better understanding on how easy and quickly a lamb roast can be cooked.

The campaign also features a new website, www.easylambroast.com.au, where consumers can select the cut and weight of their lamb roast to determine the perfect cooking time.

Interactive advertising panels in shopping centres nationally will enable shoppers to print out a range of easy lamb roast recipes on their way to buy ingredients. Recipe cards, posters and cabinet stickers will be circulated through butcher stores and supermarkets.



www.easylambroast.com.au (launching on 14 April)

Garlic roasted lamb round with mustard mash

Preparation time: 15 minutes
Cooking time: 30 minutes
Serves 4-6



- 2 x 500g lamb round roasts
- 1/3 cup olive oil
- 1 garlic clove, crushed
- Sea salt flakes and cracked black pepper
- 1 bunch sage, leaves picked
- 1 tbsp sea salt flakes
- 1/4 cup olive oil
- 1.5kg sebago potatoes, peeled and chopped
- 1 cup milk
- 50g butter
- 1-2 tsp hot english mustard

Easy Lamb roast tips:

1. Take roast from the fridge 20 minutes before cooking.
2. Set your cooking timer according to www.easylambroast.com.au
3. Rest the meat after roasting and before carving.
4. Carve the roast across the grain for maximum tenderness.

1. Pre-heat oven to 200°C. Combine 2 tbsp oil with garlic, salt and pepper and brush over lamb rounds. Heat a large non-stick frying pan over high heat. Cook the lamb, turning for 5 minutes or until browned. Place in a roasting dish and roast for 20 minutes for medium or until cooked to your liking.
2. Meanwhile, place the potatoes in a large saucepan of cold water. Bring to the boil and cook for 25-30 minutes or until tender. Drain well, return to the pan. Add milk, butter and mustard and mash until smooth, set aside and keep warm.
3. Heat the remaining oil in a non-stick frying pan over high heat. Cook the sage leaves for 30 seconds or until crispy. Drain on paper towel.
4. Spoon the mash into bowls, top with crispy sage and serve with lamb and extra pan juices.

Recipe

Serves: 4

**Preparation and cooking time:
35 minutes**

Beef pasta salad

World renowned chef Marco Pierre White has been telling Australians about the need to enjoy “a proper dinner” featuring beef or lamb. MLA has created plenty of proper dinner ideas, available on its recently revamped [themainmeal](http://www.themainmeal.com.au) website. So log on to the www.themainmeal.com.au to find more recipes like this:



Ingredients

800g oyster blade steak, diced
2 cups dry pasta, eg spirals
2 onions, sliced
100g sun-dried tomato, sliced thinly
100g kalamata olives, pitted
¼ bunch basil, chopped
¼ bunch chives, chopped
250g cherry tomatoes, halved
200g rocket or mixed lettuce leaves
2 tbsp olive oil
1 tbsp balsamic vinegar
1 tbsp soy sauce

Method

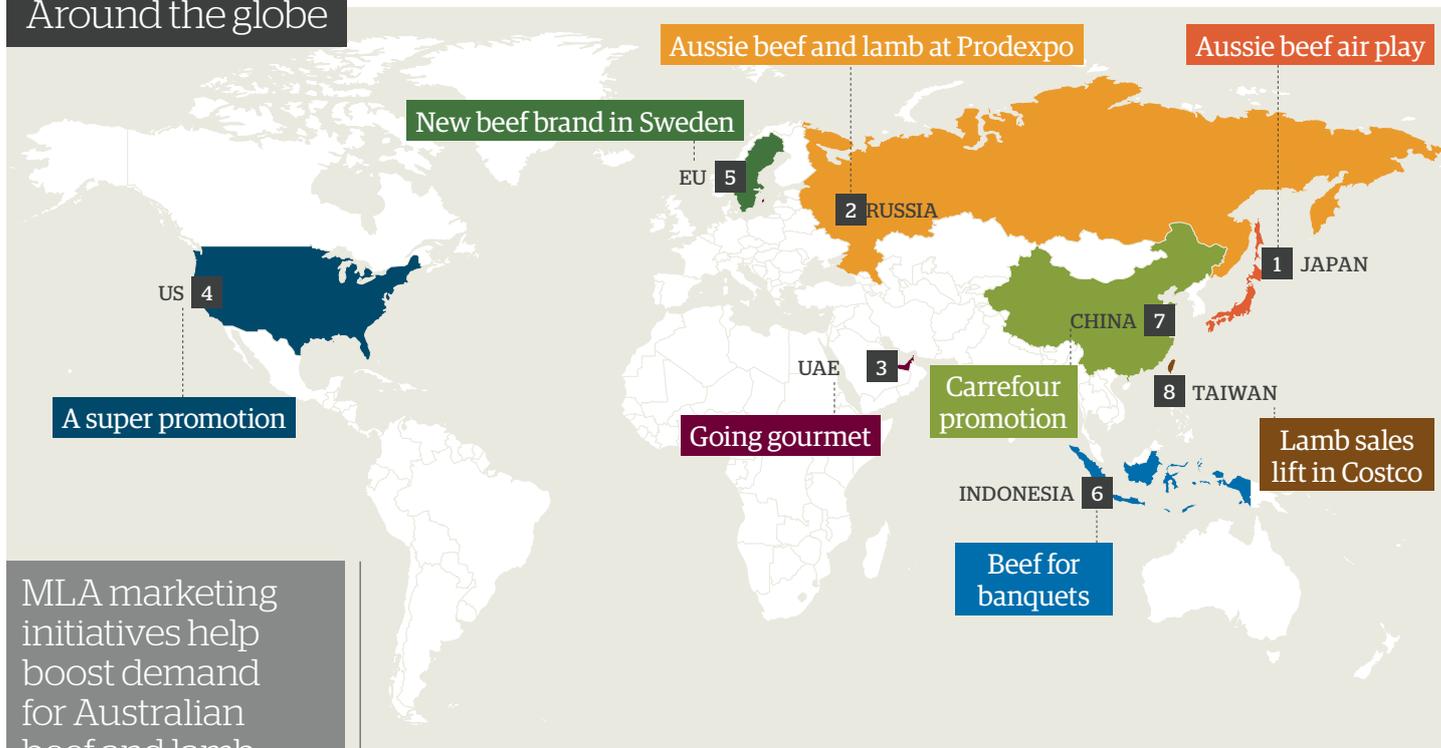
1. Cook the pasta as per packet instructions - strain in colander and leave to cool in cold water.
2. Heat a wok to hot and add 1 tbsp of oil and cook the beef in three batches; set aside when cooked and loosely cover with aluminium foil.
3. Cook the sliced onions in the wok over low heat until soft and translucent. There's no need to add oil.
4. In a bowl, mix the tomatoes, olives, onions, herbs, cooked beef and pasta; season with olive oil, balsamic vinegar and soy sauce. Just before serving, add rocket or mixed lettuce leaves.

Tip

Try a wholemeal or whole grain pasta to boost your fibre intake.



Around the globe



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



MLA's Regional Manager Japan, Melanie Brock, is interviewed by Japanese film crews.

1 JAPAN

Broadcasting beef

A campaign promoting the attributes of Australian beef reached an audience of 42 million people in Japan through appearances on nine television news programs including NHK (Japan's national broadcaster) and three of Japan's four national commercial broadcasters. With the relaxation of US beef import restrictions in Japan, MLA's Tokyo office has been communicating Australia's traceability system, safety, stable supply, and the quality and nutritional benefits of Aussie product. The television slots were equivalent to \$6 million in paid advertisements.

42 million
people in Japan hear about Aussie beef through TV campaign

2 RUSSIA

One-stop-shop



The annual Prodexpo food trade exhibition celebrated its twentieth year in February, where MLA partnered with Australian exporters at a one-stop-shop trade stand for Australian beef and lamb. The stand provided a unique opportunity for exporters to meet with existing and potential customers. Customers were particularly interested in securing chilled beef and high-end products.

3 UAE

Abu Dhabi's gourmet delights

Australian beef and lamb was showcased at Gourmet Abu Dhabi, the UAE's annual haute cuisine festival, which ran in 20 fine dining venues throughout February. MLA was involved in a range of activities including introducing samples of high-quality Australian product as well as more affordable cuts to the local trade. MLA's chef and the region's Business Development Manager, Tarek Ibrahim, ran a butchery demonstration and featured in the festival's inaugural trade industry forum.

20
fine dining venues participate in gourmet festival

4 US

Beefing up supermarkets



An Australian Angus grass-fed beef promotion was launched in a large US retail chain, facilitated by a major American importer with the aid of MLA's Washington office. Initially rolled out in California, the campaign involved about 60 stores stocking a wide range of cuts and ground beef options, supported in store by displays and promotional materials. There is huge potential for growth throughout the chain's 1,700 stores nation-wide - most of which already stock Australian lamb.

60 US stores launch Australian Angus beef promotion

5 EU

Cross-country collaboration



A Netherlands-based importer has launched an Australian beef brand with a Swedish supermarket chain. During the launch promotion, customers sampled Aussie cube roll, striploin and boneless chuck ribs. The cuts available for sale included tri-tip, oyster blade, ribeye, topside, knuckle, chuck, tenderloin, rostbiff and diced beef. More than 1,000kg of product was sold during the two-day promotion. Following the launch, MLA assisted in bringing two of the importer's largest retail clients to Australia in February to gain a first-hand appreciation of Australia's integrated quality assurance systems.

6 INDONESIA

Beefing up banquets

Thirty-nine chefs from 12 countries came together in Jakarta in February for the Third Regional Banqueting Innovation workshop, which showcased innovative ways to use non-loin cuts of Australian beef and lamb on banquet menus. Led by chef Richmond Lim from the Kuala Lumpur Convention Centre and West Australian butcher Barry Lloyd, the chefs learnt new cutting and cooking techniques for beef and lamb to help reduce food costs while maintaining quality.

7 CHINA

Carrefour beef promotion



Sales volumes lifted by up to 78% during an Australian beef promotion staged by MLA and a local importer at multinational retailer, Carrefour, in Shanghai. A weekend session at four Carrefour outlets gave customers the opportunity to taste Australian product. The sampling was supported by MLA point-of-sale material promoting Australian beef as high quality, safe and healthy.

8 TAIWAN

Costco promo

Sales of chilled lamb racks rose to 3,350kg in a five day period, nearly a five-fold increase on the same period the previous month, during an MLA in-store promotion at nine Costco outlets in Taiwan. On the first day of the promotion, sales volumes increased three times compared to the sales registered on the previous day.

495%

sales lift of Australian lamb during Taiwanese promotion

On the ground

Russia



Michael Crowley
MLA Regional Manager
Russia and the EU
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Russia's emergence as a reliable, consistent and valuable partner for the Australian beef and lamb industry continues to gain momentum, despite some price challenges.

Instability of supply from other countries favours Australia's ability to secure longer-term relationships and become a supplier of choice. However, price sensitivities mean that Australia's volumes fluctuate, despite customer numbers remaining relatively stable.

As the market matures, the emergence of high-end, steak-themed restaurants is growing demand for quality beef and lamb. A significant portion of this predominately chilled meat leaves Australia by air. This ensures maximum shelf life for the customer and the smaller volumes per load allow more tailored solutions to customer demand.

Australia competes head-to-head with the US, with similar chilled volumes from each country - about 1,000 tonnes per year. However, recent changes in the market have resulted in all US beef being banned from Russia in response to the use of ractopamine in beef and pork production.

With the growth in the chilled sector, buoyed by the temporary absence of the US, higher-end quality product opportunities are leading a resurgence of inquiry for Australian product. Chilled sea freight is becoming a real option for the large volumes required to meet the growing demand from major importers and food service distributors.

Volume opportunities remain in the commodity trade of frozen beef, lamb and mutton. Although the ban on US beef leaves a substantial gap in the frozen beef market, the opportunities for increased shipments of Australian frozen beef are expected to be limited. This sector is particularly price sensitive and competition from South America is intense, aided by the significant depreciation of South American currencies relative to the Aussie dollar.

MLA's marketing activities in Russia are predominately trade based. This means the work to drive Australian market share involves a combination of work with major importers to support the awareness of 'Brand Australia', collaborative investment into the trade with Australian exporters and tradeshow stands to ensure we have a strong Australian presence.

Market observations

Sluggish export values flow back to the farmgate

Record beef exports during 2012 should have been celebrated, as demand for Australian product in overseas markets expands.

Tim McRae
MLA Economist



However, exporters found it difficult to maintain prices for most products, illustrated by the flat demand for high-quality chilled cuts. While demand and prices for frozen cuts remained high, borne out by record manufacturing beef prices, the willingness for overseas buyers to purchase higher-priced chilled cuts waned, eroding returns to the industry all the way back to the farm gate.

The main impediment to 2012 returns was the historically high A\$. This combined with sluggish consumer demand in key, high-value chilled markets, such as Japan, to strip returns.

Despite the record export volumes, the value received increased only 2% year-on-year, reaching \$4.77 billion - well below the record highs in 2006 and 2008.

The hardest-hit sector has been the lotfeeding industry,

especially those focused on export markets. In general, the additional effort and cost involved in producing top-quality, export-specific heavy cattle has not necessarily been getting rewarded by the market.

In contrast global prices for lean manufacturing beef have been at historically high levels. During 2012, processors were pushing previously marketable lean cuts into manufacturing packs, as this was the best avenue to maximise returns.

Looking ahead, the contrasting fortunes for chilled and frozen beef are expected to continue throughout 2013, underpinned by the growth in frozen shipments to emerging markets, such as China.

For the advanced markets, increased competition and the unwelcome outlook for the A\$ is likely to see little improvement for chilled beef - maintaining what has, in effect, become a two-speed global market for beef.



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National Livestock Reporting Service

Reporting in

Many Australian livestock producers use MLA's National Livestock Reporting Service (NLRS) almost every day.

A team of MLA's livestock market officers (LMOs) attend major prime and store markets, direct sales and wholesale meat markets. Last year, they collected more than 4.8 million individual pieces of market information.

The information is fed into MLA's market analysis team, where it is assessed and collated into reports that are distributed to more than 5,000 producers.

MLA's NLRS Operations Manager Josh Anderson said the reports, such as over-the-hooks and state summaries, as well as individual sale reports are valued for their independence and accuracy.

"Producers put a lot of trust in our reporters. That's why we have a national network; the officers on the ground at sales have their finger on the pulse. This is a vital, independent service that people along the supply chain rely on."

"MLA's NLRS allows producers to check markets and price trends which can then inform their business decisions. We find producers make those checks all the time and they benefit from it."

As well as subscription services, reports are made available on the MLA website and through key national media, such as the ABC Country Hour, and rural reports on regional radio stations.

The reports are tightly managed to provide quality assured data and can be customised, based on what information the producer needs.

Technology is bringing new opportunities. Increasing numbers of producers are accessing NLRS information on smart phones and tablets.

The natural next step is providing real-time data on an application for iPhones, much like an electronic ticker tape.

There are

23 LMOs attending up to

90 sheep and cattle sales around the nation each week



Josh Anderson, MLA // T: 0427 345 703
E: janderson@mmla.com.au

Murray Long // T: 02 6975 7210
E: info@pendarra.com

Data informs decisions

Murray Long, 'Coondarra', at Ardlethan in southern NSW, believes it's an economic necessity for producers to use MLA's National Livestock Reporting Service data.

His Pendarra White Suffolk Stud sells rams to clients from Longreach, in north Queensland, to Warrnambool, in south-west Victoria.

Knowing the markets helps identify demand and client needs as well as assist his own farm business.

"I make a conscious effort to be aware of the data and to know what's going on in the market," he said.

Murray accesses the reports on the MLA website.

"The more up-to-date we can be with the information, the more up-to-date you can be with your decision making. Markets don't always follow trends. With the NLRS, you have the data available to make decisions on fact and independent analysis.

"With this information available, the serious ones in the industry have no excuse at all to make bad decisions," he said.



All in a day's work

Producers and buyers might not be able to rely on prices staying constant, but they can rely on finding the familiar face of the Livestock Market Officer at saleyards across Australia. The job requires concentration, impartiality and plenty of energy.

Stan Watson, 71, has spent 15 years covering the Scone, Singleton and Coonamble cattle sales each week. We asked him about a typical (sale) day.

7am: While many are thinking about breakfast, Stan is already walking the yards inspecting the mobs of steers and cows and calves which were unloaded and penned the night before. This pre-sale inspection, in the bustle and the noise, lets him get a good feel for the day.

8am: As the auctioneer's chatter starts up over the pens, flanked by hopeful buyers and anxious sellers, Stan watches every sale closely, recording the age, stock category, weight, muscle and fat score, price, and dressing percentage. It takes deep concentration to record this information accurately within the theatre of the sale.

12.30pm: With the auction rolling on, Stan ducks away to collate his market report for the ABC Radio Country Hour, delivered down the phone at 12.50pm. "You have to have enough commentary for a minute and

that includes the quality of yarding, comparison with recent sales and some interpretation why the market acted the way it did, such as local dry conditions causing larger yardings," Stan said.

1pm: Time for a hurried lunch before joining the sale crowd to follow proceedings to the end, which might not come for another two hours. At big sales, Stan packs a lunch - there's no time to order at the canteen!

3pm: Once the final hammer falls, Stan finalises and files his NLRS data and then there are radio reports for local stations before he drives home.

"You've got to follow the centre line and report (the yarding) for what it is. We are not paid by agents or buyers or vendors. It's independent, expert opinion we are giving," he said.

Want to keep your finger on the pulse?

The NLRS reports available to MLA members include:

- weekly livestock indicators for cattle or sheep
- daily livestock indicators
- individual saleyards
- over-the-hooks
- slaughter reports for the eastern states
- feeder cattle report
- state summaries
- hide and skin reports for the eastern states
- Sydney wholesale report



MLA // T: 1800 023 100
E: marketinfo@mla.com.au or go to



www.mla.com.au/Prices-and-markets/Latest-prices-and-indicators



Stan Watson, MLA

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E: swatson@mla.com.au

Right time, right place

Grazing management in north central and north west Victoria was the focus for five workshops recently delivered by Department of Primary Industries (DPI) Victoria in collaboration with MLA's More Beef from Pastures, Best Wool Best Lamb and EverGraze. Guest speakers familiar with the local region covered the principles of the right plant in the right place, rotational grazing and managing risk. Discussions involving the 85 producers in attendance also focused on soil health, grazing perennial shrubs and the results of local MLA Producer Demonstration Sites.

More information: Sam Ellis, DPI Victoria
T: 0408 922 712

Garry Armstrong (DPI Victoria) talking to Ouyen farmers about the work the Nullawee Best Wool Best Lamb group are doing with MLA funding.



Sam Ellis delivering a NLIS database training session.

EU accreditation and NLIS training

The Department of Primary Industries, through funding from the Cattle Compensation Fund, has delivered 43 workshops across Victoria over the last two years assisting producers to gain access to the EU beef market. Workshops have been well received with 766 people attending the training which has included teaching people how to use their NLIS database account to meet the market requirements.

More information: www.dpi.vic.gov.au/betterbeef

Young MSA enthusiasts

On 8 March Kelly Payne, an MSA end user training facilitator, delivered the principles of Meat Standards Australia (MSA) to a group of young producers from the Darling Downs in Southern Queensland. The 40 strong crowd attended a Rabobank-sponsored day at the historic Jimbour House, where they heard a number of presentations for the under 35 age group. The group consumed MSA rump and oyster blade mignons for lunch and were pleasantly surprised by the eating quality of the sub-primal cuts.

More information: MSA

T: 1800 111 672 // E: msaenquiries@mla.com.au



Upcoming events

Graham Centre sheep and beef field days

These field days provide an opportunity for producers to hear the latest news and research in sheep and beef management and production, and network with researchers and industry experts.

When and where:

Sheep: 28 June, Wagga Wagga NSW
Cattle: 9 August, Wagga Wagga NSW

Bookings: 02 6938 1806
tnugent@csu.edu.au

More information:

www.mla.com.au/events
www.csu.edu.au/research/grahamcentre/field-day/sheep.htm

Gippsland Beef School

This event is for beef producers and covers aspects of managing an efficient, highly profitable beef enterprise. Commencing with an industry dinner with guest speaker Bill Bray and the following day includes pasture and feed budgeting, parasite control, genetics, maternal productivity, the market outlook, cattle handling, and a rumen dissection.

When and where:

9 and 10 May, Lardner Vic

Bookings: 03 5662 9908
claire.geri@dpi.vic.gov.au

More information:

www.dpi.vic.gov.au/agriculture/beef-and-sheep/beef-and-sheep-networks



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

Simmental Junior National Camp

On 11-13 January young cattle breeders and enthusiasts converged on the Pittsworth showground in Queensland's south east to attend the 2013 Simmental Junior National Camp. Thirty five entrants between eight to 25 years learnt about grooming cattle, preparing cattle for a show, selecting the correct cattle for breeding, judging cattle and basic tie-up and handling skills. There was an informative talk on animal health and correct vaccination techniques. Senior entrants attended a demonstration at a local butcher on meat cuts, butchering skills and beef products. There were awards for steer judging, stud cattle classes, school teams, herdsmen, parading, junior judging and the young ambassador.

More information:

Australian Junior Simmental Breeders, Armidale // T: 02 677 32714

NSW contacts: Jess Impey and Jen Impey

E: jessandjen@luckycloversimmentals.com

Qld contact: Rebecca Skene // T: 02 6773 2714



'On the hoof' judging - Simmental and Simmental-X animals.



Judges of the future.

Beef cattle assessment workshop

Many producers relish the opportunity to update their livestock assessment skills in a practical workshop setting. Producers near Echuca, Victoria recently spent a day in the yards doing just that. The group assessed a range of crossbred cattle for structure and also focused on muscle scores to increase meat yield and fat scores for fertility and market specifications. The group discussions led by Graeme Collins, Merribrook Angus and Melissa Neal, Department of Primary Industries Victoria were delivered through the DPI Better Beef Network and MLA More Beef from Pastures program.

More information: Melissa Neal, Department of Primary Industries Victoria

E: melissa.neal@dpi.vic.gov.au



Attendees at the MSA producer day.

Advanced producer day

A successful advanced MSA producer day was held at the JBS Townsville plant on 19 February. Fifteen producers attended the forum where Terry Farrell, Livestock Supply Coordinator from Meat Standards Australia, shared information on factors that can impact on MSA compliance and tips on how to improve overall compliance. Representatives from JBS Townsville were also on hand to address any questions from attendees and all were treated to a great JBS steak for lunch.

More information: Terry Farrell, MSA

E: tfarrell@mla.com.au // T: 0417 645 093

Beef Industry Update

This event consists of three workshops presented by producers, a processor and other industry experts. The themes include: getting the beef business structure right, smart marketing for top \$s, and identifying and using KPIs for profit.

When and where:

24 April, Guyra NSW

Bookings: 0458 505 999
hoffmanbeef@gmail.com

Innovation workshops - Pacific Beef Expo

Take part in MLA's Innovation workshops to pick up new ideas and skills to help build a better beef business. The one hour workshops will focus on the key profit drivers in your beef business and deliver practical information and tools that can make a difference to your bottom line.

When and where:

20-22 June, Casino NSW

Bookings: www.mla.com.au/
pacificbeefworkshops or
1800 675 717 (option 4)

Influential Women's workshops

MLA is supporting a series of Influential Women's workshops to build the capacity of rural and regional Australia by increasing the skills and confidence of women.

When and where:

29-30 April, Katherine NT

9-10 May, Albany WA

3-4 June, Benalla Vic

6-7 June, Holbrook NSW

Bookings:

www.influentialwomen.com.au

WANTED: 6 PRODUCERS

Would you like to make an impact on your bottom line this year?
What if you had a team of business coaches, researchers and
producer mentors helping you get there?

MLA is looking for producers like you to join our new MLA challenge. This is
an opportunity to make the most of your levies, using the latest research
on your property to increase the reproductive efficiencies of your cattle and
sheep; as well as your pasture production.

**We need six participants: two from the northern cattle industry, two
from the southern cattle industry and two from the sheepmeat industry.**

If selected, we will track you on your journey to inspire other Australian
producers to take on the MLA challenge too.

TAKE THE MLA CHALLENGE NOW.

Visit mla.com.au/challenge

Another program delivered by

