FEEDBACK

MLA – FOSTERING PROSPERITY

JULY/AUGUST 2017

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MEAT & LIVESTOCK AUSTRALIA

FEEDBACK

MLA fosters the long-term prosperity of the Australian red meat and livestock industry by delivering world-class research, development and marketing outcomes.

Cover: *Victorian sheep producer Georgina Gubbins. Image by Frank Monger Photography. (Page 24)*

Have your say!

We'd love to hear from you

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A NOTE FROM THE MD...

Welcome to your new-look *Feedback.*

Since its first edition in 1999, *Feedback* has offered readers a mix of engaging, inspiring and relevant stories about practical on-farm findings to help inform on-farm business decisions. It has also informed readers about how MLA is investing producer levies in marketing and research to foster the prosperity of the industry.

To ensure *Feedback* remains relevant to our readers, MLA listens to all feedback about the magazine through surveys, focus groups and whenever we're out and about. From edition to edition we make minor tweaks based on this feedback. However, with the last major refresh in 2012, it was time to delve deeper into recent feedback and explore how we can deliver content in an enhanced way.

Our readers tell us they enjoy reading about other producers, learning about new on-farm research findings and trying out a good red meat recipe or two. So we've kept these much-loved features in the new-look *Feedback* and expanded the on-farm section with more pages devoted to producer case studies and on-farm research stories.

Our readers also tell us there are some ways we can make it an even better magazine. One of these is being able to quickly find relevant stories.

So *Feedback* now has distinct sections for 'on-farm', 'supply chain' and 'in market' stories and we've added clear labels for northern cattle, southern cattle, sheep and national (all species) stories.

We also know mailboxes and inboxes are inundated with information. So we've made sure our articles get to the point quickly, they are shorter and they contain more visuals to help tell the story.

The new design also reflects modern trends, providing an uncluttered 'look and feel' and maximising the use of images and other visual elements.

I'm really proud of this new-look *Feedback*. But as always, I welcome your feedback on how we can continue to make it even better.

Richard Norton
MLA Managing Director
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IN BRIEF

The secret is out

Australian beef is the greatest meat on earth.

While producers have always known it, Australian consumers will be left without a doubt with the launch of the next era of MLA's Australian beef marketing campaign.

Following MLA's 'You're Better on Beef' campaign, created in 2014, a new and enduring brand platform has been developed.

Australian beef will be positioned as the greatest meat on earth. The campaign was launched nationally in July with advertising, media, retail and foodservice promotions.

MLA Group Marketing Manager Andrew Howie said the long-term creative platform will be based on two distinct layers of communication.

"Beef, commanding a significant price premium over its competitors, faces the key challenge of demonstrating value to consumers. To do this, we must first start with the brand. We need to re-build people's emotional connection with beef as the greatest meat on earth," he said.

"We want Australians to feel proud of choosing beef to feed their families. "This will be backed up by giving people reasons, namely nutrition, versatility and provenance, to believe beef is the greatest meat on earth. Our data shows these are the key drivers of choice for the consumer after price.

"MLA will partner with retail and foodservice through the sharing of data and insights to give consumers incentives to choose the greatest meat on earth more often." ■

www.mla.com.au.

Active ageing ACTION PLAN

A new brochure containing the most up-to-date nutritional and exercise advice for healthy living over the age of 65 has been developed by MLA.

Available online and in hard copy from health care professionals, the brochure was created with the guidance of the Active Ageing Expert Working Group, whose members include a geriatrician and nutrition and exercise physiology experts.

MLA has developed a series of nutrition education materials to support the consumption of beef and lamb as part of a healthy, balanced diet. This approach ensures the information is scientifically accurate, consistent with dietary recommendations and healthcare professional practices and is meaningful to the target audience. ■

Check out the brochure at www.mlahealthymeals.com.au/healthy-eating/

Other brochures in the series include *Look Good Feel Good* (for young women), *How to Make Every Bite Count* (for toddlers and young children) and general nutrition guides.

Ten reasons to attend Red Meat 2017

When Alice Springs hosts MLA's Red Meat 2017 on 21–22 November 2017, red meat producers will be offered far more than an AGM and a cuppa. Attendees will have access to the latest marketing trends, insights and R&D innovations, while enjoying one of the most unique red meat production areas in Australia.

Here are 10 reasons to attend Red Meat 2017

1 **Gain practical knowledge:** Book in for the farm tour to see working demonstrations of the latest on and off-farm innovations and how these can be applied to your business.

2 **Develop new skills:** MLA will facilitate an Advocate Workshop to equip producers with the skills, confidence and knowledge to promote the industry and its credentials within the community.

3 **Visit iconic places:** The Red Centre Welcome, a cocktail event showcasing Australian beef, lamb and goat, will be staged at the Alice Springs Telegraph Station.

4 **Network with leaders:** Join a high-level discussion with a special guest speaker over breakfast with fellow producers, industry leaders and representatives from across the value chain.

5 **Talk with decision makers:** The Red Meat Advisory Council will chair a public forum for producers and stakeholders to discuss important issues impacting the industry with peak industry council representatives.

6 **Engage with MLA:** The MLA Producer Forum provides MLA members with the opportunity to hear from key MLA staff on the past year's highlights and future directions of marketing and R&D programs. The forum will also feature an open Q&A session with MLA's general managers.

7 **Explore innovations:** A tradeshow will feature working demonstrations of some of MLA's recent R&D innovations, including 3D printing and objective measurement technologies.

8 **Have your say:** MLA's 2017 AGM will be held on Wednesday, 22 November, following the Producer Forum, at the Alice Springs Convention Centre. Vote, meet the MLA Board and leadership team and learn more about your levy investment.

9 **Celebrate Australian red meat:** Red Meat 2017 will serve up dishes for lunch and a closing barbecue using techniques and global flavours to show producers red meat innovations.

10 **Enjoy a great destination:** Alice Springs is not just the gateway to the Red Centre – it's a thriving, spirited outback town famous for its stunning landscapes, rich cultural heritage and a unique pioneering history. Why not stay for the weekend? ■

Find out more or register at www.redmeat.mla.com.au

IN BRIEF

Dinner from the printer

The lunchtime buffet is often a highlight at conferences. But attendees at MLA's 2017 3D Food Printing Conference didn't have to wait until lunch to have their tastebuds tantalised.

MLA's Business Manager – Foodservice and Corporate Chef Sam Burke (pictured below) wowed the audience by demonstrating how 3D printing can transform lower-value red meat into a five-star dining experience. While for the diners it was the first chance to taste this food of the future, it was also the first time Sam had cooked with it.

Sam gave *Feedback* an insight into the innovation.

3D printed meat – what does it taste like? Just like any lean minced beef. I seared the beef in butter, so essentially it tasted like a cross between Hamburg steak (a German beef steak created from chopped meat shaped into a patty) and pâté. It was served with a jus, a thin sauce made from meat juices.

Will we be seeing 3D printed food on MasterChef soon? Chefs are always looking for the next big thing and are always pushing to bring new experiences to diners, so I would not be surprised. Just last year, byFlow (the company we worked with) opened a pop-up restaurant in London where the food, cutlery and chairs were all 3D printed.

Which dining sector will have the greatest take-up? I can see this as a potential solution in aged care foodservice for texture-modified diets (designed to make chewing and swallowing safer and easier). With 3D printing technology, you could potentially add nutrients to further boost the iron, zinc and protein content. It could provide the option of high-protein, healthy meals that are more appetising than the traditional pureed food.

Describe the ideal dish in which to use 3D printed meat? The dish we presented, of course – 3D printed pan-seared Australian beef with jus, carrot/pea puree, potato galette and a tapioca squid ink shard. ■

To watch Sam's cooking demonstration go to www.abc.net.au/landline and search 'printed meat' in the Landline search area.

Dung delivering

The power of the dung beetle is being harnessed in a new $9.2 million project, to be managed by MLA.

Funded in round three of the Federal Government's Rural Research and Development (R&D) for Profit Programme, the project will enhance the value of these 'eco-system engineers' to Australian livestock producers in creating productivity from the millions of tonnes of dung produced each year.

MLA will collaborate with 12 partners on projects which will use dung beetles to improve soil health, reduce the spread of flies, pests and diseases, increase pasture health and reduce nutrient run-off.

The project will involve the rollout of national and regional-specific dung beetle services to more than 1,000 producers and producer groups. ■

Go to www.mla.com.au and search 'dung beetles'

27kg

of manure produced per day by a 450kg grainfed steer

3kg

of that is dry matter

INTEGRITY

Strengthening our reputation

Australia's reputation as a leader in food safety, integrity and traceability is set to strengthen as changes to the Livestock Production Assurance (LPA) program are rolled out.

LPA is the Australian livestock industry's on-farm assurance program, which is now managed by MLA's subsidiary: Integrity Systems Company.

From October, producers will need to renew LPA accreditation every three years. They will be notified by email or post and then have two months to complete an online assessment of their understanding of the on-farm LPA requirements.

It is expected all producers will complete the process by 2020.

Other LPA changes include:

- introduction of LPA Learning, an online education tool to help producers prepare for assessment
- integration of animal welfare and biosecurity modules
- accelerated rollout of electronic National Vendor Declarations (eNVDs).

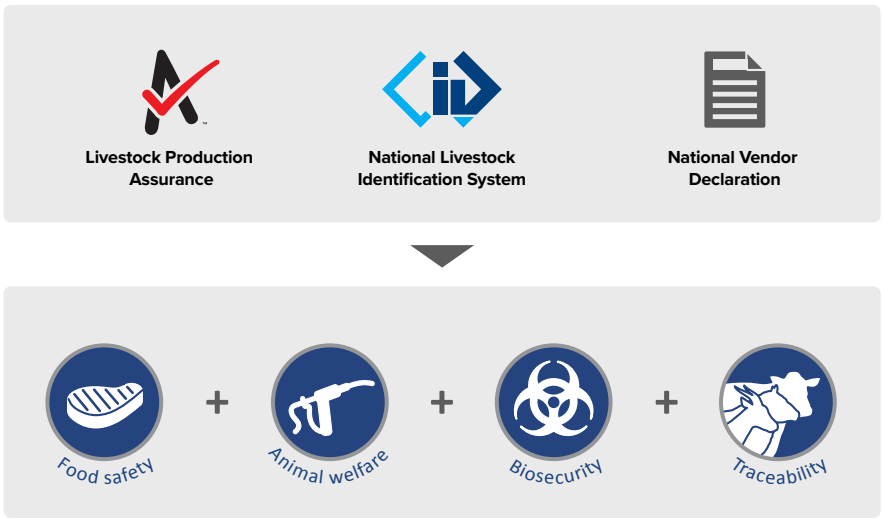
To support the program's continual improvement and meet increasing customer expectations, producers will pay $60 (plus GST) per Property Identification Code (PIC) every three years to remain LPA accredited. Where more than one LPA-accredited producer operates on a PIC, the fee will apply to each producer.

The income will support initiatives that assist producers to understand and comply with their responsibilities under the program.

Integrity Systems Company CEO Dr Jane Weatherley said the changes and decision to implement a more sustainable funding model was industry driven by the industry's peak councils.

"These enhancements are important to strengthen our promise to consumers and stay ahead of our competitors," she said. ■

Australia's red meat integrity system



Integrity Systems Company: At a glance

- A subsidiary company of MLA that provides a streamlined system for managing Australia's beef, sheepmeat and goatmeat traceability and quality assurance programs.
- Developed in response to a decision by industry and government – through the SAFEMEAT partnership – that one company be responsible for delivering a fully integrated integrity system.
- Created in early 2017, it replaced National Livestock Identification System (NLIS) Limited. Integrity Systems Company now manages the NLIS, Livestock Production Assurance (LPA) and National Vendor Declaration (NVD) programs.
- It has created single sign-on capability for NLIS, LPA (including NVDs), MSA and Livestock Data Link. All which can now be accessed through www.mymla.com.au.
- It is also responsible for delivering elements of the MLA Digital Value Chain Strategy, which aims to strengthen the integrity systems by identifying innovative data systems and digital technology.

Integrity Systems
red meat customer assurance

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www.mla.com.au/integrity

Want to keep up-to-date on the latest integrity news? Subscribe to MLA's *Integrity Matters* e-newsletter at www.mla.com.au/enews

ANIMAL WELFARE

Ensuring a welfare-focused future

A five-year $35 million research collaboration has been announced between MLA Donor Company (MDC) and some of Australia's leading research bodies to undertake ground-breaking projects to enhance animal welfare.

The Strategic Partnership for Animal Welfare Research, Development and Adoption (RD&A) has engaged a group of organisations with a shared commitment to enhance the Australian livestock industry's already world-class animal welfare practices.

The 50:50 partnership between MDC and collaborating research bodies has already seen 10 projects approved and an additional three proposals currently being reviewed.

MLA Program Manager, Animal Health Welfare and Biosecurity, Dr Jim Rothwell, said RD&A projects would look at issues such as the improvement or replacement of aversive practices and disease management.

"Tools to improve the early detection of disease, test immunity and the reduction of mortality rates will be explored," Jim said.

"This unprecedented commitment of funds will allow for strategic, innovative research that can lead to valuable and long-lasting outcomes.

"Animal welfare is one of the core pillars of the *Meat Industry Strategic Plan (MISP) 2020* and one of the six strategic pillars of *MLA's Strategic Plan 2016–2020*."

The partnership is governed by a management committee consisting of a scientific representative from each financial member, and chaired by internationally-renowned livestock researcher Professor Emeritus Alan Bell. ■

Project details can be found at: www.mla.com.au/animalwelfarepartnership

Snapshots of projects contracted under the partnership:

1. **Practical measures of animal welfare**
   What: Development of biomarkers to assess, via a blood test, the welfare of sheep and cattle.
   Who: University of Adelaide and SARDI.
2. **Induction stress in feedlots**
   What: Development of a feed additive to reduce stress in cattle being inducted into a feedlot.
   Who: Charles Sturt University and Elanco Animal Health.
3. **Developing the basis for an attitude-behaviour training program for stockpeople in the sheep transport and abattoir sectors**
   What: Identifying the best platform for training people working in sheep transportation and processing to improve attitudes toward stock handling.
   Who: Animal Welfare Science Centre, University of Melbourne.
4. **Lamb survival**
   What: Identifying the causes of dystocia in pregnant ewes to better control the issue and improve lamb survival.
   Who: CSIRO and NSW Department of Primary Industries.
5. **Immune fitness**
   What: Development of benchmarking tools to identify and select productive livestock with high levels of immune fitness.
   Who: University of Sydney.
6. **Reducing mortality rates**
   What: Using new technologies and prediction models to give early warnings of increased incidence of mortality risk factors for livestock.
   Who: University of Sydney and Consolidated Pastoral Company.
7. **Objective, robust, real-time animal welfare measures for the Australian red meat industry**
   What: Robotic technologies and ear tags will be used to monitor cattle to identify practices which lead to low resilience and compromise welfare to then encourage rectification.
   Who: University of Sydney, Allflex and Consolidated Pastoral Company.
8. **Identifying public and producer attitudes**
   What: Evaluation of public and producer attitudes and knowledge on animal welfare issues to enable the identification of gaps and sharing of facts.
   Who: Animal Welfare Science Centre, University of Melbourne.
9. **Welfare benchmarking and management**
   What: Developing a framework for welfare benchmarking and management through the supply chain.
   Who: CSIRO, NSW Department of Primary Industries, Agriculture Victoria and University of Melbourne.
10. **Improving welfare – pain relief**
    What: Establishing effective, affordable and practical applications of pain relief products during on-farm animal husbandry practices.
    Who: University of Sydney and 4 Season (an animal health company).

ON FARM

RESEARCH IN ACTION

IN BRIEF

Compare your cattle

Meat Standards Australia (MSA) producers can now benchmark their cattle's performance against the best in the country.

Available through mymsa.com.au, MSA benchmarking paints a complete picture, allowing producers to benchmark their cattle's compliance and index results against those of others in their region, state and across the country.

MSA Producer Engagement Officer, Jarrod Lees, described the new function as a "health check" for producers who previously only received feedback on their own herd's performance.

MSA benchmarking allows users to:

- put their grading data in context by discovering if they are matching, lagging behind or exceeding industry averages
- measure compliance within their region
- compare according to feed type and HGP (hormone growth promotant) status.

This work is an extension of the inaugural 2015 *Australian Beef Eating Quality Audit,* an Australian first which established a baseline for beef eating quality based on grading results for more than 3.2 million cattle.

Producers can access benchmarking through myMSA or their linked myMLA account. ■

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Managing the pressure

Forage demand by grazing animals across more than 1.9 million square kilometres of Australian rangelands will be the focus of a new project to assess total grazing pressure management and determine associated research, development and adoption needs.

Supported by MLA, the project will see producers, researchers, extension agencies, policy developers and natural resource management bodies working together across Queensland, NSW, SA and WA.

"Total grazing pressure (TGP) is defined as the demand for forage by all grazing animals, both domestic and non-domestic, relative to supply," said project leader Dr Cathleen Waters from NSW Department of Primary Industries at Trangie, NSW.

"Successful rangeland management relies on managing grazing pressure from non-domestic herbivores, adjusting livestock numbers in response to available feed, and strategically resting pastures.

"Currently there is a considerable, industry-based requirement for understanding the impacts of TGP management, particularly the costs and production benefits, but also landscape-scale impacts which have been difficult to monitor across large pastoral properties.

"This information is particularly urgent given the increases in investment of large areas of exclusion-type fencing in southern Australian rangelands." ■

www.mla.com.au and search 'rangelands'

Grassroots research

Six new MLA-funded Producer Demonstration Sites (PDS) have been established this year.

The PDS program provides funding of up to $25,000/year for three years for producer groups to demonstrate, develop and adopt innovation and on-farm management practices into local farming systems that improve profitability and productivity.

MLA's General Manager – Producer Consultation and Adoption, Michael Crowley, said the objective of the PDS program was to shorten the time lag between technological innovation and adoption of practices by producers at a local level.

The new PDS projects are:

Project	Managing group
Lamb finishing systems: the future?	Monaro Farming Systems CMC Inc. Bombala, NSW www.monarofarmingsystems.com.au
Integrating dual-purpose crops and electronic ID of sheep	Stirlings to Coast Farmers Group Albany, WA www.scfarmers.org.au
Real-time biomass imaging and the feed on offer app for improved feed budgeting	Southern Dirt Incorporated Kojonup, WA www.southerndirt.com.au
Improved feedbase management in the pastoral zone	Vanguard Business Services/Walgett Pastoral Profit Walgett, NSW www.vbs.net.au
Advantages of pasture manipulation	AgPro Management/Moora Miling Pasture Improvement Group Moora, WA www.mmpig.org.au
Good clover, bad clover (oestrogenic clovers)	MacKillop Farm Management Group/ Agriculture Kangaroo Island Keith, SA www.mckillopgroup.com.au

Find out about hosting a PDS at www.mla.com.au/pds

On the front foot

Australia's agriculture sector is one of the lowest users of antimicrobials in the world, an enviable position which the feedlot industry is determined to reinforce through a new stewardship program.

In what is believed to be a world first, the Australian industry will have its own Antimicrobial Stewardship Framework to help guide the judicious use of antimicrobials – minimising resistance while achieving high levels of animal health.

It is the first outcome of a two-year MLA project funded jointly by grainfed levies and the Australian Government in consultation with the Australian Lot Feeders' Association, aspart of the National Feedlot Animal Health Management Program. ■

Watch industry expert Dr Kev Sullivan explain the importance of antimicrobial stewardship in a new video. Search 'anti microbial Kev Sullivan' at www.youtube.com

Want to keep up-to-date on the latest feedlot news? Subscribe to MLA's *Quarterly Feed* e-newsletter at www.mla.com.au/enews

Over the fence

In this new series, *Feedback* will follow a group of producers from across Australia over the next year as they manage their operations and respond to the challenges of a modern livestock enterprise.

SNAPSHOT:

Nick Radford,
Penola, South Australia

Property:
3,690ha

Enterprise:
Breeding Angus cattle

Pasture:
Chicory, rye, clover, lucerne

Soil:
Waterfield: sand over clay. Penola and Lucindale: heavy black clay

Rainfall:
550mm

MY MAIN ACTIVITIES OVER THE NEXT TWO MONTHS:

- Evaluating selling systems. We sold our steers through a tender system for the first time. The buyers nominate on-farm or delivered; weighed here, weighed in town or weighed at their place. It's been a bit interesting and exciting.
- Processing young cattle.
- In winter it can get too wet in the paddocks, so we'll feed some hay out and find jobs in the shed, such as fixing trailers, or fencing on the higher country where we can get around.

Nick Radford

MY BUSINESS:

My father was in mining and earthmoving around Broken Hill and he owned a number of stations with sheep, cattle and a few rangeland goats. I drove trucks for him in the late '90s, but couldn't see it as a career. He bought a block in Naracoorte in the early '90s to finish some cattle, so I came down to look after it and enjoyed it. We sold a few of the Broken Hill stations and I moved here permanently in January 2000. We stuck with the existing veal operation and bought the cows with the place. There were Simmental, Murray Greys and a few Angus. The Simmentals didn't really lend themselves to feeding in drier years so we sold our Simmental and Murray Grey cows and are now all Angus. We have three properties: 2,000ha at Penola; 1,090ha at Lucindale; and 600ha at Waterfield, between Penola and Lucindale.

WHAT'S ON MY PLATE:

We've just bought another 400ha. We don't buy stock – we are completely self-sufficient as a breeding operation – so this year we will calve down 1,700 cows. We will re-join those and another 700 heifers, all black. The weaner steers stay at the Penola and Lucindale properties and the heifers go to Waterfield for joining. The culls go on improved pasture for meat production.

MY GO-TO TOOLS AND RESOURCES:

When I first moved down here, I regularly annoyed my agronomist because I didn't know how to put a crop in. We are basically graziers, but we now have seven centre irrigation pivots, three with chicory, rye and clover, and four with lucerne. The MLA Profitable Grazing Systems course was the best thing I've done. The program talked about aiming for the perfect level of nutrients in your pasture – if you go any further, you're wasting your feed. The industry has become a lot more professional, so I've signed up for an MLA Business EDGE course to help me utilise our assets to their full potential. So much of what I've done to date has been by trial and error, but efficiency is the key to productivity and I think improving efficiency will help me. ■

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Profitable Grazing Systems
www.mla.com.au/pgs

MLA Business EDGE
www.mla.com.au/edgenetwork

SNAPSHOT:

Johnny Gardner,
Cavendish, Victoria

Property:
1,850ha

Enterprise:
Prime lamb production from a 10,000 self-replacing ewe flock and 220ha of grain and oilseed crops

Pasture:
Ryegrass–clover and phalaris–clover mixes with lucerne and rape summer crops

Soil:
Sandy loam and basalt

Rainfall:
650mm

MY MAIN ACTIVITIES OVER THE NEXT TWO MONTHS:

- Improving pasture productivity through fertiliser application and in-crop weed control.
- We have an ongoing program of pasture renovation, so have put some perennial pastures in.

Johnny Gardner

MY BUSINESS:

The enterprise my dad (Rob) and I operate is a Coopworth composite ewe flock joined with White Suffolk and Poll Dorset terminal sires, predominately selected on growth, among other traits. Currently sitting at 13 DSE/ha, we are building to achieve a goal of 16 DSE/ha, which equates to around 13,000–14,000 ewes. Around 35–40% of our lambs are sold straight off their mothers at around 18kg cwt for export. For the rest, we aim at a grid of 18–26kg cwt for the domestic market. Longer term, we're looking to target 24kg cwt in all our lambs to increase the kilograms produced per hectare. The overall goal is to get our pregnancy scanning rates up to 170% and lamb weaning to 135–140%.

WHAT'S ON MY PLATE:

We've retained specialised succession planners to assist with the generational transition from my father Rob's management to mine. We recently finished setting up our lambing paddocks, through containment of ewes and pasture manipulation using Progyp (a gypsum/trace element fertiliser) and urea. Sowing the 2017 crops is completed and we finished the last of our 2016 lambs on a barley–lupin mix with some supplements and forage. Lambs are monitored through electronic identification to measure efficiency of growth and feed conversion. Our livestock manager recently resigned so there is just me, my father and a young jackaroo in the business now. In the short-to-medium term, we are going to assess how we manage with just our own labour, with contractors for operations such as lamb marking.

MY GO-TO TOOLS AND RESOURCES:

I'm using MLA's Livestock Data Link (LDL), which is an electronic carcase feedback system that allows producers to focus on the consumer market. I'm studying a Diploma in Agriculture through Rural Industries Skills Training in Hamilton one day a week, and I get most of my information through MLA, Agriculture Victoria and from the research work that groups such as the Nuffield scholars are doing. ■

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MLA Livestock Data Link
www.mla.com.au and search 'livestock data link'

Rural Industries Skills Training
rist.edu.au

SNAPSHOT:

Carlie and Lauchie Ward,
Dingo, Emerald and Bajool, Queensland

Property:
8,500ha plus 12,750ha leased

Enterprise:
Breeding and backgrounding with a herd of crossbred cows joined to Angus and Wagyu sires

Pasture:
Emerald: Buffel, butterfly pea, stylos

Dingo: Buffel, butterfly pea, stylos and bambatsi

Bajool: Native forest grasses, Rhodes grass, wincassia, stylos, para and pangola grasses

Soil:
Emerald: Predominately brigalow, ranging from heavy loam creek flats to lighter sandier ridges.

Dingo: Heavy cracking clays with 20% blackbutt beantree scrub soils

Bajool: Bluegum forest soils to lighter forest country

Rainfall:
Emerald: 640mm

Dingo: 660mm

Bajool: 760-1010mm

Carlie and Lauchie Ward

OUR BUSINESS:

We purchased Namgooyah (Dingo) from my (Carlie's) father 10 years ago following a succession plan for my parents' retirement. Three years later, we expanded by leasing a property at Bajool. We now lease two properties there and have purchased another property at Emerald, following a partial mine resumption. Breeding takes place on our lease country and backgrounding the progeny to feeder weight is carried out at Dingo and Emerald. We try to not have an attachment to any form of breeding, but combine breeding and trading to maximise our marketing efficiencies and turnover – basically, whatever makes the most money at the time. So, ours is a very fluid enterprise and we try new things to increase both the kilograms of production/ha and the value of those kilograms. We essentially run a crossbred animal. Our cows always have Brahman content, but we have been infusing British/European and tropically adapted *Bos taurus* breeds over time because they suit our country. Our focus is moving to Angus to maximise hybrid vigour and improve meat quality. The progeny are more marketable and well suited to feedlots. From this base, we are introducing Wagyu genetics to again increase the value.

WHAT'S ON OUR PLATE:

In the short-term, we're trying to improve business profitability so we can utilise market opportunities and reduce debt to become a more resilient business. We've had a period where we've grown financially and taken on a lot of risk; it got a little out of hand for a while and was extremely stressful. To address this, Lachie and I entered the Beef Business Mentoring program, which is supported by MDC (MLA Donor Company) in partnership with the Agri-Business Development Institute. This has forced us to pull our focus out of the day-to-day operations and take a more corporate view of the business and our growth plans. We are now implementing a business approach that is more structured and controlled.

OUR GO-TO TOOLS AND RESOURCES:

We try to read everything. Until now, we've sought most of our business advice from my father and other industry leaders. However, now we are branching out into more organised human resource management we learned in the course and are getting more strategic financial input from our accountant. Lauchie also talks with buyers more regularly to keep abreast of market trends and opportunities. ■

OUR MAIN ACTIVITIES OVER THE NEXT TWO MONTHS:

> Cyclone Debbie delayed operations by several weeks. We are catching up on branding and repairing fences and other infrastructure at Bajool.
> Continuing to improve our business management – our financials, staff management and internal business communications.
> Planting leucaena. There is 80ha planted at Dingo and we want to put leucaena into all our country.

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Agri-Business Development Institute
abdi.com.au

REPRODUCTION

Tactics to boost calf numbers

Reducing calf wastage starts with good breeder management.

Who doesn't want to wean more calves? The good news from recent research is there are some practical, cost-effective interventions to help achieve this.

Project leader Professor Michael McGowan, of the University of Queensland, said reducing loss to 5% was achievable in the more fertile areas of northern Australia, but tougher regions experienced losses greater than 10%.

"Typically, calf losses in adult breeder cows are related to nutrition and environment and, to a lesser extent, predation and disease," he said.

"However, maiden heifers were found to be the most vulnerable group and experienced the highest losses in all regions studied."

The research, building on discoveries from MLA's CashCow project and the Beef CRC, involved an extensive review of current knowledge and understanding of 'calf wastage' to identify potentially practical and profitable management interventions worthy of further research and on-farm trials.

Michael said many of the issues affecting calf survival at birth were created during pregnancy.

"It's far too late in most cases to fix the problem once the calf is born; apply the fix well before calving is the message," he said.

Nutrition first

Michael, fellow researcher Dr Geoffry Fordyce and their research team found nutrition, cow body condition during the last trimester of pregnancy and pasture protein and phosphorus content had a far greater impact on percentage losses between confirmed pregnancy and weaning than more sporadic factors, such as infectious diseases or trace element deficiencies.

The exception to this was maiden heifers, which have not experienced the stress of lactation and were unlikely to have natural immunity to many endemic diseases.

"You can't make something from nothing, so it is important to maximise cow body condition by providing ample, good-quality pasture during the growing season and minimise cow condition impact through strategic weaning as pasture quality declines," Geoffry said.

"Managers will wean more calves if they understand and implement best practice grazing principles."

These include:

- avoid mustering at peak calving times
- develop feed budgets to meet short and medium-term needs
- use rotational grazing or rest paddocks in the wet season to ensure pasture recovery
- limit grazing distance from water to less than 2.5km if possible
- improve or rehabilitate pasture
- ensure young lactating female cattle are supplemented with phosphorus where P-deficiency risk is high.

Weaning

Michael said timing of weaning was critical to allow cows access to sufficient quality pasture to replenish their body reserves and maintain the next pregnancy.

Tips:

- The decision to wean should be made on cow body condition, not the calves' average weaning weight.
- Use pregnancy testing and foetal ageing to segregate breeders, such as pregnant heifers and first calvers, as they need different nutritional and weaning management.

Managing health and stress

Researchers recommended managers implement evidence-based strategies to control infectious diseases including botulism, vibriosis and pestivirus (especially in maiden heifers).

Shelter from extreme weather (e.g. trees for heatwaves, drained ridges for wet conditions) is important for young calves and their mothers.

Ensure pregnant yearlings have good nutrition but are not overfed during the second trimester of pregnancy; calving is supervised and assisted where required; and handling of very young calves is avoided.

Targeted breeding

Geoffry recommended (at calving time) to identify cows with bottle teats for culling as the teats can appear very different, even days later.

"Teat and udder structure is quite heritable, so ensuring bulls are not bred from cows with bad teats or udders is critical," he said.

Geoffry said calf loss was highly repeatable in cows, and these females were often excellent candidates for sale as well. ■

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Go to www.mla.com.au and search 'cashcow'

MLA Calving Histogram Calculator: Go to www.mla.com.au/tools

www.futurebeef.com.au and search 'calf loss'

RESEARCH IN REVIEW

PROJECT AIM
To identify practical management strategies to significantly reduce calf wastage.

RESEARCH ORGANISATIONS
University of Queensland, University of New England, Queensland Department of Agriculture and Fisheries, Northern Territory Department of Primary Industries and Resources

FUNDING
MLA contribution $247,150

DURATION
February 2016 to March 2017

KEY FINDINGS
More research is required to validate whether identified and ranked management interventions to reduce calf wastage are viable, practical and profitable.

LESSONS LEARNED

> Calf loss between pregnancy test and weaning is a problem experienced by all beef breeding operations.
> Many issues affecting calf survival at birth are created during pregnancy – it's often too late to fix the problem once the calf is born.
> Nutrition and best practice grazing principles will result in more calves weaned.

The war on waste

The 'calf wastage' project, driven by producer desire to reduce northern calf losses, is supporting further research into cost-effective strategies that help lift weaning rates. A six-member producer reference group, representing the broad range of northern Australia's breeding operations, is providing grassroots direction for the project.

***Feedback* talked to four reference group members about their involvement:**

Bec Comiskey

Bec and her husband, Dave, run a breeding and fattening operation at 'Melton', an 8,524ha property near Alpha, in central western Queensland.

The business is certified organic and focuses on supplying premium markets such as MSA, EU and Pasturefed Cattle Assurance System (PCAS).

"Our operation is quite modest but, even so, we've experienced high calf losses from pregnancy test to branding. Through implementing seasonal mating we have managed to reduce that to 8%," she said.

"Culling the cows that don't bring a calf in at branding has been the key."

Bec hopes her involvement in the group will give her the opportunity to share experiences and learn from others.

"The group helps keep the project focused on producing practical, cost-effective strategies that farmers can understand and will implement to improve calf survival," she said.

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Geoff Murrell

Geoff is general manager of Paraway Pastoral's northern operations, setting financial targets and managing outcomes for seven Queensland properties.

"There has been a lot of research into specific aspects of calf loss over the years, but this project captures a broad view and deals with many of the contributing factors, which are interconnected," he said.

"When I was managing 'Helen Springs', prior to my role here, we were part of CashCow and got a lot of benefit from that, particularly the geographical information and the ability to benchmark performance.

"I'm hoping we'll see similar outcomes from this – good quantitative data to develop practical strategies we can employ in our businesses every day to improve profit and animal welfare."

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Kylie Schooley

Kylie is a cattle veterinarian at Chinchilla, Queensland, but also breeds cattle for niche premium markets such as EU and PCAS with her husband, Simon, and children Kobi, 17, (pictured above with Kylie) and Amilia, 15, at 'Rocky Springs', west of Mundubbera.

With 600 breeders, they consider themselves 'small time'. Every calf contributes to their viability, so any waste in their operation hurts.

"I wanted to be part of this because I really believe in research and development. We were involved in CashCow and this seemed a natural progression," she said.

"Given our smaller scale, even if we could save a few extra calves a year, that would help our profitability."

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Wendy Brodie

Wendy and her husband, Jim, run 1,100 breeders at 'Redland Park', 30km east of McKinlay in north-west Queensland.

Supplying mainly the heavy feeder market with their Santa Gertrudis–Angus cross, they believe their annual calf loss from pregnancy test to weaning is about 10%.

"We don't really know what the major contributors to that are, so we're really keen to see some cost-effective, practical outcomes that will help us lower it," Wendy said.

"We're trying enhanced mothering – running older cows with first calvers – to see if that helps and we're also examining other animal husbandry practices we do on farm to identify weaknesses but, without robust research outcomes, it's very hard to know."

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Calf Alive Symposium

Want to improve calf survival in your enterprise? The National Calf Alive Symposium, featuring leading research and practical interventions, will be held on 24–25 November 2017 at Capella, Queensland.

Presenters include Professor Michael McGowan, formerly of the CashCow project, and producer and veterinarian Kylie Schooley, as well as US and Indonesian perspectives provided by researchers Professor Frank Garry, Dr Tom Kasari and Dr Dahlanuddin.

Conference information:
Jackie Kyte
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Cost: $100/person

COMPLIANCE

Feeding market opportunities

Chris Murphy has found an opportunity to use pellets as a supplement to finish grassfed cattle.

When Chris Murphy had the chance to be 'a guinea pig' in on-farm trials for the MLA, JBS Australia and Agriculture Victoria project, he jumped at it.

Despite having quality, improved rotationally grazed pastures and dry matter/ha grazing period triggers, Chris sometimes struggled to meet market specifications.

"I put 108 steers in the project that were targeted for sale via the MSA grass trade yearling market into JBS Farm Assured," he said.

"Of those, we identified 36 (using MLA's BeefSpecs tool) as unlikely to meet the carcase weight and fat specifications of the grid.

"By boosting growth rates with an eligible pellet, we estimated we could improve compliance from 59% to 96% for the entire mob."

All steers remained on pasture, however the lighter mob of 36 had access to pasture and pellets in a feeder and, following an introductory ration of 2.5kg/head/day for five days, were fed 1 tonne/week (4kg/head/day) for 60 days.

The pellet contained an estimated 12.1 ME (MJ/kgDM) and 16.6% crude protein.

By increasing the daily weight gain of the 36 identified steers to 1.7kg/head/day (compared with 1.5kg/head/day for the remainder of the mob), only three remained outside specs failing on weight, not fat cover.

Was it worth it?

Seven of the pasture-only steers did not satisfy MSA requirements: five had fat cover issues and two were dark cutters.

The average carcase weight of the 36 steers (originally the bottom third of the mob) was more than the average of the non-supplementary fed portion – 293kg compared to 286kg.

Chris said although the net increase in profit was modest – $1,096 after an estimated $5,581 for feed, labour and fencing (excluding capital costs such as a pellet silo) were accounted for – there were other benefits.

"By drafting off the smaller steers and managing them separately, the remaining animals had more feed on offer," he said.

"We were also able to sell our entire steer portion in two drafts including the twins and orphans."

Flexible response

Since the project, Chris had another challenging season in 2016, where buying in hay or silage to keep steer weights on track wasn't an option.

Last year, he repeated the exercise of supplementary

SNAPSHOT: **Chris Murphy,** 'Woodhouse West', Dunkeld, Victoria

Property: 515ha

Enterprise: Breeding Angus steers and heifers (250–300kg carcase weight) for grassfed markets including JBS Farm Assurance program

Livestock: 300 breeding cows

Pasture: Perennial ryegrass and sub-clover (70%) legumes (30%)

Soil: Clay and sandy clay loams

Rainfall: 650mm

feeding pellets to the bottom third of his steers.

"There was an even larger variation in the steer weights when I started, with the bottom third about 55–70kg behind the mob average," Chris said.

"I started feeding earlier and used the pellet supplement as my winter feed filler.

"I fed them 5kg/head/day for 60 days before putting them on to spring pastures and, despite the initial weight variation, again managed to sell them all (in two drafts) to the JBS Farm Assured program."

This year, thanks to an excellent 2016 spring, Chris has plenty of silage on hand and plans to achieve the same gains – and increased profit – using silage as his grassfed steer supplement. ■

LESSONS LEARNED

> Identify and target the tail end of a mob early.
> Use pellets if good quality silage is not available.
> Drafting off the tail end improves conditions for the rest of the mob.

Chris Murphy
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MLA Beef Specs tool: www.mla.com/tools

Finishing off with grass

Buyers of grassfed beef want a quality product 365 days a year but this is not as easy as it sounds. A recently completed MLA-funded project is helping overcome this challenge.

According to JBS Australia Farm Assured and Supply Chain Manager Mark Inglis, sourcing reliable supplies that meet market specifications day-in, day-out is challenging.

"In 2011 and 2012, carcase compliance with MSA and company specifications was only about 66%," Mark said.

"With the launch of our Great Southern (grassfed) brand we saw an opportunity to lift compliance by helping producers to understand the whole value chain, interpret feedback and consider on-farm management changes, such as filling feed gaps."

Mark described Great Southern's ideal grassfed animal as 300–320kg (carcase weight) with p8 fat 12mm+, rib fat 6–8mm, grading MSA and having a MSA Index of 61 and above.

To overcome these supply difficulties and return more profit to producers, the project:

- examined best practice systems, including rotational grazing to maximise pasture utilisation and persistence, and selecting improved pasture species
- developed strategies for early identification of animals unlikely to meet market specifications
- trialled options that satisfied grassfed protocols while improving compliance, for example, supplementary feeding of silage or approved pellets.

According to Mark, the project made real market gains with compliance to JBS specifications rising to 85% by the project's end. Part of the project used Livestock Data Link (a carcase feedback system developed by MLA).

"The producers involved got enormous benefit from understanding the whole value chain, right up to meeting the customers," he said.

Pasturefed Beef Project coordinator Maria Crawford, of Agriculture Victoria, said the 'key learnings' from the project are now available to producers.

"A manual has been compiled for Farm Assured suppliers based on the project's findings. It covers pasture-based production and resources; cattle growth paths, handling and market suitability; and the beef carcase and how to measure profitability," she said. ■

RESEARCH IN REVIEW

PROJECT AIM
To improve grassfed compliance rates via increasing producer knowledge and identifying finishing techniques.

RESEARCH ORGANISATIONS
Agriculture Victoria, Pear Consulting (extension consultant) and NSW Department of Primary Industries

FUNDING
MLA, JBS Australia and Agriculture Victoria

DURATION
July 2014 to July 2016

KEY FINDINGS
It is possible to lift compliance rates in grassfed cattle through best practice production and pasture utilisation and by using approved supplementary feeding.

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Contact Maria for an electronic or hard copy of the Farm Assurance program manual

Livestock Data Link: www.ldl.mla.com.au

Pasturefed Cattle Assurance Scheme: www.pcaspasturefed.com.au

FEEDBASE

Finding a winter feed boost

Researchers Geoff Moore and Paul Sanford from the Department of Agriculture and Food examining Persian clover treatment sown in kikuyu pasture at Adrian Anderson's property in Wellstead, WA.

There are more than 150,000ha of kikuyu-based pasture in WA where the tropical grass has proven successful at filling the summer feed gap on the state's south coast.

Paul Sanford, Department of Agriculture and Food WA Senior Research Officer, said interest in improving the winter production of this productive spring/summer grass with companion legumes was growing.

"Our investigation found that sub-clover remains the most proven companion for kikuyu, particularly if producers can maintain it at adequate densities," Paul said.

"However, the hard-seeded serradella varieties are good candidates for summer sowing because they will survive false breaks. These varieties can grow later at the end of spring particularly in deep sands, but seedlings will be lost if grazed hard."

When choosing a legume producers should always consider the climate, soil conditions and pasture management (particularly grazing methods and pressure) to ensure the best results.

Paul's tips for establishing legumes in kikuyu-based pastures include:

- A viable legume seed bank is essential. If the seed bank is poor or conditions are dry, suppress kikuyu using herbicides or hard grazing and sow legumes following the season break.
- In wet years, assuming an adequate seed bank, legumes will establish well as long as the kikuyu has been grazed hard in the autumn pre-break of season.
- Take care with herbicides. Kikuyu displaces weeds: if suppressed with a chemical, weeds can re-establish and dominate the pasture.
- Hard-seeded serradellas can be sown as pods into kikuyu pastures in summer, rather than winter sown as scarified seed.

While sub-clover and serradella proved to be the most reliable companions for kikuyu, several novel legume species such as woolly pod vetch showed potential (particularly with adequate rainfall).

RESEARCH IN REVIEW

PROJECT AIM
To find suitable productive legumes for introduction to kikuyu pastures to reduce the need for supplementary winter feeding while increasing stocking rates and improving soil fertility. This project is part of a national project to increase feedbase production and quality of subtropical grass-based pastures.

RESEARCH ORGANISATIONS
Department of Agriculture and Food Western Australia (DAFWA) and ASHEEP

FUNDING
DAFWA and MLA

DURATION
May 2012 to September 2017

KEY FINDINGS TO DATE
Productive legume partners for kikuyu are:

- sub-clover
- yellow serradella
- French serradella
- woolly pod vetch (requires > 400mm rainfall and seed can be toxic to livestock).

Does it pay?

Paul used a computer simulation based on a dual-purpose Merino enterprise. The modelling ran on a feedbase of 25% sown to a kikuyu/sub-clover, with the remainder annual pasture. The model assessed the economics of varying amounts of legumes in kikuyu pastures.

Paul found lifting legumes in the pasture by around 25% increased the gross margin by about $40/ha. The analysis also revealed producers must increase stocking rates to maximise their return on investment from improved pastures.

"The average increase in pasture yield was 535kg DM/ha/year, with clover driving pasture production in the cooler months," he said. ■

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ASHEEP
http://gga.org.au/group/asheep/

EverGraze
www.evergraze.com.au

Serradella success

Alan and Bec Hoggart (pictured above with their children Paisley, 7 and Charlie, 9) have been involved in a three-year legume trial with their local ASHEEP (Association for Sheep Husbandry, Excellence, Evaluation and Production) grower group as part of MLA's Producer Research Site program.

ASHEEP wanted to investigate using serradellas in kikuyu pastures, given sub-clovers have been patchy in the past few years on the south coast of WA due to red clover disease, which causes a reddening of the leaf and plant die-back.

The trial on the Hoggarts' property involved testing two varieties of serradella and sowing at different times of the year.

Preparation for legume sowing:

- summer – kikuyu was heavily grazed and sprayed in early autumn
- autumn – kikuyu was heavily grazed until May and sprayed before sowing.

Legume sowing involved:

- summer – Margurita serradella at 25kg/ha and unscarified Bartolo bladder clover at 20kg/ha in February
- autumn – Santorini and Margurita serradellas at 10kg/ha and Bartolo bladder clover at 10kg/ha in May
- seed placement at a depth of 1cm on 30cm row spacings.

Of the two varieties of serradella, Alan found Santorini performed the best on his property.

"In my experience, Santorini has more tolerance to grazing by sheep and has added value to our lower-grade pastures," he said.

"Santorini gets going a lot quicker without competition, but it will establish in a kikuyu pasture with the right management. Once established, it persists without too much intervention in a rotational grazing operation."

Although other producers on the south coast of WA have had success with summer sowing, Alan leans towards autumn sowing.

"Our property has areas of light, sandy soil prone to erosion, so we don't crop. We needed to improve our lighter-soil pastures with varieties that persist with minimal intervention," he said.

"We had average rainfalls of 540mm over the three years of the trial, and found planting into existing pasture in summer didn't work for us, because the kikuyu takes too much moisture away from the legumes.

"Sowing in autumn gave the seedlings more access to moisture because of increased winter rain and decreased kikuyu activity." ■

LESSONS LEARNED

- Santorini was the best performing serradella.
- Autumn sowing is the most suitable in the enterprise.
- Good management is important for establishment.

Alan Hoggart
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SNAPSHOT: Alan and Bec Hoggart, Condingup, Western Australia

Property:	Enterprise:	Livestock:	Pasture:	Soil:	Rainfall:
2,500ha	Ewes for prime lamb production	5,600 Dorper/ Wiltshire ewes	Clover, serradella, ryegrass and kikuyu	Predominantly black clay, sand over gravel to deep sand	650mm

Tailor made

MLA's new online service, myMLA, is proving a hit with producers, with users reporting 'convenience', 'relevance' and its ability to aid in 'streamlining administration' as some of the positive features.

myMLA offers personalised, relevant content delivered to an online dashboard unique to each user.

To sign up for a myMLA account, producers enter their email address and choose a password. Users then configure the myMLA dashboard to suit their enterprise.

After entering their postcode and enterprise type – choosing from grassfed cattle, grainfed cattle, sheep and goats – myMLA provides:

- a customised seven-day weather forecast
- market information based on production type and location; users can also customise up to eight online 'market information/indicator cards'
- information on nearby events
- relevant industry news, market news and advice, and information from MLA and other sources
- links to relevant research resources and tools
- a link to a single sign-on facility for key industry integrity and information systems. ■

www.mla.com.au/about-mla/mymla/

Meet the myMLA converts

Stuart Austin and Trish Cowley,
Managers, Wilmot Cattle Company,
Ebor, NSW

Wilmot Cattle Company is a grass-finishing and backgrounding enterprise that processes 60–120 head/month and trades 3,000–5,000 head/year into feedlots.

What motivated you to sign up to myMLA?
We buy a lot of cattle out of saleyards in spring and out of the paddock later in the season. The ability to customise myMLA with snapshots from the saleyards that we buy from regularly and to watch the market in more detail than the EYCI (Eastern Young Cattle Indicator) was very appealing.

Single sign-on for the integrity programs was also a big attraction. When I need an MSA declaration or eDec NVD in a hurry, I don't have to go looking for oddly configured user names and passwords.

How has it changed how you manage your enterprise?
myMLA has given me the ability to value cattle in the paddock more accurately. I can monitor regional market trends and how they are correlating to the EYCI to make marketing decisions on forecast sales.

We endeavour to manage risk by forward selling cattle as far out as the market will allow. By monitoring what's happening in the market, we can get a better feel for where we think it is heading. This enables us to make decisions in advance to maximise profit, rather than speculating and taking a price on the day.

Name the best feature of myMLA
Up-to-the-minute, customised, detailed information relevant to my enterprise.


Stuart Austin and Trish Cowley from Wilmot Cattle Company with their son Harry.

Scott and Anna Anderson,
Killara Pastoral Company,
Flinders Island, Tasmania

The convenience of myMLA was the main attraction for beef and lamb producer Scott Anderson.

What motivated you to sign up to myMLA?
The linked accounts are much more convenient than having different account numbers and passwords for the National Livestock Identification System (NLIS), Livestock Data Link (LDL) and Livestock Production Assurance (LPA).

How has it changed how you access information?
It has made it more convenient. We're mostly a backgrounding operation, but we also finish heifers and cows. We access NLIS data to look at carcase weights of cattle we have bred and to check transfers have been done correctly, as these are usually handled by a third party. We access LDL for feedback on the cattle we sell over the hooks, and we access our LPA account to manage eDECs. I also look at National Livestock Reporting Service market reports and general market news through our myMLA dashboard.

What is the best feature of myMLA?
The single password for the three systems that we use: NLIS, LDL and LPA.

James and Georgie Knight,
'Dornoch', Mortlake, Victoria

James and Georgie Knight moved to 'Dornoch' 12 months ago to manage the family beef business. They run 900 Angus and Angus–Shorthorn breeders.

What motivated you to sign up to myMLA?
Streamlining administration and keeping informed are key areas of focus and interest. We saw the myMLA portal as a great tool to access multiple platforms from the one site and be provided with up-to-date data.

How has it changed how you manage information and marketing?
We have myMLA set as our homepage on our office computer to give us a daily snapshot of the EYCI, saleyard prices, market and industry news, and MLA-supported events and resources. Key measurable indicators are set within our new business and the portal allows us to track those indicators and manage our marketing cycle.

Name the best feature of myMLA
It is a very user-friendly interface and is easily modified to suit a producer's business. The LPA, NLIS and MSA-linked account has streamlined administration and is a key feature for our business.

Any suggestions for improvements?
Although the site is mobile compatible, it would be beneficial to see it released as an app, given the increasing amount of time spent working outside the office. ■

Scott and Anna Anderson from Killara Pastoral Company, Flinders Island, Tasmania.

Georgie, James and Olivia Knight pictured with Georgie's father Bruce Allen (left).
Photo courtesy: Stock & Land

CLIMATE VARIABILITY

Planning for all seasons

While an average rainfall of 1,000mm sounds luxurious to some, it does not tell the full story of Georgina Gubbins' farming environment.

"Two of the past three years have had the bottom percentile of rainfall, while 2016 was in the top percentile," she said. It also means waterlogged pastures in winter with slow dry matter production.

Georgina was one of the first participants in the More Lambs More Often program, which is funded by the Australian Government and based on tools and modules in MLA's Making More From Sheep.

"The result is we've become more proactive in our approach to seasons and managing our flock," she said.

"We have trigger points in our business – they're like gates, we either stop or go, depending on what is happening.

"We used to be much more reactive. We would wait to see what happened and make decisions as we went along. Now, we do a lot more forward planning."

Ewe scanning is a central component of Georgina's approach to management. On scanning in June, ewes are drafted into empties, singles, twins and triplets. Priority for feed and shelter is given to triplets, then twins and then singles.

"I used to hate (managing ewes carrying) triplets but now we've had up to 230% lamb marking from our triplet mob," Georgina said.

"Every ewe in the triplet mob has at least twins and many raise triplets. Overall, our lamb marking is around 150–160% across all the mobs."

Scanning also tells Georgina how many head she will have on the ground in spring. That information, combined with weather forecast data from seven different climate models, helps with decision making, such as whether to buy in supplementary feed prior to September. Climate forecasts provide a trigger point for partial destocking in a tight season.

"We have what we call 'black tag' ewes – they're the ewes that, if the season isn't going the way we want, are the first to go," Georgina said. This group generally includes older ewes or poor performers.

"This also helps with shearing, because the 'sell stock' is the first to be shorn."

"Markets are important, so from the get-go we look at how many lambs we might need to sell to stores and how many we'll keep to finish in the paddocks," she said.

Stock are paddocked so they can be easily accessed for sale without too much more handling or time spent going through multiple ewes.

"Really, it's all about better planning. It's not harder to do, it just requires being better organised," Georgina said. ■

LESSONS LEARNED

- Scanning supports planning.
- Establishing climatic trigger points provides structure.
- Being well organised underpins decision making.

Acknowledgement: *This article was prepared as part of the More Lambs More Often project. This project is supported by funding from the Australian Government.*

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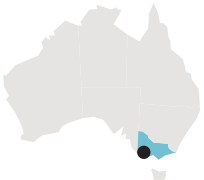
More Lambs More Often:
www.rist.com.au

Making More From Sheep:
www.makingmorefromsheep.com.au

Check out modules on planning and weaning more lambs

SNAPSHOT: **Georgina Gubbins,** Heywood, Victoria



Property:
970ha

Enterprise:
Cattle and prime lamb production

Livestock:
800 Angus cattle and 4,000 composite ewes

Pasture:
Perennial and annual ryegrass, fescue, and trialling a fescue/phalaris mix in sandy areas

Soil:
Peat, gravelly loam and bush sand

Rainfall:
1,000mm

Hunger for knowledge

Feed supplements are an investment in herd health and productivity. To get the most cost-effective results, producers need to understand what their animals need and when.

Livestock management consultant and MLA's Nutrition EDGE workshop provider, Désirée Jackson, said good grazing management and an understanding of how the rumen functions – and should be managed – can go a long way to boosting productivity and reining in excessive costs.

What does the rumen do?
The rumen microbes digest the roughage (pasture) in the diet and provide energy for the animal. As they multiply, they also become the animal's major source of protein.

To carry out this function, it is critical animals have sufficient roughage, whether in the paddock or in yards, and that the microbial population isn't depleted.

In addition to roughage, the rumen microbes must have access to sufficient nutrients to function. For example, supplementation with urea provides rumen microbes with nitrogen when pasture is low in protein, so they can continue to process the roughage and increase turnover in the rumen.

Why is a good pasture base so important?
Pasture provides most of the animal's energy and drives production, and grass is the cheapest form of energy.

Feed budgeting – what are some of the basic skills producers should have?
Number one is to be able to gauge what the pasture is providing to animals; what their needs are in terms of how much energy, protein and minerals are required to grow, lactate and conceive; and then what the gap might be. Different stock classes have vastly different requirements, depending on their stage of growth or productivity.

It's also important to know whether licks are supplying the nutrients at adequate levels balanced with the nutrients from pasture. Finally, when selecting supplements (e.g. loose licks or blocks), it's important to calculate the costs of the targeted nutrients on a price/unit basis.

How can producers tell if their stock have mineral deficiencies?
The first step should always be to identify the most limiting nutrient in the diet and address that first. Phosphorus (P) is usually the big one and the most reliable test is the P-screen (best done on dry stock at the end of the growing season). Soil P and dung are also useful indicators in some situations. Other mineral deficiencies such as sulphur, salt, copper, cobalt and selenium are often commonly identified in certain regions and these can be confirmed either through serum tests or liver and kidney tissue samples.

It is important not to over-supplement trace elements as some, particularly copper and selenium, can be toxic.

How do producers know animals are getting enough nutrients and minerals from a supplement?
Monitoring is probably the most difficult aspect of supplementation due to range, herd size, multiple watering points and the nomadic nature of cattle. It is better to monitor intakes over a month, rather than a week; a month will give a far more reliable indication of how much lick is being consumed. Sometimes lick intakes can be too low, not because the cattle have sufficient nutrients, but because the lick is unpalatable. Conversely, when the pasture has become energy-deficient, cattle can over-consume supplements to compensate. Most producers rely on expert advice and visual appraisal of their stock to judge whether pasture and supplement intakes are sufficient and in balance. A good guide for recommended mineral intakes per kg DM can be found at www.futurebeef.com.au and search 'minerals and vitamins'. ■

Deficiency symptoms

Phosphorus
- poor growth rates and breeder cow condition
- decrease in fertility, associated primarily with lower body condition
- bone chewing
- depraved appetite (pica) includes chewing rocks, dirt, wood, bones or hair
- stiffened gait or peg leg (in extreme cases of phosphorus deficiency).

Selenium
- white muscle disease
- increased incidence of retained placenta
- infertility
- immune system depression.

Copper
- diarrhoea
- poor weight gain
- scruffy coat
- swollen or painful joints
- broken bones
- anaemia
- infertility
- decreased milk production.

Cobalt
- poor appetite
- reduced growth
- anaemia
- thin skin and poor hair quality.

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Like to attend a Nutrition EDGE workshop or organise one in your area? Go to www.mla.com.au/edgenetwork

Download MLA's free publication *Phosphorus management of beef cattle in northern Australia* at

www.mla.com.au/phosphorus

https://futurebeef.com.au/knowledge-centre/minerals-and-vitamins/

With a tough season predicted, Jenny Walker is planning to start feeding supplements to their weaners earlier than normal.

Ready, set, feed

By the time Jenny Walker sees pasture quality deteriorate, she is already using knowledge gained from an MLA Nutrition EDGE course to guide cost-effective decisions.

Pasture quality and cow body condition are under constant scrutiny as the Walkers look for the environmental and physical triggers that indicate nutritional supplements are needed.

"Our country isn't phosphorus or particularly mineral deficient; our biggest challenge is frost, which can happen anytime between May and August," Jenny said.

LESSONS LEARNED

- Dividing a cattle herd into stock classes and feeding supplements to those most in need helps control costs.
- Green, lush growing pasture is optimal for condition of animals; once pasture has flowered and gone to seed, its nutritional value is declining and the lactating cow is already losing condition.

"As soon as we get a frost, pasture protein disappears, digestibility falls and we know the cattle are losing weight and need supplementary nutrition."

During the course, Jenny learnt how to interpret supplement labels and compare the cost of protein and energy/kilogram.

"We also learnt to assess how much pasture is available in a paddock in terms of dry matter/ha and how long that might last," she said.

"For me, one of the most interesting revelations was grass quality and when it's at its best.

"Pasture's peak, for both nutritional value and digestibility, is when it's lush, green and growing; by the time it's gone to flower and seed, it's already declining in protein and energy.

"The cattle are already starting to lose weight, yet it's very difficult to detect through visual appraisal, so it is beneficial to supplement as soon as the grass is dry or frosted."

For ease of handling, the Walkers use dry licks made of cereal grain, urea, minerals and vitamins.

"We segregate our stock classes and supplement those with the highest nutritional needs, which are usually weaners, maiden heifers and late calvers," Jenny said.

Urea content is introduced to weaners gradually, starting at 3% and building up to 10% of the lick; and for the rest of the herd is given up to 15% in the dry lick. This is to acclimatise the gut microbes to extract the maximum amount of protein and energy from the feed.

The Walkers use visual assessment of their stock's condition to determine whether supplement amounts are sufficient but, following their attendance at a Nutrition EDGE workshop, they also send faecal samples to a Brisbane laboratory for analysis. The feedback determines any diet shortcomings.

Jenny said that due to a tough seasonal outlook forecast they were planning to wean some calves early and start feeding supplements to weaners and maiden heifers, and had already preg-tested and sold off the empties. ■

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SNAPSHOT:

Rowly and Jenny Walker and daughters Briohny and Brogan, son Andrew and his wife, Claire – 'Iwona', Mitchell, Queensland

Property:	Enterprise:	Livestock:	Pasture:	Soil:	Rainfall:
11,000ha	Breeding EU-accredited Simbrahs, which are grain finished	1,100 breeders	Buffel, herbage, natives	Brigalow, belah, bottle tree country, red and black soils, box flats	575mm

Cattle health focus

Recently completed research has delved into the cattle health issues of bovine Johne's disease and bull breakdown. We hear from researchers on the outcomes of the two MLA-funded projects and how they can improve animal health and welfare.

Research has found bovine strains of Johne's disease can survive in northern soils for more than 12 months, highlighting the importance of regular testing of Queensland cattle herds.

The research was carried out after two properties were infected during 2012 and 2013 with two new strains of Johne's disease that were not related to the introduction of any cattle infected with strains known to occur in southern Australia.

According to project leader Dr Robert Hedlefs, from James Cook University, it was thought Johne's disease would not survive for long in Queensland due to high temperatures and dry conditions.

But the results showed bovine and bison strains of Johne's disease can survive in northern Queensland environments for more than 12 months and its survival can be prolonged even further in dry conditions. The cause of the disease – the bacterium *Mycobacterium avium subsp. paratuberculosis* – can remain dormant and then reactivate after periods of 15 months or longer.

"It is vital for Queensland producers to carry out regular Johne's testing of cattle, particularly for those producers requiring access to the live cattle export market or stud bull breeders wishing to maintain their Johne's Beef Assurance Score," Robert said.

"The clinical symptoms of Johne's disease, such as diarrhoea and chronic ill thrift, will often only be evident in older cows in the herd, but producers need to be aware that cattle can still be infected and not show any symptoms."

Producers are encouraged to use the range of tests that are available, including blood and molecular diagnosis and testing of faecal samples, to help increase the likelihood of detection.

Where there have been previous infections, producers need to recognise the potential risk of reinfection from dormant Johne's disease and include long-term surveillance and monitoring, and veterinary advice in property management plans.

Further research is needed into the process of Johne's disease dormancy and how this can be managed to reduce the risk of disease recurrence. ■

Dr Robert Hedlefs

Behind the breakdowns

A thorough health check of bulls before joining, along with close monitoring of mobs during the mating period, is vital to reduce the impact of bull breakdowns.

Veterinarians and producers in north-east Victoria and southern NSW have long dealt with lesions on the penises of bulls in the joining period (a condition known as balanitis). The lesions often make bulls reluctant to mate, resulting in breakdown and poor conception rates.

Balanitis can be caused by Bovine Herpesvirus (BHV), which is transmitted at joining from the bull to the cow, or vice versa. There are two types of BHV that can cause balanitis or vulvovaginitis (lesions on the vulva of cows), BHV-1 and BHV-5, both known to occur in cattle in Australia.

Initial studies identified that BHV-1 was associated with balanitis in some bulls, but not all bulls tested positive. Penile lesions had an inconsistent appearance not always typical of balanitis in cattle in Australia. Veterinarians from different regions also described the lesions and their effect differently.

The next stage of the research, carried out on farms in southern NSW and north-east Victoria, took samples from cows and bulls. None of the animals tested positive for either BHV-1 or -5.

According to researcher Dr Leah Tyrell, lesions found on the bulls and cows on two of the farms were typical of the syndrome, despite the negative results.

The project also discovered the presence of BHV-6 (a new strain) from penile and vaginal swabs. The significance of this is not yet known and further research is required to investigate its role, if any, in bull balanitis.

"Bull breakdowns can be devastating for beef enterprises because no calf equates to no income. Producers need to monitor mobs closely during mating. If they suspect a problem with bulls failing to work they should remove the bull immediately and have the problem investigated by a veterinarian," Leah said. ■

RESEARCH IN REVIEW

PROJECT AIM
To determine environmental survivability of bovine and bison strains of Johne's disease (*Mycobacterium avium supsp. paratuberculosis*) on northern grazing properties.

RESEARCH ORGANISATIONS
James Cook University, Queensland Department of Agriculture and Fisheries and University of Sydney

FUNDING
MLA

DURATION
January 2014 to January 2016

KEY FINDINGS
- Bovine and bison strains of Johne's disease (*Mycobacterium avium subsp. paratuberculosis*) can survive in northern Queensland soils for more than 12 months.
- Survival is enhanced in dry conditions due to the organism's ability to become dormant and then regenerate again.
- High-value breeding cattle or animals destined for export should be regularly tested to minimise the risk of infection being spread.
- Producers should use currently available tests to more accurately detect the disease.

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A range of information is available to help producers better understand bovine Johne's disease and how to avoid it.

www.futurebeef.com.au

www.animalhealthaustralia.com.au

RESEARCH IN REVIEW

PROJECT AIM
Investigation of balanitis in beef herds in southern Australia.

RESEARCH ORGANISATIONS
The Mackinnon Project, University of Melbourne

FUNDING
MLA

DURATION
May 2013 to March 2017

KEY FINDINGS
- Bovine Herpesvirus (BHV) -1 and -5 were not found to be associated with mid-season breakdown of bulls on farms in southern NSW and the upper Murray region of north-east Victoria.
- The presence of a new BHV-6 strain was also identified but the significance of this finding was unable to be determined.
- Producers should monitor mobs closely during joining and ensure they carry out a full health check of bulls pre-mating.

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More Beef from Pastures contains modules on animal health, disease and maximising weaned calves: www.mla.com.au/mbfp


Researcher Leah Tyrell

BUSINESS MANAGEMENT

Many happy returns on yard investment

With strong cattle prices, many producers are in a position to invest in on-farm improvements. But which strategy will deliver the most bang for your buck? Speakers at an MLA-sponsored Pasture Update event, held at Table Top, NSW, earlier this year, discussed a number of investment scenarios.

Here we focus on two – infrastructure and pasture improvement.

The new 'Larakoona' cattle yards.

MARCUS' LESSONS LEARNED

- It's important to do your own homework, but you don't have to reinvent the wheel. Listen to the yard builders and design experts and take advantage of their knowledge.
- Don't rush and don't feel you have to go with the first yard design presented. The designers and I went back and forth and had about eight design versions before the final one.

The Pasture Update event was organised by the Grassland Society of Southern Australia's Albury–Wodonga branch and held on committee member Marcus Richardson's property 'Larakoona'.

The Richardsons recently invested $170,000 in a new set of steel cattle yards to replace 50-year-old timber yards. The investment included $20,000 for gravel, $10,000 for earthworks to prepare the site, extensive concreting and roofing, and a dust-suppression sprinkler system.

Built by Holbrook Engineering in a design partnership with Thompson Longhorn, the yards feature a prefabricated rotary crowd pen and race.

Marcus said he had five 'tactical' reasons for investing in new yards rather than modifying the existing yards:

1. Design flaws in the old yards
2. Lack of durability in the old yard materials
3. Improvements in yard design that could be incorporated in a new set of yards
4. Modifying the old yards would lead to compromises and not allow extensive site preparation
5. Cash flow and tax planning.

"The original yards tended to work against cattle behaviour rather than with it," Marcus said.

"Some of the gates didn't swing, some sliding gates didn't slide and some of the gates were in the wrong place, which meant cattle flow was not ideal.

"There were a number of other limitations that all added up to inefficiency, inconvenience and frustration, as well as compromised safety."

Marcus said his decision to make such a large investment in infrastructure was driven by a number of factors.

Marcus Richardson with his wife, Louise, and children Skye and Billy. The photo was taken after the group vaccinated 380 weaners and drafted heifers from steers in six hours. "Lou and Billy pushed up the cattle without any prior experience and did really well," Marcus said. "Lou and the kids filled the race from the rotary crowd yard easily and in complete safety from the elevated walkway, with the help of the backing gate and curved panels."

"My wife and I took over the business from my parents three years ago, after I had worked for them for about 10 years," he said.

"Ideally, I wanted to get some big projects done early in our business ownership and we were lucky the profit we made last year allowed us to do that.

"I could have put the money elsewhere, but our fencing, pastures and machinery are all in reasonable condition. I would like to expand the business in terms of scale, but that opportunity hasn't arisen yet.

"I also could have put it into superannuation for the future, but I chose to invest in creating a better work environment for today.

"I'm 44, so I have about 20 years left in the business. There would be no point making a big investment in my work environment five years before retirement. This way I get to enjoy the full benefit of it."

In terms of return on investment, Marcus said while the yards provide a pay-off in reduced stress on stock due to less time spent in the yards and reduced bruising, the main return is emotional.

"It's more about the emotional wellbeing that comes from reduced frustration caused by the inefficiency of the old yards, and the reassurance of knowing safety has been improved, which affects family, employees and visitors," he said. ■

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More Beef from Pastures manual module on herd health and welfare www.mbfp.mla.com.au

MLA's *Beef cattle feedlots: design and construction* manual is available at www.mla.com.au by searching 'feedlot design manual'.

SNAPSHOT: **Marcus and Louise Richardson,** 'Larakoona', Table Top, NSW

Property: 903ha

Enterprise: Self-replacing, EU-accredited Angus herd. Steers grown to 500kg and sold direct to feedlots. Surplus heifers to the highest bidder. Cull females direct to processor

Livestock: 560 breeders joined in 2016

Pasture: 56% perennial pasture of phalaris and sub-clover mix; 4% lucerne; 40% unimproved native pasture of which another 17ha will be sown down to perennials in 2017

Soil: Grey and red loams with 60% undulating/ arable land rising to 40% hill country

Rainfall: 605mm

To sow or not to sow?

FIXING PASTURE DECLINE IN SOUTHERN AUSTRALIA

When considering rejuvenating or replacing a pasture, the first question to ask is: "Why did it fail in the first place?"

That's the advice Meridian Agriculture's Senior Agronomy Advisor, Andrew Speirs, gave at the Table Top Pasture Update.

"Replacing a pasture without understanding why it failed means you could waste a lot of money, as the same mistakes may be repeated," Andrew said.

"Start by asking: 'Is there a limitation in nutrition and/or management?' If there is, have a crack at fixing those first; you will get a lot further with the same amount of investment."

Andrew said a full pasture replacement could cost up to $500–$600/ha. At the extreme other end, a rejuvenation might simply involve two spray toppings, at $25/ha, and a little grazing management.

"Rejuvenating pastures by correcting your limitations for nutrients, while managing a few weeds, often delivers very pleasant surprises," he said.

"It also requires an understanding of how your management may need to change. For example, if you're going to flog the paddock and keep it at less than 1,000kg of DM/ha, it doesn't matter what you sow – it won't produce long term."

Andrew recommended speaking with neighbours about how they handled pasture decline and seeking the advice of an agronomist experienced in replacement and rejuvenation.

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Look out Pasture Updates events in your region at www.mla.com.au/events

When choosing between replacement and rejuvenation, Andrew suggested considering:

- **What is left of your perennial base?** How many plants are left and how big are they? If there are a reasonable number of small plants, can you manipulate them with grazing management and/or nutrition and/or weed control, to give them a chance to flourish? This can work well, especially with phalaris.
- **What is the state of your soil fertility?** Identify any soil fertility limitations, such as phosphorus, potassium, sulphur or trace elements (e.g. molybdenum or copper) and rectify them.
- **How acidic is your soil?** If soil tests find the soil has acidified to the point where it needs to be limed (check at 0–10cm, 10–20cm and 20–30cm), you will need to do a full pasture replacement, incorporating lime.
- **How bad is your weed problem?** If you have a large percentage of perennial weeds, replacement may be the best option.
- **Do you have the right plant for the position or for the seasonal conditions?** Summers and autumns in southern Australia are much tougher than they were 20 years ago. You may need to replace your pasture with a different species or, at least, a different cultivar.
- **What's your budget?** A budget of $10,000 will cover the cost of replacing about 20ha at most. If you decide to rejuvenate pasture by manipulating existing plants, $10,000 might bring 150ha of pasture from 50% production to 70%. Consider which option will deliver the most feed. ■

Image below: Examples of weed control impact on pasture productivity at Casterton and Beaufort, in western Victoria. The light-coloured pasture in the left half of the photo was sprayed with Ally® and Pulse® Penetrant to control onion weed 12 months prior to this photo, at a cost of $22/ha. One year after treatment the paddock stocking rate had increased by 2 DSE/ha, with clover content also increased.

REPRODUCTION

Serving it up for the right sex

Dr Edward Clayton, Department of Primary Industries, Wagga Wagga, NSW.
Photo courtesy: Toni Nugent

On-farm research is working to confirm if feeding ewes before joining with high omega-6 or omega-3 fatty acid diets could affect the ratio of male and female lambs.

Earlier research, led by Dr Edward Clayton from the Department of Primary Industries at Wagga Wagga, NSW, in conjunction with the Graham Centre at Charles Sturt University, showed changing the diet of ewes before joining could influence the sex ratio of offspring.

Ewes fed oats and cottonseed meal (omega-6 fatty acids) had more ewe lambs. Ewes fed silage (omega-3) produced more ram lambs.

"How producers can use this depends on their operation. For example, if you are running a self-replacing Merino enterprise or joining Border Leicester rams over Merino ewes to produce first-cross lambs, you want more ewe lambs," Edward said.

"But if you are growing out second-cross prime lambs you are better off with male lambs, as they will grow quicker."

Trials have been set up on 11 properties to test the initial results in commercial settings.

Five demonstration sites were established at Wagga Wagga and Holbrook in 2016 with 500 Merino ewes split into two mobs in the lead-up to joining. One mob grazed pasture only while the other had access to pasture and were supplementary fed 600 grams/head/day of oats for four weeks before joining and the first two weeks of joining.

Preliminary results did not find a big difference in the sex ratio of lambs on any individual property, which may have been influenced by differences in feed-on-offer in the paddocks. But blood samples collected from the ewes at joining told a different tale.

"Ewes with high levels of omega-6 fatty acids in their blood at joining had more female lambs while the ewes with high omega-3 fatty acids in their blood had more male lambs," Edward said.

The project will continue to investigate the impact of feeding omega-6 and omega-3 rich foods and measure the effect on reproduction in both the ewes and their female offspring. ■

RESEARCH IN REVIEW

PROJECT AIM
On-farm demonstration of the influence of diet on lamb sex ratio by measuring the impact of feeding omega-3 and omega-6 fatty acids.

RESEARCH ORGANISATIONS
NSW Department of Primary Industries and Holbrook Landcare Network

FUNDING
MLA and Australian Wool Innovation

BUDGET
$125,000

DURATION
May 2016 to April 2019

KEY FINDINGS TO DATE
- Changing the diet of ewes before joining could influence the sex ratio of lambs.
- Ewes on diets high in omega-6 fatty acids in the trial had more ewe lambs; a diet high in omega-3 fatty acids produced more male lambs.
- Trials on 11 properties in NSW over three years will further investigate the impact of feeding omega-6 and omega-3 rich foods on ewe reproduction.

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Seeking real biomass

RESEARCH IN REVIEW

PROJECT AIM
To improve the accuracy and reliability of hand-held biomass measurement tools.

RESEARCH ORGANISATIONS
An MLA Producer Research Site project feeding into research conducted by the Cooperative Research Centre for Spatial Information (CRCSI)

FUNDING
MLA

DURATION
June 2014 to September 2017

KEY FINDINGS
- Sensor data, particularly combined with height measurement, can be more precise than visual assessment.
- Measurements can be difficult at low or complex biomass levels.
- With a good dataset, producers can expect 65-75% accuracy from hand sensors.

Biomass has been electronically estimated using handheld sensors by producer groups in five regions across Australia.

Project leader Karl Andersson, from the University of New England – a partner in the Cooperative Research Centre for Spatial Information – said it was great having producers involved to build awareness and road-test the systems on farm. The data is being collected over three years, providing calibrations for different seasons.

"While calibrations from different years don't always match due to variable pasture or climatic conditions, other results provide reliable and consistent estimates. In addition, producers can now collect data and generate calibrations for their property or region," he said.

The project involved measuring the normalised difference vegetation index (which relates to plant growth) and pasture height. Pasture was cut and sorted into green and ageing material and the dried samples were weighed.

"From this, we develop calibrations so producers can use the sensor and height to estimate green pasture biomass without having to do the cutting and sorting," Karl said.

"Samples were taken at the sites three times during the year (not necessarily on set dates) to establish early, mid and late-season relationships. Each site used the same process, with the aim to be able to use the sensors to get reliable, objective estimates for grazing management decisions."

The research project is set to finish in September and producers will be able to register for access to a supported system that will continue to receive new data. An android and iPhone app to provide data on different regions is due for launch this year and data from the project will also feed into the NRM Spatial Hub, a satellite platform being developed with MLA funding.

Here we talk to producers road-testing the technology:

Brad and Tracey Wooldridge, grain, oilseed and prime lamb producers from Kalgan and Arthur River, WA

Producer Research Site group: Muchas Gracias

The Wooldridges were already familiar with collecting pasture measurements via satellite when asked to participate in road-testing the Greenseeker® handheld sensor as part of the project.

They have used Pastures from Space since 2000 and use aggregated satellite data collected from the moderate-resolution imaging spectroradiometer (MODIS) technology.

"As it only measures biomass up to 2.5 tonnes, the data is most accurate in lower pasture production. It is a key fit for us in times of reduced biomass when we need to manage fodder carefully," Brad (pictured) said.

"In a good season it gives us the confidence to push stocking rates and capitalise on the higher pasture production."

What's next? The Muchas Gracias group will demonstrate Greenseeker® technology in WA via a new MLA Producer Demonstration Site (PDS) project and will be at the Southern Dirt Techspo on 12 and 13 September 2017.

data

Will Green, sheep, beef and irrigated crop producer from Cressy, Tasmania

Producer Research Site group: Holmes and Sackett Benchmarking Group
Will (pictured) put the Greenseeker® to use to develop feed budgets over one year.

"I can give the Greenseeker® to other people on the property and be sure I'm getting an objective reading of the amount of feed in a paddock, rather than a subjective opinion," he said.

"When I drive through paddocks, I point it (the sensor) out of the window and take measurements as I go, which means I can make timely decisions. It has taught me to utilise what I've got. I know if I can buy in stock or if I should de-stock to avoid supplementary feeding over winter."

Tech specs:

Current measurement options include:

- **The Greenseeker®:** a handheld unit with a footprint of about 60 x 30cm with an active sensor suitable for use under any light conditions.
- **Landsat:** provides satellite data in the form of large regional images with a pixel size of 30m.
- **Pastures from Space:** uses Landsat data and algorithms to develop pasture growth rates and biomass across a farm. Cloud cover and data delays can limit flexibility.

Martin and Cheryl Oppenheimer, sheep and cattle producers from Walcha, NSW

Producer Research Site group: Agriculture Information and Monitoring Service
Martin (pictured) was motivated to join the trial by the desire to have consistent, efficient biomass measurement for feed allocation and budgeting, utilising data from the New England region.

"Producers in this area mainly use rotational grazing. A machine that can be handheld or mounted on a vehicle to measure herbage mass while a producer is going about their daily business is our ideal for planning pasture grazing," Martin said.

"The concept is to have a bluetooth between a Greenseeker® and an iPhone or android, to communicate to a consultant or the farm office for accurate, fast assessment (of pastures) calibrated against good data.

"The calibrations we now have in place are 70% accurate, but we still haven't produced a quick, easy tool that can measure total herbage mass and aid feed allocation and budgeting." ■

Why do producers need more accurate biomass measurement tools?

"When producers fall back on instinct, they are often too conservative in the good seasons and act too late in bad seasons. Pushing the limits of pasture utilisation to lift the bottom line requires easily accessible and accurate data for correct decision-making." Martin Oppenheimer, Walcha, NSW.

"Five people can stand in a paddock and (all will) see different levels of available feed on offer. (I want) to be sure I'm getting an objective reading of the amount of feed in a paddock, rather than a subjective opinion." Will Green, Tasmania.

"We can avoid overstocking in poor seasons because we can make management changes early and use predictive green feed budgets to look three months in advance." Brad Wooldridge, Arthur River, WA.

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Pasture tools and calculators:
www.mla.com.au/tools

Southern Dirt Techspo:
www.techspo.com.au/

GENETICS

Objectivity breeds better results

Buying bulls is an important business decision but it doesn't always get the attention it deserves.

According to Tropical Beef Technology Services (TBTS) technical officer Tim Emery (pictured right), bull selections can have consequences in herds for up to 15 years.

Tim said businesses should have clear breeding objectives.

"Be honest with yourself as to where your herd is at now and what is achievable, consider your target markets and environmental constraints, and have written objectives that everyone in your business agrees with," he said.

"Also, determine the breeding objectives of prospective seedstock suppliers."

Use existing tools

Producers can minimise risk to their businesses, including getting a veterinary Bull Breeding Soundness Evaluation on all bulls before purchase/joining.

Tim said some producers are still selecting bulls by eye alone without using estimated breeding values (EBVs), potentially sending their herd in an undesirable genetic direction.

"EBVs can help you take control of your genetic path," Tim said.

"If you don't understand how to interpret the figures, ask for help. EBVs are publicly available, they're free to look up and they've been shown to work."

Tackling the catalogue

Before jumping online, it is important for producers to know which balance of traits they want to focus on.

"Breed society selection indexes have been developed to help this decision-making process," Tim said.

When producers are ready, they should go to either the BREEDPLAN or breed society website and look for the tab 'sale catalogues', and then the 'search/sort' function.

By entering a selection index and/or a handful of figures bulls that are genetically suited for a producer's enterprise will automatically be selected.

"From here, in-depth information about individuals can be investigated, for example, when the bull's dam first calved and how old she was, and how many calves she's had in a row and when," he said. Fertilie bulls are a must.

Bring your shopping list

On sale day, Tim recommended buyers arrive focused and equipped with a list of genetically suitable and fertile bulls.

"By doing this, you can concentrate on assessing the structural soundness and temperament of these suitable bulls," he said.

"Your final list should only contain bulls that have desirable EBVs, fertility, structural soundness and temperament. Rank your bulls in order of preference and calculate what you can afford to pay."

Finally, Tim suggests insuring new bull purchases as a risk management strategy. ■

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Tropical Beef Technology Services at www.tbts.une.edu.au for information on better understanding EBVs and breeding for fertility.

FutureBeef: Information on breeding and genetics. www.futurebeef.com.au

BREEDPLAN: BREEDPLAN produces estimated breeding values (EBVs) for cattle for a range of important production traits. www.breedplan.une.edu.au

MLA's genetics and breeding program: MLA invests up to $5 million/year in livestock genetics R&D to facilitate increased genetic gain and adoption with the aim of boosting profitability. www.mla.com.au/research-and-development/Genetics-and-breeding

A long-term investment

Buying bulls is one of the most important tasks in Steven and Claire Farmer's business.

The seedstock and commercial breeders believe in having a clear breeding objective, doing their homework and buying bulls with genetic potential in commercially important traits.

"It can take patience to find the right bull but – you think about it – you might spend one day a year buying bulls but you could live with the consequences of those decisions for next 15 years," Steven said.

Estimated Breeding Values (EBVs) are improving for the number of traits measured and accuracy, and Steven recommends producers use them whenever possible.

"In our herd, we focus on selecting bulls for fertility, fast growth, moderate maturity, polledness and good temperament," he said.

"The market is applying pressure for polled animals and we have young children, so temperament is very important to us."

Before attending a sale, Steven compares bulls' EBVs, semen morphology tests and their dams' calving history to arrive at a shortlist.

"The Droughtmaster breed is getting close to having a days to calving EBV, which will make selection for fertility easier, but the traits I focus on now are scrotal circumference – for the stud I want a bull in the top 20% of the breed, for the commercial herd just above breed average. Semen morphology should test at better than 70%," he said.

"Growth is similar but I focus on the 600-day growth figures, as most of our calves end up in the Japan ox trade, even though our involvement usually ends when we sell them to feedlots." ■

LESSONS LEARNED

- Good all-round bulls are not necessarily leaders in one particular trait.
- Source bulls from studs with similar breeding objectives to yours.
- Inspect stud breeder herds for structure, teats, etc, before buying a bull.

Steven and Claire Farmer with children Hugh, Hamish and Lara.

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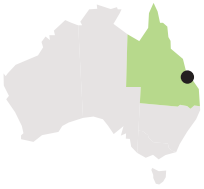
Watch Steven explain his bull buying strategy in an MLA-funded FutureBeef video at YouTube: FutureBeefAu

SNAPSHOT: **Steven and Claire Farmer,** 'Mt Elsa', Canoona, Queensland



Property: 3,887ha

Enterprise: Droughtmaster stud, commercial Droughtmaster–Brangus herd with terminal Wagyu sires

Livestock: 250 stud and 400 commercial breeders

Pasture: Spear grass, Rhodes, Pangola, Gatton panic

Soil: Sandy loam, coolabah floodplains, ironbark and bloodwood forest country

Rainfall: 700mm

EATING QUALITY

THE INTERNATIONAL TASTE TEST

A 12-month research project involving global taste testing of Australian lamb and young mutton has found Chinese consumers not only love our lamb, they may love it even more than we do.

Lead researcher Professor David Pethick from Murdoch University said the study debunked a long-held belief in Australia that Chinese consumers don't like lamb.

Researchers worked with 720 consumers in each of three countries: China, the US and Australia. The taste testers gave sensory scores for two different cuts of meat – loin and topside – from one-year-old crossbred lambs and two and four-tooth Merinos, averaging 732 days old.

"Consumer perceptions of the different cuts were remarkably consistent across the three countries, but the Chinese were more accepting of lamb," David said.

"About 2% of Chinese consumers failed lamb loin, compared with 6% in Australia and 9% in the US, and about 40% of Chinese gave lamb loin a five star premium rating, compared to 24% in Australia and the US."

Overall, however, David said the effects of country were very small.

"All consumers could tell the difference between lamb and mutton, but not by a huge margin, and younger mutton was not unattractive to consumers," he said.

"There was no suggestion of a reaction to 'strong lamb' or 'sheepy flavour'.

"We also found the gap between scores for lamb and yearling topside was less than three points; in previous research it has been up to 10 points. This could open the way for new young mutton products to be developed for these markets."

The US and China are Australia's first and second most valuable lamb export markets, respectively, while China is our number one mutton export market.

Taste testing underway in China

The project also tested whether the MSA cuts-based lamb prediction model – which David and his Sheep CRC team are developing – would work for consumers outside Australia.

Sensory scores were generated according to MSA consumer sensory panel protocols.

"In order for our MSA grades to work overseas, we need to be able to predict how international consumers will react to our sheepmeat," he said.

"This research showed little country effect when consumers tested different cut types, or meat from younger and older animals, and there was also no country effect on 'overall liking'.

"However, Chinese consumers gave both the lamb and older sheepmeat products higher final ratings than the other countries, giving a much higher proportion of five star (premium) and lower proportion of two star (unsatisfactory) as their final scores." ■

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RESEARCH IN REVIEW

PROJECT AIM
To identify taste preferences of consumers in key lamb and sheepmeat markets and to examine if the MSA cuts-based prediction model would work for markets outside Australia.

RESEARCH ORGANISATIONS
Sheep CRC and Murdoch University

FUNDING
MLA via the Sheep CRC and Department of Agriculture and Food Western Australia

DURATION
July 2015 to December 2016

KEY FINDINGS TO DATE
- Chinese consumers like the taste of Australian lamb and sheepmeat.
- MSA grades established in Australia might also apply in global markets.

Liping learns about lamb

Dr Liping Zhao is a key member of the team which conducted lamb and sheepmeat taste testing among consumers in China, Australia and the US. An alumnus of China Agricultural University, Liping is currently undertaking a Sheep CRC-funded postdoctoral fellowship at Murdoch University. *Feedback* asked Liping what she found out in the eating quality research project.

What did you learn about Australian lamb and were there any surprises?
- Australia's emphasis on eating quality is a new approach to me. The MSA grading system is a good example, as it takes consumers' satisfaction into account. The lamb sensory test in Beijing was the first consumer-based taste panel in China. It gave the consumers an opportunity to know more about eating quality and MSA.
- Cut-based processing and selling is also common here. It increases carcase value and income for producers. This is what the Chinese lamb industry lacks.
- The lamb-eating culture surprises me. I remember a wonderful video 'celebrate Australia with a lamb barbecue' for Australia Day, which was a really good lamb promotion. That shows eating lamb is not just about business here, but also a cultural thing.
- What also interests me is the strict application of safety and quality control in the supply chain and the close relationship between the lamb industry and research.

Based on these learnings, how can we ensure Australian lamb has maximum appeal for Chinese consumers?
The safety and quality of Australian lamb are the top two attractive points for Chinese consumers. Grassfed lamb is also attractive for Chinese consumers because of its health benefits, the consideration of animal welfare and the lack of pasture in China.

Also, MSA's recommendation of cooking methods for different cuts would be educational for Chinese consumers. ■

Dr Liping Zhao
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TECHNOLOGY

DEXA ROLL-OUT ACCELERATES

Australia's red meat peak industry councils have endorsed adopting dual energy X-ray absorptionmetry (DEXA) technology to provide scientific measurement of lean meat yield. The support includes the creation of an objective carcase measurement (OCM) adoption and commercialisation taskforce to drive the initiative.

The endorsement came at the first 'all-industry' briefing by MLA in June on the roll-out of DEXA technology, attended by processors and industry representatives, including cattle and sheep producers, lot feeders and processors.

Further work (such as costings and establishing individual requirements) on MLA's proposal to roll-out DEXA in all AUS-MEAT registered processing plants on a voluntary basis was also endorsed by the attendees.

This will allow peak industry councils and processors to consider the most appropriate funding model to deliver an industry-wide rollout, which may include levy funds from producers and processors, funds from individual processors and the potential for matching Australian Government research dollars.

Supporting this roll-out will be the new taskforce, to be established to assist in managing OCM adoption and commercialisation – dealing initially with DEXA and then subsequent OCM solutions, including eating quality.

The taskforce, to be chaired by industry expert Gary Burridge, will include representatives of each peak industry council, processors, MLA, the Australian Meat Processor Corporation (AMPC) and OCM researcher Dr Graham Gardner from Murdoch University.

This collaborative approach is consistent with recent analyses of the technology, including a report from financial services firm EY commissioned on behalf of AMPC. ■

www.mla.com.au

NUTRITION

WHAT'S REALLY ON **AUSTRALIA'S PLATE?**

Australians are eating less red meat than recommended in the Australian Dietary Guidelines, providing opportunities for MLA to use healthy meal ideas to boost consumer nutrition and demand for red meat.

MLA Nutrition Manager Veronique Droulez said MLA-funded research analysed data from the Australian Bureau of Statistics' *National Nutrition and Physical Activity Survey, 2011–12*. It showed how much, what types, and in what dishes red meat was consumed.

"A key finding was that Australians, on average, are eating less than the recommended amount," Veronique said.

"For example, the Australian Dietary Guidelines recommend adults, adolescents and children aged nine and over should eat a maximum of 455g of lean red meat per week, which is equivalent to three to four palm-sized portions a week.

"People tend to think 'if it's a maximum limit, then less must be better'. They don't seem to understand that the 'maximum' figure is based on the amount required to meet iron, zinc, vitamin B12 and omega-3 needs.

"Red meat makes an important contribution to intake of these critical nutrients in the Australian diet and, for this reason, 65g/day (equivalent to 455g/week) is recommended.

"An 'upper limit' was recommended in response to the association between meat and cancer reported in the scientific literature. But, as well as being the upper limit, it is also the amount recommended for health and wellbeing."

Veronique said results from the earlier 2013 *What's Cooking Survey*, funded by MLA, showed Australians wanted to know how to make their meals healthier (74%) and how to cook different cuts of meat (73%).

"MLA will use the latest data to develop nutrition communications that will tell people not just how much red meat they should eat for good health, but how they can use it to achieve the healthier meals they want," she said. ■

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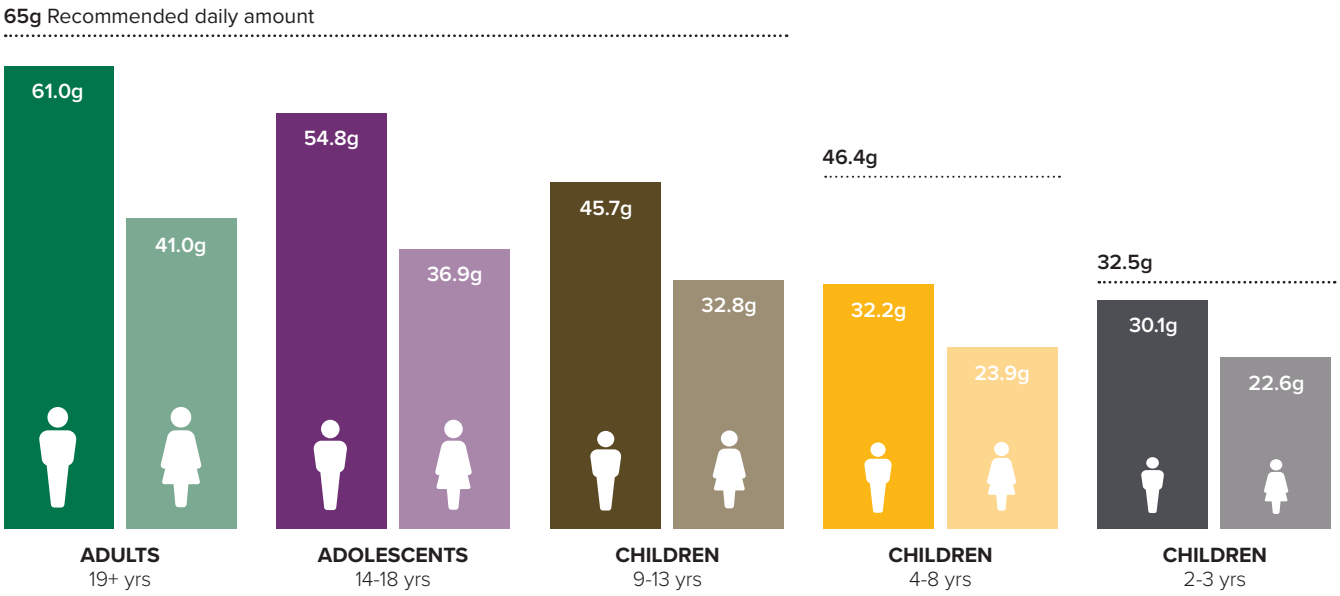
Australian red meat per capita consumption versus Australian Dietary Guidelines recommendations



Source: National Nutrition and Physical Activity Survey 2011–12, ABS

RESEARCH IN REVIEW

PROJECT AIM
The Australian Health Survey was conducted to understand red meat consumption patterns in Australia.

RESEARCH ORGANISATIONS
University of Sydney

FUNDING
MLA

DURATION
June 2014 to October 2016

KEY FINDINGS
On average, red meat consumption was less than amounts recommended in the Australian Dietary Guidelines:

- 38% of Australians ate beef and 8% ate lamb on the day of the survey; other popular meats included chicken (37%), processed meats, particularly ham/bacon (32%) and fish/seafood, including fresh and canned (23%).
- Beef and lamb are important sources of nutrients in the Australian diet, contributing: 19% to total protein intake; 13% to total iron intake, with beef the major source of well-absorbed haem iron; 22% to total zinc intake; and 12% to total long-chain omega-3 intake, the second-largest contribution after fish/seafood.
- Red meat is mainly consumed at dinner, typically as 'meat and veg', spaghetti bolognaise, stir fry and casseroles.

DELIVERING THE NUTRITION NEWS

Research analysing Australian red meat consumption was just one of the topics on the program at the annual nutrition symposium hosted by MLA in April.

The symposium is part of MLA's commitment to support continuing education of health professionals and effective communications through nutrition education material. This year's theme was *'Nutrition in Action – Making everyday meals, healthy meals'*.

MLA Nutrition Manager Veronique Droulez said the presentations were based on MLA-funded research within Australia and overseas.

Key messages included:

- the need for at least two protein-rich meals a day for older people, as illustrated in MLA's latest nutrition education material *Live Well – Tips for healthy living after 65 years*
- the need to consider a population's diet and lifestyle risk profile to better understand the relationship between red meat and cancer
- the importance of providing nutrition advice as practical, everyday meals
- the benefits to health and the environment from eating according to the Australian Dietary Guidelines and reducing food waste.

The symposium and live webinar attracted almost 800 registrations, and more than 85% of delegates reported being *'very satisfied'* or *'satisfied'* with the event. ■

The recorded symposium will be promoted throughout the year and is available for viewing at www.mlahealthymeals.com.au

640
diners enjoyed autumn lamb pop-up

Lamb cashes in

'We Love Our Lamb' presented *The Currency Kitchen*, a dining experience with a seat at the table for everyone. The pop-up formed part of the broader autumn lamb campaign and continued the lamb's strategy of bringing Australians together.

Over five nights, from 16 May, *The Currency Kitchen* in Sydney's Redfern served up lamb dishes from all over the world, created by a collection of Australia's top chefs including; Nic Wong, Analiese Gregory, Paul Carmichael, Jacqui Challinor and Ben Milgate and Elvis Abrahanowicz.

Targeted at younger consumers, each lamb dish was inspired by the chef's background and heritage. During the course of each evening the chefs shared how their personal experiences have inspired their cooking journey.

Diners came together in a communal dining set-up to share dishes. They also set the price. Guests were encouraged to pay what they thought their dining experience was worth, in their currency of choice. Funds raised went to the food rescue charity OzHarvest. ■

Couldn't make it? Recipes are available at: www.TheCurrencyKitchen.com.au

BREAKING DOWN THE 'OTHER' BARRIERS

Research commissioned by the Australian red meat industry has estimated the value of non-tariff barriers (NTB) affecting the Australian red meat industry at $3.4 billion.

MLA Trade and Market Access Manager Andrew McCallum said Australian Meat Industry Council (AMIC) and MLA initiated the research to re-energise industry and assist the Government's focus on NTBs.

"The cost of NTBs to our industry has risen significantly in recent years and an ongoing coordinated industry effort, in partnership with the Australian Government, is essential to alleviate the impacts of priority NTBs," Andrew said.

"MLA, in conjunction with AMIC, producer peak industry councils and other commercial partners, will help develop and implement NTB-alleviation action plans. It will take a coordination, science research and in-market service role, as well as ensuring communication of actions to stakeholders against the various priorities."

Andrew said industry's recent NTB alleviation efforts (led by AMIC, with MLA's support) had focused on:

- Middle East – shelf-life restrictions on chilled meat; burden of legalisation of documents to Gulf Cooperation Council countries
- China – restrictions on chilled meat; tripe, white offal restrictions; establishment listing restrictions
- Egypt – beef piece size restriction
- Indonesia – import regime; product bans
- Mexico – flat-stacking of sheepmeat carcases.

Andrew said there was a breakthrough in the Middle East in May 2017. Following concerted advocacy for increased shelf-life (via the provision of commercial and scientific justification), the United Arab Emirates announced new shelf-life standards. Vacuum-packed chilled beef was assigned a 120-day shelf-life period (previously 90 days) and sheepmeat a 90-day period (previously 70 days).

"Across the Middle East shelf-life restrictions have an impact value of more than $85 million a year, so the UAE's move will help facilitate additional trade in high-value chilled product," Andrew said.

"The task now is to seek similar shelf-life amendments in more countries in the Middle East region.

"In relation to China, there has been welcome progress with the Australian and Chinese governments signing a joint statement on Enhancing Inspection and Quarantine Cooperation between Australia and the People's Republic of China in March."

The joint statement will unlock a number of trade restrictions including:

- expanding the chilled meat trade
- expediting the listing of 15 additional establishments eligible to export meat to China
- advancing Australia's access for tripe exports to China (and initiating trade in donkey meat and edible skins to China)
- promoting a protocol for the export of Australian slaughter sheep and goats. ■

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ADVOCACY MORE ESSENTIAL THAN EVER

MLA Trade and Market Access Manager Andrew McCallum said global support for further trade liberalisation had shown signs of waning over recent months.

"The rise of nationalism – which, in some cases, may lead to increased protectionism – coupled with an environment of scepticism about the impact of trade reform on jobs, has made trade reform far more complicated," Andrew said.

"To maintain momentum, the benefits of trade must be promoted and pro-reform alliances leveraged.

"The recent trifecta of free trade agreements (FTAs) Australia secured with Japan, Korea and China, for example, has helped maintain Australian beef and sheepmeat's competitiveness in an increasingly crowded international environment."

A number of priorities have been set for MLA's market access team in 2017, including:

- Harvesting gains from the yet-to-be-ratified Trans-Pacific Partnership (TPP), which hit a hurdle when the US withdrew. The remaining 11 TPP members aim to find common ground on securing the TPP's benefits. For Australian red meat, the TPP would deliver gains in Canada, Mexico and Peru, with further tariff reductions on beef in Japan.
- Continued support of the Regional Comprehensive Economic Partnership (RCEP) negotiations to improve market access among several of the 16 country members. RCEP also has the potential to help address numerous non-tariff barriers.
- Support of the ongoing Indonesia–Australia Comprehensive Economic Partnership negotiations, Australia–India Comprehensive Economic Co-operation Agreement and, more recently, the Australia–Hong Kong FTA and Peru–Australia FTA negotiations.
- Support of the early commencement of Australia–EU FTA negotiations. Australia currently faces punitive access arrangements that hamper our response to ongoing EU consumer demand.
- Advocating for non-discriminatory market access for Australian beef and lamb entering the UK, following the Brexit decision.

MLA Managing Director Richard Norton recently held meetings in London to advocate for improved market access. He said MLA efforts would include boosting industry's presence in London, expanding the market access team and continuing to work closely with the Australian Government. Industry also has an FTA with the UK in its sights when the time is right, likely post-March 2019 when the Brexit process is expected to be completed. ■

DUAL APPROACH TO MATURE MARKET

Australian red meat producers enjoy an enviable position as Japan's number one supplier of imported beef and lamb.

Japan is the world's third-largest economy and one of the largest meat importers.

MLA runs dual marketing strategies in Japan, based on the differing market classifications for beef and lamb.

"Japan is a mature market for Australian beef," MLA's Japan-based International Business Manager, Andrew Cox, said.

"We have 54% of the imported beef market share and Japan recently became our largest beef export market again, in terms of both volume and dollar value.

"Our key role for beef in Japan is to 'defend and maintain' that market share.

"In terms of sheepmeat, we take a 'grow' approach to marketing because, while Japan is a strong and stable market for our product, it is a little underdone."

While Australia supplies 68% of Japan's sheepmeat imports, in volume terms this is only 13,000 tonnes swt (compared to beef's 264,000 tonnes swt).

"Most of our sheepmeat exports to Japan go to Hokkaido, where the Genghis Khan barbecued dish is extremely popular," Andrew said.

"However, sheepmeat is not as popular in the megacities of Tokyo and Osaka.

"Tokyo has 32 million people in its greater metropolitan area and it's a fantastically diverse global foodservice city, so there remains tremendous opportunity for lamb in the foodservice sector, as well as among consumers and retailers." ■

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Japan's population:

126.3 million in 2016

125 million projected for 2020 (due to an ageing population and declining birth rate)

Australian beef exports to Japan:

volume – 264,325 tonnes swt

value – $1,809.7 million (2016 calendar year)

Australian sheepmeat exports to Japan:

volume – 13,222 tonnes swt

value – $108.8 million (2016 calendar year)

SERVING IT UP FROM 'DOWN UNDER' IN JAPAN

Lambassadors – This program has been running since 2015. It began by identifying nine foodservice opinion leaders in Japan and bringing them to Australia to educate them about our lamb. The Lambassadors have since been involved in promotions to drive lamb's image among foodservice, consumers and media.

Since July 2016, the Lambassadors have been involved in six red meat education workshops for trade and foodservice professionals, plus six consumer events, including the MLA-hosted Lambassador Festival in Tokyo, which attracted 10,000 visitors, and the Hitsuji (sheepmeat) Festival, attended by 20,000 people.

Let's Barbie – This three-month summer campaign has been running since 2015 and taps into Japanese consumers' growing demand for outdoor eating and trying thicker-cut steaks.

In 2015 the Let's Barbie campaign saw strong increases in sales during summer and a significant increase in the relative export value of featured cuts.

Following the 2016 campaign, consumer awareness of the Australian 'barbie' concept increased from 6% in 2015 to 15%. Japanese housewives (a key consumer segment) who said they were not confident cooking Aussie beef decreased by 9% compared to 2015, while consumers who liked beef steak increased 9%.

A key learning from the campaigns has been that, as well as raising awareness and inspiring consumers, education is critical. MLA hosted its first pop-up store in Tokyo's fashionable Omopesando district in early June.

The store was open for two weeks, selling steak samples and individual steaks, and providing education on how to cook a steak, Aussie barbecue style. ■

MLA International Business Manager Andrew Cox serves up Aussie beef in the pop-up restaurant with Yuko Ishizaka, a dietitian and food consultant.

Trade agreements with Australia:

Japan–Australia Economic Partnership Agreement (JAEPA)

Import tariffs:

Sheepmeat – Nil
Beef – 29.9% for chilled, 27.2% for frozen. Under JAEPA, this will fall to 23.5% (chilled) by 2028 and 19.5% (frozen) by 2031.

Technical trade barriers:

Nil

Japanese consumers' reasons for not buying lamb:

Not familiar with it – 47%
Unaware how to cook it – 35%
Not available – 31%

(Source: MLA Global Consumer Tracker, 2016)

INDUSTRY INSIDER

A fourth-generation **meat man**

Selling red meat is in Matthew Dwyer's DNA.

While he originally thought red meat genetics would provide his career path, after graduating with an agricultural science degree from the University of Sydney in the mid-2000s, Matthew has found his home looking after the domestic marketing of Australian lamb.

He's the fourth generation of his family to sell Australian red meat. His great grandfather started Dwyer's Butchery in the main street of Parkes, in central NSW, more than 70 years ago and it remains in the family today. Matthew's father, John, wasn't interested in the butchery business, but he retained a connection to the industry by working for *The Land* newspaper for more than 30 years. Matthew's maternal grandparents were third generation lamb producers at Alectown, NSW, and his paternal grandmother was the daughter of a cattle producer from between Parkes and Forbes.

"There was always a constant supply of red meat on my family's dinner table when I was growing up," Matthew said.

Matthew Dwyer: MLA Brand Manager – Lamb.

Here Matthew talks to *Feedback* about his current role with MLA:

Q: Explain your role with MLA and how you came to a career in the red meat industry?

I manage the marketing and promotion of lamb to consumers in the domestic market. This involves a range of activities from delivering large-scale national advertising campaigns and associated public relations and media, to working with the trade marketing team in the retail and foodservice sectors.

My career at MLA – which began 10 years ago – started at the opposite end of the supply chain when I was a project officer at LAMBPLAN (now part of Sheep Genetics). I have held a variety of communications and marketing roles with MLA.

Q: What are the best parts of your job?

There are three things:

The product – as a marketer, I think it's fundamental that you believe in what you do and what you are saying, and that holds true with me and lamb.

Impact – the effect that the brand is having and the message around unity and bringing Australians together is a great thing to be part of.

Always learning – to be somewhere for this long is a testament to always being challenged with new roles and interesting projects and programs, and that's what MLA has provided.

Q: How do you like to eat your lamb?

I think lamb's commanding trait is that you don't really have to do anything to it. It's so full of natural flavour, it is best to keep it simple and not over-complicate it. Lamb also works well at both ends of the cooking spectrum – it's great for a quick grill on the barbecue or long and slow cooking in the oven. Lamb wins every time.

The first dish I really mastered when I left home was a slow-cooked lamb shank recipe. It was rolled out any time I had guests, mainly because it was foolproof and, more importantly, the plates were always left empty. However, I've come a long way since then. I love cooking and my top three lamb cuts are ribs, shoulder and rump. ■

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A winter warmer...

Osso Buco Ragu

SERVES: 4 • PREP TIME: 30m • COOK TIME: 1.5h

1kg osso buco (veal shin)
2 tsp extra virgin olive oil
½ cup red wine
500ml salt-reduced beef stock
1 cup tomato passata
1 head garlic, halved
2 carrots, peeled, 1cm diced
2 swedes, peeled, 1.5cm diced
4 sprigs thyme
500g potato gnocchi
300g green and white beans
½ cup Sicilian olives
Parmesan cheese, chopped flat leaf parsley, to serve

1. Place osso buco on a plate and pat dry with paper towel. Sprinkle with cracked black pepper and drizzle with oil. Heat a large cast iron casserole over medium heat and when hot, add the osso buco in a single layer, you should hear a sizzle. Turn when golden brown. Add wine and allow to bubble up. Add stock and passata and bring to a simmer. Add garlic, carrots, swedes and thyme. Press a piece of baking paper onto the surface and cover with lid. Bake at 180C fan forced for 1 hour 20 minutes to 1 hour 30 minutes or until tender. Stir every half hour, adding more stock if necessary.
2. Remove meat to a chopping board and chop or shred. Mash marrow (from the centre of the bone) and return meat and marrow to the sauce. Mash garlic into the sauce and discard skins.
3. Heat a pot of boiling water and cook gnocchi until they float to the surface. Remove gnocchi with a slotted spoon and drain. Return water to the boil and cook beans in the same pot for two to three minutes or until tender.
4. Toss drained gnocchi through sauce and stir in olives and parsley if using. Check seasoning and serve with parmesan.

ALTERNATIVES

1. Try with beef blade steaks on the bone or oxtail.
2. If you don't want to use red wine, substitute 1 tablespoon red wine vinegar or lemon juice and ½ cup water.
3. Add one long red chilli or one dried red chilli for a warm chilli note.

THE LATEST EDITION OF MLA'S *ENTICE* MAGAZINE has just hit the supermarkets and independent meat retailers. It is filled with winter warmers and ideas for making the most of beef and lamb over the colder months. This is just one of the recipes featured in *Entice*. Check out more at: **www.beefandlamb.com.au and click on 'online magazines'**

Switch to make:

Osso buco and spinach lasagne

• Finely chop one bunch washed silverbeet and fold through ragu sauce • Layer lasagne in a baking dish starting with sauce, then pasta sheets, then ricotta and finely grated parmesan • Repeat, finishing with a layer of ricotta and parmesan • Bake at 180C for 40 minutes until golden.

‘SUIT YOURSELF’
ACCESS TO MARKET INFORMATION

Whether you want to know the latest EYCI, seasonal forecast or national livestock slaughter volumes, MLA Market Information keeps producers informed with timely, independent and accurate news, trends and analysis.

Supporting the service are 27 livestock market reporters who cover significant saleyard markets in each state. Eight market analysts, based in head office, make weekly contact with processors, agents and buyers, as well as MLA’s global network of offices located in Australia’s largest export markets.

The breadth of market information ranges from livestock and export prices and saleyard throughput, to export volumes and values, and competitor activity.

Here are three ways you can access this information for your business:

1. Direct delivery

- **Market information publications and reports:** Get the latest industry reports delivered straight to your inbox. Subscribe at: **www.mla.com.au/prices-markets/subscriptions/**
- **MLA’s *Meat & Livestock Weekly* e-newsletter:** An e-newsletter containing the latest market news, ranging from domestic pricing to exports, demand factors and competitor movements. Subscribe here: **www.mla.com.au/enews**
- **Market Information App:** Available from app stores, the app is updated daily with prices, processor volumes and market news.

2. Design your own reports

- **myMLA:** Create your own market information dashboard. Set up a myMLA account and market information specific to your enterprise and location will be delivered straight to your page. **www.mla.com.au/mymla**
- **Market reports and prices interactive tool online:** If you are looking for more detailed prices and trends at your local saleyard, access the online Prices and Markets tool. It allows you to customise data to your specifications, view historical trends and compare between saleyards or specifications. It includes saleyard commentary and audio recordings of each sale. Along with the latest saleyard data, the website also houses data on over-the-hook indicators, slaughter and saleyard throughput, feeder paddock sales and saleyard indicators. **www.mla.com.au/prices-markets/market-reports-prices/**

3. Stay tuned

- **Media:** Tune in to ABC radio Country Hour at 12.45pm to hear selected daily saleyard market reports from MLA’s on-the-ground market reporters. Major regional and statewide newspapers and e-news services also feature MLA market information.