FEEDBACK

MLA – FOSTERING PROSPERITY

SEPTEMBER/OCTOBER 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: *Kevin and Leesa Woolcock with their children Ollie, 6, Anna, 8, and Chloe, 4, at 'Mostyndale', Springsure, Queensland. Image by Edwina Robertson Photography. (Page 25)*

Have your say!

We'd love to hear from you

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A NOTE FROM THE MD...

Last month I spent a week in Europe, meeting with diplomats regarding the EU Free Trade Agreement and the future UK Free Trade Agreement. It's important we explain exactly where Australia sits in the European market as a supplier of high value cuts.

Due to the significant export volumes we send around the world, there is a perception in Europe that Australia could flood the market.

MLA has established an office in London to ensure the EU Commission and UK governments understand Australia is a small producer in the global red meat industry and that we only export high value cuts to European markets.

I also spent time with Switzerland's largest importer of beef and lamb and heard their concerns around sustainability and animal welfare. Switzerland has some of the most expensive red meat in the world and only accepts the very best quality, placing huge demands on its suppliers. I was pleased to see so much Australian product in their cold storage facilities and to hear of the reputation our red meat has in this market.

Closer to home, MLA's Red Meat 2017 in Alice Springs is fast approaching on 21–22 November. If you haven't already checked out the jam-packed program including a producer tour, forums, a tradeshow, networking events and MLA's Annual General Meeting, I encourage you to do so at **redmeat.mla.com.au**.

Every edition of *Feedback* showcases the breadth and depth of MLA's work across the value chain. This edition is no different, with articles on objective measurement, calf survival, grass seeds and MLA's on-the-ground work in the EU and Korea.

Troy and Nette Fischer's story on pages 32–33 is a must-read, demonstrating the resilience, hard work and nous that our industry is built upon. We have also included special features on animal welfare (pages 14–21) and Meat Standards Australia (pages 24–27).

Thanks to everyone who has shared their feedback on the new-look *Feedback* – it's been well-received. Please continue to share your views so we can work to make it even better.

Richard Norton
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Image courtesy of the University of Sydney's Australian Centre for Field Robotics.

Meet the future at **Red Meat 2017**

Augmented reality, unmanned vehicles, farming from space...there are a lot of tech terms buzzing around agriculture at the moment, but what do they really mean for the average livestock producer?

Find out at MLA's Red Meat 2017 in Alice Springs on 21–22 November.

The bumper program leads off with working demonstrations of a range of new entry-level on farm technologies during the MLA Producer Tour at Ben and Nicole Hayes' 'Undoolya Station'. A host of other major innovations currently being developed or rolled out across the red meat value chain will be demonstrated at the Alice Springs Convention Centre, the site of MLA's AGM and producer forums.

"All technologies at Red Meat 2017 will be demonstrated with their current capabilities. Producers will see exactly how they are being used to improve efficiencies on farm and in the value chain," said Sean Starling, MLA's General Manager Research, Development and Innovation.

"It's not just about showing what these technologies can do. We want to hear from producers about what they'd like them to do."

Sean is a guest speaker at the event and will be talking on future innovation for the red meat industry.

Here are some of the technologies that will be showcased at Red Meat 2017:

MLA Producer Tour (21 November)

- Unmanned vehicles: RuralCo, who recently entered into a research partnership with MLA Donor Company (MDC) to develop and demonstrate drones, will show the current capabilities of the **PrecisionHawk** drone. On the ground will be **SwagBot** (pictured), a robot currently used in MLA-funded research by the University of Sydney's Australian Centre for Field Robotics to monitor livestock and pasture.
- Satellite imagery: Following the lead of broadacre cropping, producers will see just what data is already available from **farmmap4d** to help assess and monitor soil type, pasture growth, livestock movement and topography.
- Innovations used in managing Undoolya's Hereford enterprise including a **walk-over-weighing auto draft system**.

Alice Springs Convention Centre (22 November)

- Objective carcase measurement: A mobile **DEXA** machine will demonstrate how to assess yield using X-ray technology.
- CT scanners: Australia's first equine **CT scanner** will be on hand to show its potential in estimating carcase traits (see story page 8). Adaptation of the scanners is underway to provide objective health and eating quality measurements.
- Processing solutions: MDC-funded innovations such as the **BladeStop**™, which has significantly reduced processing injuries while improving efficiency, will be in action.
- Augmented reality: Fresh from its debut at Brisbane's Ekka, attendees will be able to immerse themselves in MLA's new virtual reality 360° paddock-to-plate experience.

Producers are encouraged to register now for Red Meat 2017, which includes the producer tour, an advocates workshop, business breakfast, producer forum, social events and the MLA AGM.

redmeat.mla.com.au

red meat 2017
producer tour • forums • tradeshow • mla agm

Lamb gets the praise

The latest lamb marketing campaign from MLA positions lamb as the meat more people can eat regardless of religious beliefs, backgrounds or dietary requirements.

The campaign continues with the theme that lamb is the dish that brings everyone together, with creative content for online, social and television showing the gods, goddesses and prophets of different faiths and beliefs coming together over lamb at a modern-day spring barbecue.

MLA Group Marketing Manager, Andrew Howie, said the new campaign remains under the 'You Never Lamb Alone' banner and shows no matter your beliefs or background, the one thing we can all unite over is lamb.

"We know that lamb has been the meat that brings everyone together for decades, and what better way to celebrate the product than over a spring barbecue," he said.

"Our marketing aims to reach more consumers by making lamb more relevant to a diverse, modern audience. This time around, we are highlighting the diversity of religious beliefs, backgrounds and dietary requirements in Australia.

"Ultimately, our marketing activities are designed to showcase quality Australian lamb and return value to levy-payers by growing demand for the product."

As well as a long form film and 30 second TV commercial, the campaign includes an integrated marketing strategy, with social media amplification, billboards, a bespoke digital media partnership, in-store promotion and public relations activity.

"To further drive engagement amongst younger audiences, MLA will undertake a range of activities to connect and inspire young Aussies to cook with lamb," Andrew said.

The tailored program will include social media content, simple recipe inspiration and a competition, all centred on shared lamb dishes and coming together with friends.

To view the new content online, visit the *We Love Our Lamb* Facebook and YouTube pages.

Inbox market info

October will see the launch of MLA's new weekly *Prices & Markets* e-newsletter, providing the latest market news and analysis.

Delivered every Wednesday, *Prices & Markets* will replace the current *Meat & Livestock Weekly* and will contain:

- in-depth supply analysis of Australia's cattle, sheep and goat markets
- key international market trends and consumer insights – and what they mean for your business
- information to help you decide when and where to sell your livestock, as well as market opportunities to look out for
- case studies featuring producers sharing information about the markets they target, decision making, marketing tools and the results
- saleyard activity reports from MLA's Livestock Market Officers
- links to MLA reports and analysis
- a closer look at how MLA is investing producer levies in beef and lamb marketing to drive consumer demand.

Market statistics currently in *Meat & Livestock Weekly* will be available to download from MLA's *Friday Feedback* e-newsletter as part of an expansion which includes a 'markets watch', offering insights into key market activity from the past week.

Want to sign up?

MLA members: You should already receive *Friday Feedback*, and from 18 October, will also receive *Prices & Markets*. If you don't currently receive *Friday Feedback*, email info@mla.com.au with your name and, if possible, MLA membership number. Alternatively, visit mla.com.au/enews and choose the e-newsletters you wish to receive.

Non-MLA members: Go to mla.com.au/enews and select the e-newsletters you wish to receive. You will be added to the circulation list immediately.

Current *Meat & Livestock Weekly* subscribers: You will not automatically receive MLA's new *Prices & Markets* e-newsletter. Subscribe at mla.com.au/enews.

Meat judging students make the grade

The Intercollegiate Meat Judging Competition (ICMJ) is now a truly international event, with a key focus on enhancing the skills and experiences of the global red meat industry's future leaders.

Wagga Wagga, NSW, hosted the MLA-sponsored annual competition in July, attracting 125 students and 35 coaches from across Australia, Japan, Indonesia, the United States and Korea. There were 10 Australian universities and four international teams involved in this year's event.

In the 'Team' section, it was a close call for University of Sydney, who took the lead by just 10 points. They were closely followed by the Korean National Team.

ICMJ President Dr Peter McGilchrist said the Korean team's achievement was a testament to their dedication to learning about Australian red meat production.

Texas A&M University put in a standout effort to take out the Roy McDonald Shield for champion overall team, with their own Jenna Hunt also claiming the Founders Buckle for champion individual.

"Our program has absolutely achieved our goal of inspiring and developing future leaders of the global red meat industry," he said.

"This year was a great cohort of students who posed the most thought provoking questions we've ever had to our presenters, interacted heavily with companies at the careers expo and took full advantage of every opportunity."

The top 10 finalists and the coach's team participated in a training week with MLA staff in Brisbane in August.

Charles Sturt University team member and top 10 finalist, Jane Nelson, said ICMJ "opened her eyes" to the possibilities within the red meat industry.

"I learned so much more than I ever could have imagined," the third-year Bachelor of Veterinary Science and Veterinary Biology student said.

"The networking, not only among industry professionals but also my peers, was really beneficial."

The top 10 finalists: Bridie Luers, Harriet Moss and Rachel Cruickshank, Murdoch University; Lachlan Woods, Jane Nelson and Jake Bourlet, Charles Sturt University; Nicola Culey and Karl Sternberg, University of Sydney; Emily Lukas, University of Queensland and Emily Webb Ware, University of Melbourne.

The coach's team: Lorenzo Crollini, University of Sydney; Elizabeth Kennedy, University of Melbourne; Paige Marsh, Tocal College; Henry Vaughan, Murdoch University; Johanna Tulloch, LaTrobe University; Annabelle Butler, University of Queensland; Isabelle Fenton, Marcus Oldham College; Michael Sauli, University of New England; Matthew Cadd, University of Adelaide and Ashleigh O'Leary, Charles Sturt University.

Following the industry training week in Brisbane, five students will be selected for a tour of the US meat industry in 2018. ■

icmj.com.au

The 2017 ICMJ Committee (from left) Demi Lollback, Nick van den Berg, Jarrod Lees, Hamish Irvine, Kiri Broad, Ruth Corrigan, Rozzie O'Reilly, Peter McGilchrist, Maria Thompson, Tim Ryan, Ben Thomas and Michael Campbell. (Absent: Jessira Perovic)

Serving up MSA excellence

Some of Australia's top beef producers will be recognised for their hard work, dedication and quality produce through the Meat Standards Australia (MSA) Excellence in Eating Quality Awards, at events to be held nationally throughout September and October.

The awards recognise producers who have achieved outstanding compliance rates to the MSA specifications, as well as high eating quality performance as measured by MSA Index results for cattle MSA graded during 2015–16 and 2016–17.

A 'Most Outstanding Feedlot' and 'Most Outstanding Non-Feedlot' MSA producer will be named in each state. One producer from each state will also win the inaugural 'MSA Excellence in Eating Quality Progress' award for the greatest improvement in their MSA results on the previous year.

MSA Program Manager Sarah Strachan said this year's awards build on the inaugural events of 2016.

"We know how hard the majority of producers work to produce a quality product that meets the strict MSA criteria," she said.

"There is also a strong desire among producers for the latest information on how they can improve and gain insights into the future direction of eating quality science."

Check out the 2017 winners in the December/January 2018 edition of *Feedback*. ■

mla.com.au/msa

The innovation **generation**

Creative young producers are making headway in developing high value opportunities for beef and lamb.

The second intake of Young Food Innovators (YFI) has started an intensive 12-month program aimed at building capacity of primary producers from the red meat, horticulture and pork sectors. The second round of the program specifically seeks to empower participants with the market insights and capabilities they will need to participate effectively in future value chains.

Participants are supported by funding from MLA Donor Company and the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit programme.

This year's red meat representatives include:

- Dan Reid – an ex-television journalist who has returned to the family farm at Temora, NSW, to develop paddock-to-plate enterprise Mimosa Valley Lamb.
- Rozzie O'Reilly – who after starting her career in feedlots, recently took a position with sheep genetics business LAMBPRO based in Holbrook, NSW.
- James Madden – who was enticed into the red meat industry when his father offered him the position of CEO in his Flinders Island processing plant, which evolved to become Flinders Island Meat.
- Jilly Tyler – a qualified occupational therapist who is now the Human Resources and Business Development Manager at Sandalwood Feedlot in Dalby, Queensland.
- Jose Webb – a fourth year university student, Jose has worked for processor JBS Australia and now works in her family's two southern NSW-based businesses, Yuluma Plains Pastoral Company and Back Up Charlie (sheep handling manufacturing).
- Madelaine Angus – from station hand to executive assistant, armed with a Bachelor of Business, Madelaine fulfils many roles in her family's vertically integrated beef operation, Angus Pastoral Company in Clermont, Queensland.
- Patrick Fellows – as manager of eastern Australian operations for Harmony Agriculture, Patrick's role involves everything from managing 15,000 head of livestock and 40 staff through to export operations.
- Michael Shannon – armed with an agricultural science degree, Michael runs his family's 1,500ha sheep and cattle operation at Cathcart, NSW and is the driving force behind a new cooperative called Bega Beef. He has also spent time in China learning about export opportunities.

The group has already attended a one-week workshop in Sydney and regional NSW, and will spend the rest of their year participating in residentials (including a trip to program partner country New Zealand), attending industry events, accessing mentors and participating in the Young Food Innovators network.

insights2innovation@mla.com.au

Young Food Innovators program: mla.com.au/yfi.pdf

The latest intake of Young Food Innovators visited a tomato farm during their first get-together.

Scanning for solutions

Horse racing and airport security technology might be about to offer the next leaps forward in red meat processing.

MLA will invest almost $28 million into developing new systems to objectively measure eating quality – both on and off farm – in the next five years.

Three key projects will look to develop solutions based on:

1. Utilising airport baggage CT scanning systems for objective measurement data collection (including disease identification and eating quality) and boning automation.
2. Adapting airport security CT scanning for the value chain including the scanning of live animals on farm.
3. Converting CT scanners used for management of race horses (pictured) to use for live animal health and eating quality measurements, particularly for feedlots and on farm. ■

Measurement program boost

The MLA-managed Advanced Livestock Measurement Technologies (ALMTech) project has received a boost, with the creation of the Objective Carcase Measurement Adoption and Commercialisation taskforce.

Establishment of the taskforce was recently endorsed by the red meat peak industry councils. It will be tasked with helping manage the various aspects of industry objective carcase measurement adoption and commercialisation.

ALMTech Principal Investigator Dr Graham Gardner, from Murdoch University, said the taskforce "will be invaluable".

"The taskforce brings all sectors of industry together to enable focused discussion on how best to rollout new objective carcase measurement technologies," said Graham, also a member of the taskforce.

Joining him will be Gary Burridge (as chair), representatives of peak industry councils (Cattle Council, Sheepmeat Council, Australian Lot Feeders' Association, Australian Meat Industry Council and Goat Industry Council of Australia), processors, MLA and the Australian Meat Processor Corporation.

ALMTech's role includes developing objective carcase measurement technologies for lean meat yield (LMY) and eating quality.

"ALMTech will provide the technologies, their validation and the proposed systems for using the data they generate, and the taskforce can then handle the debate on how best to adopt these technologies on behalf of industry," Graham said.

"These debates will also drive further questions, many of which will direct future research projects."

Endorsement of the Objective Carcase Measurement Adoption and Commercialisation taskforce followed official endorsement of the introduction of objective measurement across industry, including the adoption of dual-energy X-ray absorptiometry (DEXA) to provide a single scientific measurement of LMY.

"This endorsement of DEXA will have an accelerating effect on ALMTech's program," Graham said.

"We have a plan in place to develop, validate and calibrate DEXA, which is now being accelerated as multiple new DEXA scanners become available at locations around Australia."

What's next for ALMTech?

A key outcome of ALMTech's work, so far, has been the first commercial installation of a beef DEXA machine which is underway at Teys Australia's Rockhampton plant.

"Looking forward, a lot of our LMY research will be centred in Rockhampton and will include beef carcase scanning using DEXA, multiple-energy X-ray absorptiometry (known as MEXA), computed tomography and 3D technologies," Graham said.

"Live carcase scanning using 3D technology will also be a priority." ■

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mla.com.au/ocm.pdf
mla.com.au/dexa.pdf

ON FARM

RESEARCH IN ACTION

Triplets thriving at 'Shelburn', near Geelong, Victoria.
Photo by Gordon Brown.

IN BRIEF

Bred Well Fed Well for beef

After five years of delivering tangible on farm results to sheep producers, Bred Well Fed Well's practical content has been adapted to suit beef production.

MLA General Manager – Producer Consultation and Adoption, Michael Crowley, said beef workshops were now available following a successful pilot series.

"The practical, one-day workshops are an opportunity for producers to gain knowledge and skills in genetics and nutrition to help meet their enterprise objectives," Michael said.

"They highlight the key production benefits of superior genetics plus feed management for improved reproductive performance and herd productivity." ■

Look for upcoming Bred Well Fed Well events at mla.com.au/events

Goat worm control guides

WormBoss, Australia's sheep worm and parasite control resource, has been extended to incorporate goats.

Goat producers now have access to:

- regional worm control programs
  - practical strategies relevant to grazing management in your region
  - breeding for worm resistance
  - when to drench and test
  - managing drench resistance
- drench decision guides
  - whether to drench now
  - what to drench with
  - when to test again
- drench database
  - search for drenches in a number of ways, including by drench group and active ingredient, allowing you to better plan your drench decisions
- worm and parasite identification
  - roundworms, tapeworms and flukes
  - other occasional parasites, such as coccidia or itch mite
- test information
  - worm tests
  - drench-resistance tests
  - collecting samples
  - worm egg counting
- management tools
  - immunity to worms
  - breeding and feeding for worm resistance and resilience
  - best practice drench use. ■

Go to wormboss.com.au

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Facebook ParaBoss sheep: facebook.com/paraboss.com.au

Timely return of It's Ewe Time forums

A new series of It's Ewe Time rolled out across Australia in August. It's a program designed to increase producer awareness of the principles, practices and tools of sheep enterprise profitability and productivity.

Abbie Villis and Fran Francis, both of Kimba, caught up with Jennifer Horne of Wharminda at the Kimba It's Ewe Time forum.

MLA's Cameron Allan (centre) at the Ceduna It's Ewe Time event with Jacob Hoffrichter of Ceduna (left) and Cameron Lynch of Mudamuckla.

A joint initiative of MLA and Australian Wool Innovation (AWI), the forums are part of the flagship Making More From Sheep program. MLA's General Manager – Producer Consultation and Adoption, Michael Crowley, said the objective of the forums was to help sheep producers achieve 10% more carcase value, produce 10% more lambs per hectare and grow 10% more wool.

Topics covered included sheepmeat and wool market outlooks, supply opportunities and challenges, managing high-performing ewes to wean more lambs, animal health, feedbase options and enterprise planning and structure.

Murdoch University's Dr Andrew Thompson, who spoke at the Eyre Peninsula forums, said 2016 gross margin figures from Agrarian Management in the Kojonup, WA, region showed sheep enterprises were making just under $50 per dry sheep equivalent on average – a figure almost double 2013 averages.

He said in order to capitalise on excellent prices, it was vital to improve twin lamb survival.

"There has never been a better time to improve weaning rates and the focus should be on twin lamb survival," Andrew said.

"Statistics show that Lifetime Ewe Management participants who adopted scanning for multiples and differential management increased weaning rates by 14%. This shows there's a very good return for the extra cost in scanning for multiples.

"In terms of immediate priorities during the next six months for those with limited spring feed, it's important to focus on the condition score of ewes and weaners, to minimise any possible impacts of the season." ■

To find out about the forums or to view presentations go to wool.com

Coming your way

Here's an update on three MLA-funded animal health research projects underway to deliver on farm benefits for livestock producers.

1. Strain identification

What: Development of modern diagnostic tests for virulent footrot, based on the direct examination of swabs collected from the feet of sheep.

Who: University of Sydney

When: The project concluded in January 2016 and identified serotype but not virulence. Under permit, producers can now buy vaccines for each strain. These vaccines are available through animal health company Tréidlia Biovet and are currently being used under veterinary supervision in Tasmania.

treidlia.com.au

2. On the front foot

What: Development of a cross-reactive footrot vaccine to protect against all serotypes of footrot.

Who: University of Sydney and Monash University

When: The vaccine is expected to be finalised by May 2018, with testing and commercialisation processes to take a further five to seven years.

Resources on current best practice footrot management are available from the Livestock Biosecurity Network: lbn.org.au

3. Tough stuff

What: Examine whether animals deemed to be resilient to Johne's disease are also resilient to other diseases or internal parasites; and identify why some sheep are resistant to Johne's disease and/or why some recover, as well as genetic correlation.

Who: University of Sydney

When: This is a three-year MLA Donor Company-funded project due for completion in 2020. ■

Go to sydney.edu.au and search 'Johne's disease'.

Over the fence

In this series, *Feedback* is following producers in diverse locations and livestock enterprises as they manage their operations over the course of a year and respond to the challenges that arise. This is the second instalment of 'Over the fence'.

SNAPSHOT:

Nick Radford (pictured), Penola, South Australia

Area:
3,690ha

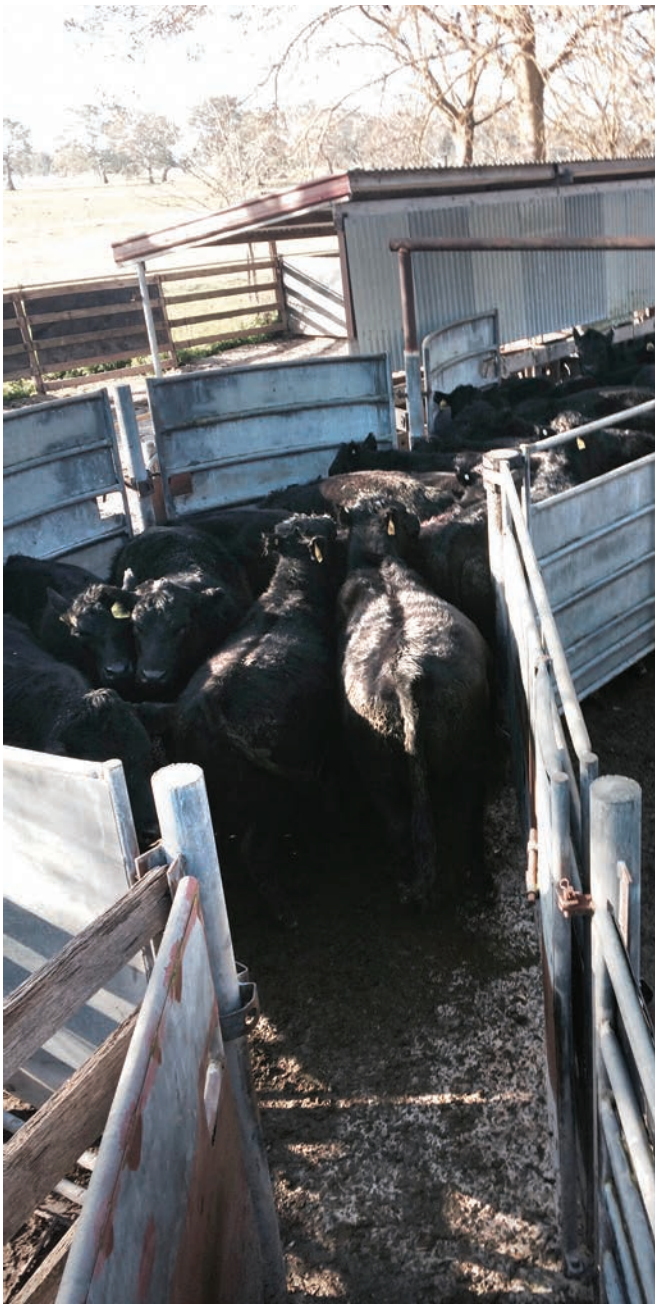
Enterprise:
Breeding Angus cattle

SEASONAL CHALLENGES:

It's been a weird season; the highest-ever rainfall for May, the lowest on record for June and a below-average winter, as was forecast. I'm now hoping for good spring rain. However, I'm fortunate to have an abundance of feed, because I'm still breeding up numbers to utilise the extra 400ha purchased recently. So we're sitting pretty overall.

PROGRESS ON LONG-TERM GOALS:

Weaning will be a bit earlier this year to fit in with the pasture management system. I've done two sessions of the MLA Profitable Grazing Systems course with Simon Vogt. It has opened my eyes to utilising the pasture to its full potential by growing it to the right height, then grazing it to the right height. I've increased the mob size and done a feed budget. I haven't worked with a mob that size before, so I've started with just one mob of 350 cows. They each need 11kg dry matter (DM) a day, so I need to work out the area allocated to optimise their feed intake.



HANDY TOOLS:

I'm getting out of the bad habit of just assessing pasture by sight, and am using science instead. I've purchased a pasture plate meter (a hand-held electronic tool) and have used it to count leaf and pasture growth. Pasture Principles (included in the Profitable Grazing Systems program) recommends the most efficient approach is putting the cattle on at about 2,500kg DM/ha and allowing them to eat pasture down to 1,500kg DM/ha over three to five days. Leaf emergence is then monitored to establish how quickly the grass will recover. So far, the pastures are producing 8.17kg DM/ha/day. ■

ACTIVITIES OVER THE NEXT TWO MONTHS:

- Wean earlier than normal, as learned from the Profitable Grazing Systems course. As soon as the cow-and-calf unit is using more energy than they would separately, it's time to wean them. We can then allocate enough feed to maintain body condition and growth without wasting feed.
- Fencing the irrigation pivots to cut them into eight sections. This will require installation of a middle watering point, but will allow rotational grazing of irrigated pastures.
- Attending the MLA Business EDGE course in September.

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Profitable Grazing Systems: mla.com.au/pgs

MLA Business EDGE: mla.com.au/edgenetwork

SNAPSHOT:

Johnny Gardner (pictured), Cavendish, Victoria

Area:
1,850ha

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

SEASONAL CHALLENGES:

The season is going very well. There was an early break, warm soils and excellent grass growth, with the result that I lambed down with 1,500kg DM/ha or better across the board, which was our goal. It also meant great weather through lambing, with minimal wind and rain.

Dad and I trialled Merino teaser rams for the first time this year with success. Ewes are introduced to the teasers two weeks before the active rams are introduced, to get ewes ready to conceive in the first cycle. As a result, more than 90% of our lambs were born within the first 17 days, which really condensed the lambing period.

PROGRESS ON LONG-TERM GOALS:

The next stage of succession planning involves me buying my sisters' share of the property and transitioning towards overall management of the operation, and this is going well. The business has worked the past couple of months with only three people, but I've lined up extra labour units to help with lamb marking.

ACTIVITIES OVER THE NEXT TWO MONTHS:

- Monitoring weaners following marking.
- Making silage.
- Repairs and maintenance on the woolshed to maintain and improve sheep-handling efficiency.

In my Diploma of Agriculture, I've completed units in soil and nutrient management. This puts some science behind fertiliser and pasture renovation decisions, and also helps with finance and budgeting. The latter has assisted with planning for the next 12 months and with knowing what is affordable in terms of the succession plan.

HANDY TOOLS:

In keeping with the goal of being a low-cost producer, I've been using the MLA Cost of Production calculator. I've completed several modules on the Making More From Sheep website: animal husbandry, soil and business management. ■

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MLA Cost of Production calculator: mla.com.au/tools

Making More From Sheep: makingmorefromsheep.com.au

SNAPSHOT:

Carlie and Lauchie Ward (pictured), Dingo, Emerald and Bajool, Queensland

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

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

SEASONAL CHALLENGES:

It's been a typically dry winter. However, Cyclone Debbie came late in the wet season, so the cattle have enjoyed good weight gain and still have a significant body of feed that will tide us over until a summer break.

PROGRESS ON LONG-TERM GOALS:

The last couple of months have been spent mainly working in the business. We have finished branding our breeders and, at the same time, pregnancy testing to ensure we have adequate pregnant cows to make progress in 2018. Early pregnancy testing allows us to budget accurately and make any trades necessary to meet our financial commitments.

We've continued rolling out a more efficient human resources program. This aims to integrate staff more effectively and eventually maximise their roles in the business. We are heading off to the final meeting of the MLA Donor Company-supported ABDI (Agri-Business Development Institute) CEO course. This will help consolidate what we've learnt, our continued integration of those lessons and what longer-term actions are needed. The course has been an excellent support and motivator to completely overhaul our business. ■

ACTIVITIES OVER THE NEXT TWO MONTHS:

- Rollout our human resources program.
- Start weaning and planning our artificial and natural breeding programs for heifers.
- Conduct an enterprise assessment of weaning versus growing feeder steers.

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ANIMAL WELFARE

Welfare changes on the way

South Australia has become the first state to implement Australia's new Animal Welfare Standards and Guidelines for Sheep and Cattle.

The Standards and Guidelines have been incorporated into the state's Animal Welfare Regulations, under the SA *Animal Welfare Act 1985*.

MLA Program Manager – Health Welfare and Biosecurity, Jim Rothwell, said achieving nationally consistent animal welfare Standards and Guidelines was never going to be quick, but progress is being made.

"Implementation for cattle – and possibly sheep – is also expected to begin in the Northern Territory this year, while other states are progressing with their own timetables," Jim said (see on page 15).

"Whether or not they are officially implemented in a particular state or territory yet, I would suggest any producer wishing to move towards best practice would benefit from following the Standards and Guidelines."

Improved animal welfare outcomes is a key objective of the *Meat Industry Strategic Plan 2020*.

"Supporting these new Standards and Guidelines is part of our effort to secure community support for our industry in the long-term, maintain access to critical markets and maximise on farm productivity," Jim said.

"Producers know that healthy and contented livestock are productive livestock."

The Australian Animal Welfare Standards and Guidelines for Sheep and Cattle were developed by Animal Health Australia to replace the model codes of practice, which have guided sheep and cattle welfare for more than 20 years. The new Standards and Guidelines were officially endorsed by state and territory ministers in January 2016.

According to Jim, the biggest differences between the model codes and the new Standards and Guidelines are an emphasis on the age of animals at the time of aversive procedures, recommendations to use pain relief and requirements for pain relief in animals marked at more than six months of age (with some exceptions).

Jim said the Standards and Guidelines are consistent with MLA's best practice husbandry guides: *A producer's guide to sheep husbandry practices* and *A guide to best practice husbandry in beef cattle*.

"If you go about your business guided by MLA's best practice guides, you will be well placed to adhere to the new Standards and Guidelines," he said.

"You will also be in a good position to embrace a quality assurance program, should an opportunity arise." ■

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Australian Animal Welfare Standards and Guidelines for Sheep: animalwelfarestandards.net.au/sheep

Cattle: animalwelfarestandards.net.au/cattle

The Australian Animal Welfare Standards and Guidelines for Sheep and Cattle have been agreed to by state and territory governments and are being regulated into law by most state and territory governments.

The table below outlines progress to date on implementation.

Australian Animal Welfare Standards and Guidelines for Sheep and Cattle	
State/territory	**Implementation progress (as at August 2017)**
Northern Territory	The NT will start cattle implementation in 2017 and it is likely to continue into 2018. Sheep implementation may be done in parallel, however cattle implementation has precedence.
South Australia	The SA regulations to mandate the Standards incorporated in the Cattle and Sheep Standards and Guidelines came into operation in April 2017.
New South Wales	The NSW Government intends to adopt the Standards and Guidelines as prescribed guidelines under Section 34A of the *Prevention of Cruelty to Animals Act 1979*. This means they will not be mandatory, but can be used as evidence in proceedings under the Act or its Regulations. It is anticipated the implementation will be made in 2017.
Western Australia	The Cattle and Sheep Standards have not been regulated in Western Australia. It is anticipated they will not be regulated until after a review of the *Animal Welfare Act 2002* (WA) has been finalised.
Victoria	Victoria intends to adopt the Standards and Guidelines into legislation subject to the usual policy development process. It is anticipated implementation will start in 2018–19.
Queensland	Queensland intends to implement the Cattle and Sheep Standards as a compulsory code requirement under the *Animal Care and Protection Act 2001*, subject to legislative processes and timeframes. The date of implementation is unknown.
Tasmania	Tasmania's Animal Welfare Advisory Committee is preparing advice for the Minister on which parts of the documents should be made into regulations in Tasmania. It is anticipated they will be legislated within the next 12 months.
Australian Capital Territory	The Australian Animal Welfare Standards and Guidelines will be implemented in the ACT via codes of practice under the *Animal Welfare Act 1992*. ACT is unable to provide a timeline at this stage.

Source: Animal Health Australia

Goat standards provide guide to best practice

Goat producers wishing to apply best practice animal welfare in their operations need look no further than the Australian Industry Welfare Standards and Guidelines for Goats.

The Standards and Guidelines were launched in July 2016 after extensive industry consultation.

Funded by the Goat Industry Council of Australia (GICA) and developed by Animal Health Australia (AHA), the Standards and Guidelines are voluntary, however they have been written as if they are legal requirements i.e. they use the word 'must'. This means the Guidelines could be used as the basis for developing consistent goat welfare legislation across Australia at a later date.

animalwelfarestandards.net.au/goat

ANIMAL WELFARE

Planning means more

Philip Gough is a member of a Bestwool/Bestlamb group coordinated by James Whale from Meridian Agriculture (see story on page 17). James said the group members are challenging each other to improve lamb survival rates and recently reviewed their 2016 lamb production results.

Each enterprise's scanning rates, lamb survival and weaning rates were measured and openly discussed to gain a better appreciation for the variation across the group, and how high-performing businesses were achieving their results.

Philip and Maz Gough have been producing lambs at Hotspur, in south-west Victoria, since 1995.

The Goughs run about 5,400 self-replacing ewes, bred via a Corriedale and Coopworth cross-breeding program designed to maximise hybrid vigour. About 50% of the ewes are joined to self-replacing rams and 50% to White Suffolk terminal sires.

This year, they are also running 1,750 ewe weaners, of which 500 have been joined at 12 months old with a 157% scanning rate.

"Lambs are weighed and sold directly to Coles," Philip told conference attendees at MLA-sponsored LambEx 2016.

"This gives us clear feedback, forces us to focus on a target, and we get paid for what we produce."

Setting goals...and kicking them

In 2003, after experimenting with different breeds and breeding programs, the Goughs defined their breeding goal: produce a ewe that can wean 150% lambs/year to suit the supermarket trade (fat score 3 and 18–24kg carcase weight) at 130 days of age.

To do this they needed to:

- lift lambing percentage
- maintain hybrid vigour
- lift lamb produced/ha from under 300kg to over 400kg
- improve adult wool cuts to above 5kg/head (had fallen to about 4kg)
- make as much money from as few animals as possible, for labour efficiency
- produce efficient, environmentally fit animals
- allow the enterprise to trade cattle when possible.

"Last year's lambing finally hit 150% lambs marked to ewes joined, and 2015 and 2016 exceeded 400kg live weight of lamb/ha," Philip said.

"We're averaging 5.1kg of wool/head and the lambs are successfully hitting target weights.

"Our breeding program is maintaining about 72% heterosis (hybrid vigour) in our maternal flock and 100% in the terminal cross."

Strategies for maximising production

Philip is the first to admit achieving these goals has not been plain sailing, but he now has a clear set of strategies to guide his breeding program.

These include:

- use LAMBPLAN to select high-performance rams, targeting high fertility in the maternal flock (number of lambs weaned ASBV) and carcase and growth traits in terminal sires
- select sires on their breed purity, for hybrid vigour maximisation
- only breed self-replacers from ewes that were conceived as multiples and produce multiples every year
- sell dry ewes
- move single-bearing ewes to the terminal flock
- tag and cull ewes needing assisted delivery.

South-west Victorian producer Philip Gough (pictured) shares key strategies for lifting lamb survival.
Image courtesy Sandy Goddard Photography

Strategies for lifting lamb survival

When it comes to lifting weaning percentages, Philip advocates focusing on the physical things you can control.

"Overcoming our lamb survival challenges starts with having ewes in good condition at joining, and then preferentially managing multiples after scanning," he said.

Philip's key lamb survival tips are:

1. Aim to have ewes at condition score 3 at joining.
2. Scan ewes to identify multiples and separate into single and multiple-bearing mobs (this year scanned 192%).
3. Give preferential treatment to multiple-bearing ewes.
4. Maintain or increase condition on multiples through the last trimester to increase birth weights and produce stronger lambs.
5. Maintain small mob sizes (this year, average mob size is 100).
6. Reduce stocking density (due to their lamb-finishing program involving summer brassica crops on about 25% of the property, lambs can spread out until this program begins at mid-to-late lambing).
7. Provide adequate shelter at lambing.
8. Control disease (such as campylobacter). ■

lambs

SNAPSHOT:

Philip and Maz Gough,
'Coora', Hotspur and Branxholme,
south-west Victoria

Area:
900ha

Enterprise:
Self-replacing crossbred ewe flock producing trade lambs for Coles supermarkets

Livestock:
5,400 crossbred ewes (Corriedale–Coopworth)

Pasture:
Sub-clover and perennial ryegrass

Soil:
Hotspur: sandy loams

Branxholme: heavy black clay loams

Rainfall:
700–800mm

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Consider attending LambEx 2018, in Perth, WA on 1–3 August 2018: lambex.com.au

Small changes increase survival

Lamb producers can enjoy significant productivity and profitability gains by making simple changes to on farm management, according to Meridian Agriculture consultant James Whale.

"If you want to improve weaning rates, first ask where you are letting yourself down: is it scanning or survival?" said James, who has delivered numerous workshops through MLA's Making More From Sheep program.

"In the past, there was a lot of focus on getting scanning figures up, but now attention has turned to getting those foetuses through to being marked as a lamb."

James' top tips for lamb survival

What is considered best practice management for lifting lamb survival?

1. Pregnancy scanning: Scan to identify single and multiple-bearing ewes and ensure they have adequate nutrition to meet their energy requirements.

Multiple-bearing ewes need a lot more energy in the last trimester to maintain, and in some cases improve, condition. This ensures birth weights are as high as possible; we want at least 4.5kg/lamb.

Single-bearing ewes may need to be run on shorter pasture to avoid ewe condition gain, which can lead to dystocia.

2. Mob size: Due to reduced mismothering, the smaller you can get the mob size for multiple-bearing ewes, the better the lamb survival rate.

Aim for a maximum of 150 ewes in a mob of multiples; there are plenty of commercial producers now running under 100/mob.

For single-bearing ewes, we don't see differences in lamb survival between small mobs or mobs of 400 or 500.

3. Pasture cover: The better the quality and quantity of feed at her feet, the longer the ewe spends at the birth site. A twin-bearing ewe needs at least six hours to mother-up properly with both lambs.

Some people now set up paddocks specifically for twin and triplet-bearing ewes, with minimum pasture cover of 1,500kg/ha. This keeps ewes at the birth site for up to 24 hours.

4. Shelter: Understand which paddocks offer the best shelter and prioritise those to maiden and multiple-bearing ewes.

What are the top producers doing differently to maximise weaning rates?

High weaning rates start with high scanning rates; genetics and nutrition are the keys to high fertility. Ewes should be at condition score 3–3.5 at joining, and on a rising plane of nutrition.

Flushing or feeding with lupins is gaining popularity in Victoria. One standard recommendation is to feed ewes 500g lupins/head/day for 10 days before the rams go in. This costs about $2/ewe.

What is the financial impact of lifting weaning rates?

Goal: Increase lamb survival from 70% foetuses scanned to 80%

Net profit/lamb: $100 (based on common Victorian production systems)

Mob size: 100 ewes

Scanning rate: 150%

Outcomes

- 70% survival = 105 lambs marked
- 80% survival = 120 lambs marked (i.e. 10% increase in survival = 14% increase in number of lambs marked)
- Value of 15 extra lambs = $1,500 (extra profit of $15/ewe).

Considerations and costs

- A ewe that doesn't raise a lamb to weaning costs the same to manage as one which does.
- Some additional pasture utilisation and flock management required to raise more lambs to weaning. ■

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Making More From Sheep *Module 10 – Wean more lambs*: makingmorefromsheep.com.au/wean-more-lambs

Lifetime Ewe Management program and handbook: lifetimewool.com.au

Profitable Grazing Systems: mla.com.au/pgs

ANIMAL WELFARE

Invest in less stress for livestock

Boyd Holden, a trainer in best practice livestock handling techniques, maintains that low-stress stock handling is a new term for old concepts practised for centuries.

"None of what we teach is new. It's all commonsense but, with increasing emphasis on animal welfare and workplace safety, more businesses are recognising how important it is to have a system for interacting with stock that all employees and animals understand," he said.

Based on the family farm at Old Bonalbo in the NSW Northern Rivers region, Boyd (pictured below right) runs his own livestock handling and welfare consultancy service and works with the entire red meat value chain. From producers and feedlots right through to processors and the live export industry, he trains stock handlers to adopt a best practice system aimed at handling animals in the safest way possible.

The people

"The key areas to address are always people, livestock, infrastructure and circumstances. By that, I mean 'what are you trying to achieve?'" Boyd said.

"People need to work as a team and have a system that everyone understands and rarely changes.

"A system describes how things are done – it's not a plan. An example of a plan is pregnancy testing or calf marking, where the system is relied on to carry out tasks."

Boyd said it is paramount stock handlers don't rush, communicate clearly and work calmly and quietly.

"Adding speed increases risk and playing the blame game doesn't help," he said.

"If things aren't working, stop and examine what you're doing.

"The true test of the mettle of any man or woman is how they react when things aren't going well."

The animals

Boyd also emphasised the importance of investing time in training stock, teaching them how to travel at a walk and to cope with their natural fight and flight responses.

"Animals can learn to cope with stress and fear, but not pain," he said.

Dangerous situations can also be avoided by not isolating individual animals.

"They need their mates. If you need to do something to one animal, take a few," he said.

Boyd believes good temperament should be a basic expectation of a herd and that any 'difficult' animals should be removed.

When selecting sires, referring to their 'docility' estimated breeding values can also improve the likelihood of breeding quieter stock.

The equipment

According to Boyd, infrastructure can make a huge difference to workplace safety and animal welfare outcomes.

"Three words: invest, invest and invest," he said.

"Buy the best quality cattle crush you can afford and always have a slide gate which is the maximum of an animal's length behind the crush.

"A race length should be no more than 6–8 cows, and don't fill the forcing yard to any more than 50% of its capacity.

"Invest in good overall yard design based on the purpose you will be using it for, and make it for a greater capacity than the numbers of stock.

"Put shade over the race, crush and calf cradle area and incorporate water into as many yards as you can.

"Build designated yards for weaning and feeding cattle."

For improved safety, Boyd suggested installing positive, lateral slam-shut gates fitted with a chain in any high-pressure areas where timing of shutting a gate is important. He also said all yards should have emergency escapes or exit strategies incorporated into their design. ■

LESSONS LEARNED

- Have a system for handling stock that staff and animals understand.
- Become an effective communicator and, if things go wrong, be prepared for self-examination.
- Invest as much in livestock handling infrastructure as you can afford.

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livestockbehavioursystems.com.au

youtube.com and search 'Boyd Holden'

Check out Making More From Sheep's Easy Sheep Management guide under the 'hot topics' module at makingmorefromsheep.com.au

Breeding for calm

Quieter animals consistently deliver more tender meat.

Not only are quiet animals easier and safer to handle, but they also perform better on the plate.

According to research conducted by the MLA-supported Beef CRC II, animals with longer flight times (an indicator of docility in northern breeds) consistently delivered more tender meat than their counterparts with poorer temperaments.

Flight time was also found to be moderately heritable, meaning producers can manipulate – to a certain extent – eating quality outcomes through breeding choices.

According to MLA's Genetics Program Manager Hamish Chandler, Limousin was the first breed to record docility scores in 1995.

Now, there are seven breeds reporting the estimated breeding values (EBVs) for temperament traits.

"Angus, Hereford, Limousin and Simmental (as a trial) report docility EBVs, while Belmont Red, Brahman and Santa Gertrudis report flight time EBVs," he said.

"In both cases, a higher EBV means bulls have a higher probability of having progeny with a more acceptable temperament."

Hamish said there is a large amount of genetic variation in each of the cattle breeds.

"For example, in the Limousin breed there is a 73% difference between the highest 1% of the breed and the lowest 1%," he said.

"This means that one bull would be expected to have 36.5% more of his progeny with good temperament scores when compared with another bull, and similar variation is found in other breeds."

Hamish said selecting for improved temperament leads to better welfare outcomes for animals, lower occupational health and safety risks for livestock handlers and improved animal performance, particularly in feedlots.

"It also means fewer losses in the processing plant from dark cutting and bruising, and an improvement in eating quality for consumers, although selecting directly for lower shear-force EBV would be a more direct way of influencing tenderness," he said.

"Temperament is like any other trait in that it has a genetic and an environmental component and is also highly heritable, so selection does lead to genetic improvement.

"Combining this with good livestock handling techniques and yard weaning gives producers the best chance of meeting targets." ■

LESSONS LEARNED

- Temperament is moderately heritable and influenced by a combination of genetics and environment.
- There is considerable genetic variation within all breeds.
- Seven breeds are now reporting estimated breeding values for temperament traits.

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Beef CRC legacy website: beefcrc.com

Find animals with EBVs for docility and flight time at breedplan.une.edu.au

ANIMAL WELFARE

Reaping the benefits of best practice

For Michael and Cathy Blake, low-stress stock handling has been a life-long pursuit and part of a much wider vision focused on best practice beef production.

Thirty years ago, the couple began looking for a better way to handle their animals after becoming disillusioned with the traditional approach of barking dogs and stock whips. To help achieve this, Michael completed a 'humane animal management' course in 1999 and has never looked back.

Today, 'Bally Glunin Park' is accredited with 12 quality assurance programs, including Cattlecare and Flockcare (Livestock Production Assurance on farm quality assurance programs), Meat Standards Australia, European Union certification, SustainaWOOL™ and other farm safety and environmental accreditation schemes.

The couple introduce low-stress stock handling methods to cattle and sheep at birth.

"I try to make contact with as many newborns as I can, taking the time to get out of the vehicle and pat them so they learn there is no hostility," Michael said.

"If you're gentle and instil some softness and understanding, they don't automatically adopt the flight response."

Michael follows the work of Dr Temple Grandin, Professor of Animal Science at Colorado State University and an acclaimed expert in grazing animal behaviour.

In particular, Michael subscribes to her widely accepted work on animal flight zones, and uses these as a basis for conducting stock movements.

"It's important to understand animals' vision – what they can see and how that influences their decisions on where they move," he said.

"I still use a dog to muster sheep but, once they are confined, Cathy and I use 'rattlers' (sticks with plastic bottles half full of stones) to move them about."

The cattle are mustered by quad bike without dogs, and a laneway system across the property makes paddock rotations or bringing them to the yards a simple task.

"We don't drive our cattle, we steer them," Michael said.

"Moving stock quietly may feel slower, but it is actually quicker."

The couple have a beef cross-breeding program using Limousin bulls and are acutely aware of the importance of selecting bulls with strong docility estimated breeding values.

"We source bulls from a stud with similar breeding objectives that has been a leader in balancing those desirable growth and carcase traits with strong docility scores," Michael said. ■

LESSONS LEARNED

- Choose sires with strong docility estimated breeding values.
- Imprint animals early with the concept that fear and flight are not the only options.
- Build infrastructure that encourages ease of stock flow, for example, laneways.

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Livestock Production Assurance: mla.com.au/lpa

Estimated breeding values: breedplan.une.edu.au

Michael applies Dr Temple Grandin's theories on grazing animal flight zones when moving stock.

SNAPSHOT: **Michael and Cathy Blake,** 'Bally Glunin Park', Hamilton, Victoria

Area:	Enterprise:	Livestock:	Pasture:	Soil:	Rainfall:
1,500ha	Wool, prime lambs, beef production	2,800 Merino ewes, 220 Hereford–Limousin cows	Dundas wheat grass, phalaris, cocksfoot, Fitzroy ryegrass, strawberry and balansa clover	Red volcanic	600mm

Establishing optimum density

Early results from a national on farm project show twin lamb survival could be improved by reducing mob size and stocking rates at lambing.

Murdoch University researcher Amy Lockwood (pictured) said this project would provide information on the effects of mob size and stocking rate on lamb survival across a range of different sheep breeds, environments and management conditions.

In 2016, twin-bearing Merino or maternal ewes were allocated to one of four treatment groups: high or low mob size and high or low stocking rate. The average mob size was 90 ewes for the low mob size group, and 230 for the high mob size group while the stocking rate varied from 5.5–8 ewes/ha.

Preliminary results from the 22 farms indicated lamb survival was 4.5% higher where ewes lambed at the lower mob size and stocking rate than at the higher mob size and stocking rate.

"These early findings also suggest the impact on lamb survival is being driven more by mob size than stocking rate," Amy said.

"The effects on lamb survival may be related to the impacts of ewe behaviour. We expect that as you get higher lamb densities or mob sizes there is going to be a greater risk of mismothering due to the interference between ewes during lambing."

This year, the project will compare mob sizes of up to 400 ewes to reflect the range of sizes on commercial farms. Researchers are keen to involve other producers who scan for multiples, either by contributing their own data or as further demonstration sites.

Research will also look at the interactions between lamb survival and ewe condition score, pasture availability, sheep breed and characteristics of lambing paddocks.

"A cost-benefit analysis of lambing in smaller mobs and at lower stocking rates, including the costs of subdividing paddocks, will be carried out to determine whether reducing lambing density to improve lamb survival is economical for producers," Amy said.

The research results will be used to develop producer guidelines on optimal mob size and stocking rate at lambing to improve lamb survival. ■

RESEARCH IN REVIEW

PROJECT AIM
Investigating the effects of mob size and stocking rate on the survival of twin-born lambs.

Seventy on farm demonstration sites across WA, SA, NSW and Victoria will be involved.

RESEARCH ORGANISATIONS
Murdoch University, The University of Adelaide, NSW Department of Primary Industries, Agriculture Victoria, Elders, Landmark

FUNDING
MLA, Australian Wool Innovation and Shearwell Australia

BUDGET
$741,000
(MLA contribution $234,000)

DURATION
January 2016–June 2018

KEY FINDINGS TO DATE
- Preliminary results from 22 farms indicate reduced mob size and stocking rates during lambing could improve twin lamb survival.

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A spreadsheet is available for producers to complete at wool.com and search 'lambing density'

MANAGEMENT

Early weaning impacts understood

Stock managers can act with confidence when using early weaning to conserve cow body condition and improve re-conception rates in tough seasons, based on new research findings.

University of Queensland researcher Dennis Poppi worked with Kieren McCosker, Tim Schatz and student Tiago Silva to solve the longstanding conundrum of what risks early weaning poses to the future of young calves.

"The good news is weaning calves at 100–130kg live weight and feeding them only a urea-based supplement during their first dry season will not impact their future weight gain capability or skeletal development," Dennis said.

"However, if managers want these early-weaned heifers to achieve joining weight by their second year, that is a challenge which can be overcome by feeding higher energy and protein supplements."

The experiment was conducted with 135 Brahman crossbred heifers in the NT's Victoria River District – however, its findings can be applied across northern Australia.

"During the first wet season, early-weaned heifers made greater rates of weight gain than their normally-weaned counterparts (weighing an average of 180kg) as their bodies tried to compensate," Dennis said.

"Despite this compensation, most early-weaned heifers fell short of their two-year-old target joining weight if fed only maintenance rations during the dry season. Only 25% achieved pregnancy, compared to 65% of the normally-weaned heifers.

"Armed with this knowledge, managers can make decisions based on economics, knowing there are no animal welfare or biological reasons forcing them to feed more than maintenance rations during the animals' first dry season." ■

RESEARCH IN REVIEW

PROJECT AIM
To identify the impact of early weaning of calves in northern beef systems.

RESEARCH ORGANISATIONS
MLA, University of Queensland, Northern Territory Department of Primary Industries and Resources and Australian Centre for International Agricultural Research

FUNDING
$177,822

DURATION
May 2014–May 2016

KEY FINDINGS TO DATE
Early-weaned heifers don't experience any long-term, detrimental effects on live weight gain or skeletal development if fed for maintenance (with a simple urea mineral block) during their first dry season.

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Kieren McCosker
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Tim Schatz
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Resources to help northern producers better manage weaners: mla.com.au/weaning

Use calculators at futurebeef.com.au/beef-business-tools to work out:

- comparative costs of energy and protein to effectively compare supplements and feeds
- sell or feed
- feed in paddock or in a feedlot.

GENETICS

Preparation breeds success

When Geoff and Lyndal Nicol head to a bull sale, they already know which bulls they're going to look at.

They'll have shortlisted 20–30 bulls that will be above breed average estimated breeding values (EBVs) for scrotal circumference, days to calving, 400 and 600 day weights, and have superior morphology. They will then critically assess each one of these for structure and temperament.

Geoff and Lyndal are looking for physical and genetic traits that will improve their herd's fertility and growth.

"Our weaners are mostly sold into the feeder market at 450–480kg live weight, with some heifers at 380–400kg," Geoff said.

"We're putting Santa bulls over crossbred (Santa–British cross) cows."

The Nicols buy bulls from a stud with a long history of performance recording, and genetic information provided by EBVs is critical to their selection process.

"I download the stud's sale catalogue from the Santa Gertrudis breed society website and use their select-and-sort function to pick which bulls meet our criteria," Geoff said.

Geoff considers semen morphology testing, part of a bull breeding soundness evaluation, essential.

"We want bulls that test above 80% on morphology because they're more likely to positively influence the reproductive performance of their daughters and, if they become stressed, they are likely to remain more fertile than bulls with average morphology," he said.

Their ideal bull is medium-framed with good fat coverage.

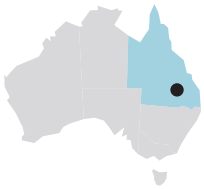
"If our top picks are too dear, our back-up plan is to compromise on some growth performance. We won't sacrifice on fertility though," Geoff said. ■

LESSONS LEARNED

- Have a clear breeding objective before the sale.
- Choose bulls with a balance of commercially relevant traits, backed by EBVs.
- Sacrifice growth traits ahead of fertility traits – fertility is essential to a breeder herd.

SNAPSHOT:

Geoff and Lyndal Nicol, 'Ninderra', Injune, Queensland



Area:
4,250ha
(including leased country)

Enterprise:
Breeding Santa Gertrudis-cross steers and heifers to supply feedlots

Livestock:
430 Santa Gertrudis–British–Euro

Pasture:
Buffel, scrub country

Soil:
Brigalow belah scrub and some vine scrub country

Rainfall:
650mm

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BREEDPLAN:
breedplan.une.edu.au

For information on bull breeding soundness examinations go to futurebeef.com.au and search 'BBSE'

COMPLIANCE

Meat Standards Australia (MSA) grading is applied to more than 40% of the cattle processed in Australia and nearly 25% of all lamb is following the MSA pathway. In these four pages you will find out how four different enterprises are using MSA to boost their bottom line.

A platform for performance

David and Christine Weston believe there are no excuses in Australian beef production for poor animal performance, with programs such as MSA available to assist producers.

"I think the whole industry has to be lifted, which is where MSA comes in," David (pictured) said.

"The perception of the industry can't be dragged down by low-performing animals. Good breeding, good news and good history all take a long time to build."

The pursuit of a quality end product, as well as rewards for his efforts, led fourth-generation beef producer David to register his self-replacing Shorthorn herd with MSA more than a decade ago.

"We became MSA registered for two reasons. The opportunity for new markets and price premiums, and the reinforcement of good animal husbandry practices are what drew us in," David said.

"We've found that in trying to produce a better quality animal, your animal husbandry practices lift in the process. The MSA standards help define expectations for our staff as well – they give them something tangible to understand as to why we handle our animals in a certain way."

Depending on the season, the Westons run most of their cattle through feedlots, with a smaller contingent going through the local store sale. Those bound direct for the processors are grown out to about 600kg.

About five years ago, the Westons introduced a new flavour to the mixed farming enterprise – Wagyu.

David said the change brought a new and exciting 'spice' to the family operation, in addition to financial incentives.

"We join all our heifers and surplus cows to Wagyus to get a first cross, which are all terminal," he said.

"We certainly weren't expecting the returns we're seeing now. Last spring, we sent animals into the feedlot and received a return of $7/kg live weight."

Fine-tuning the Wagyu influence on their Shorthorn herd will be a focus at 'Googodery' in the next 5–10 years.

"We're still getting into the rhythm with the Wagyu cross. A mix of MSA and processor data is being used to measure where we fit in at the moment in terms of our genetics," David said. ■

LESSONS LEARNED

- MSA opens up opportunities for new markets and price premiums.
- Processes involved in following MSA guidelines will ultimately lead to improved animal husbandry practices.
- Rotational grazing systems can assist in pasture longevity and stock performance.

SNAPSHOT:

David and Christine Weston, 'Googodery', Cumnock, NSW

Area:
5,000ha

Enterprise:
Beef, prime lambs

Livestock:
2,500 Shorthorns and Shorthorn–Wagyu cattle and 7,500 Merino–Corriedale sheep

Pasture:
Phalaris, lucerne, clover and grazing wheat

Soil:
Red and grey loam

Rainfall:
660mm

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Focusing on the right kind of fat

Kevin Woolcock has found the formula to turning off Droughtmaster cattle that consistently meet Meat Standards Australia (MSA) requirements – it starts with genetics and ends with the right kind of fat.

Bolstering his herd with "soft, easy going bulls", Kevin looks for bulls with even P8 and rib fat scans and higher intramuscular fat (IMF) percentage scans.

"People shy off bulls that lay down fat, but if the fat is distributed throughout the meat as marbling, then it's a desirable trait for any commercial producer targeting the MSA market, and also means easier finishing for the progeny," he said.

The Woolcocks (pictured on the cover of this edition of *Feedback*), who also market a portion of their herd as Pasturefed Cattle Assurance System (PCAS) certified, signed up to MSA almost a decade ago to capitalise on the premiums. They also wanted to gain a deeper understanding of the eating quality potential of their herd.

"We follow our MSA feedback very closely and have recently started using myMSA, a fantastic tool we use to benchmark our cattle against others from the same region, state or nationally. It helps us to get an idea of how our cattle are performing compared to others," Kevin said.

"There is always room for improvement, which is why myMSA is so important. It shows us those specifics that we can work on to increase our MSA compliance."

The Woolcocks believe access to clean water and good quality fodder right through to loading onto the truck is important to improving MSA compliance.

"Our high MSA results are also a reflection of our commitment to low-stress handling," Kevin said.

"We stopped using hormonal growth promotants in our steers in 2015 and have been able to target our steers to the PCAS market, and have also seen an improvement in our MSA Index."

With good rainfall this year, 'Mostyndale' is a far cry from the drought in 2014 that led the Woolcocks to develop their own National Feedlot Accreditation Scheme feedlot, effectively drought-proofing their enterprise.

"[The feedlot] allows us to turn off finished cattle in dry conditions and frees up paddocks for younger cattle," Kevin said.

The Woolcocks finish their PCAS cattle on grazing oats in the winter and dolichos (lablab) in summer, as seasons permit.

This year, their 100-day grainfed steers were fed a barley-based ration, after high barley yields were achieved in the 2016 winter cropping program. Cull heifers are grown out on improved buffel grass pastures and marketed as MSA and PCAS-certified to Teys Australia at 18–24 months.

"99% of our PCAS steers sold off the dolichos crop in May this year were graded as MSA-compliant, with 98% meeting our buyers' eating quality specifications," Kevin said. ■

LESSONS LEARNED

- The right kind of fat can help achieve consistent MSA results.
- Look after cattle right through to delivery.
- Use MSA tools to benchmark and improve performance.

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SNAPSHOT: **Kevin and Leesa Woolcock,** 'Mostyndale', Springsure, Queensland

Enterprise: Beef, winter and summer cropping

Livestock: Droughtmaster cattle

Pasture: Natural forest grasses and improved buffel grass

Soil: Cracking clay

Rainfall: 600mm

COMPLIANCE

Customers given the 'royal' treatment

Producer Nic Job firmly believes "there is no point in breeding beef if it's not good".

Years spent at farmers' markets selling his family's beef taught Nic (pictured) a thing or two about what the modern consumer wants – quality beef, and knowledge about how to cook it.

The fifth-generation beef producer manages Shorthorn stud 'Royalla' with his parents Nielson and Sue at their 3,600ha property west of Yeoval, NSW.

The Job family run about 600 breeders, and sold their beef at farmers' markets for 15 years before purchasing their own vertically-integrated butcher shop in Sydney last year.

"We found a lot of customers didn't understand what would translate into good eating quality, what to look for in a particular cut and how to cook it," Nic said.

"A lot of people weren't eating beef because of bad eating experiences in the past and we thought 'right, we've got to change this'."

MSA solves these consumer dilemmas through its grading system and ability to match cuts graded on their predicted eating quality performance, along with recommended cooking methods. These were some of the main reasons the Job family became MSA registered more than five years ago.

Royalla averages a compliance rate of approximately 95% and an MSA Index of roughly 65. The industry average in 2015–16 was 57.52.

"Becoming MSA accredited was the next step in helping us identify key eating quality attributes and genetics," Nic said.

When choosing genetics, Nic said eating quality was one of the most important factors.

"Because we're selling our own beef, we're very aware of the eating quality of our product because of that contact with the consumer," he said.

"Being a seedstock producer, there is a financial incentive in breeding animals that eat well."

Marbling is another important feature at the Jobs' grassfed operation. In Nic's eyes, all of the stars need to align to receive a good marbling score.

"You need the right genetics to start with, but if you don't have the right nutrition or handling, they won't marble," he said.

As well as MSA, Royalla is also involved in JBS Farm Assurance and puts more than 50% of its commercial cattle through this program. ■

LESSONS LEARNED

- The modern consumer is demanding quality beef and cut information.
- MSA has a comprehensive grading system which can match cuts graded on their predicted eating quality performance.
- Achieving a good marbling score is a result of the right genetics and good nutrition and handling practices.

Nic Job
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SNAPSHOT: **Nic Job,** 'Royalla', Yeoval, NSW

Area:	Enterprise:	Livestock:	Pasture:	Soil:	Rainfall:
3,600ha	Beef	600 Shorthorn breeders	Red wheats, oats, annual ryegrasses and vetch	Heavy red loams to light grey sandy country	600mm

Producing sheep with bite

MSA is a natural fit for sheepmeat producers wanting to maximise the returns from premium eating quality in lamb, according to producer Robert Armstrong.

Robert (pictured) runs 3,000 Primeline ewes across the 2,000ha property 'Yullundry' outside Cumnock in central-west NSW with his wife, Felicity, and their three daughters.

Up to 75% of the Armstrongs' lambs are processed through Thomas Foods International at Tamworth, with a small consignment of lighter lambs going through the saleyards or direct to Coles.

"We aim for a 26kg carcase... that's the sweet spot for us, where we reach our most efficient level of production," Robert said.

Eating quality has been a primary focus for Yullundry over the past five years. Robert and Felicity have changed their breeding program with the aim to turn over higher-yielding lambs, with premium eating quality, earlier.

"We have a self-replacing composite breed, joining the same ewe with the same ram," he said.

"The breeder we use to supply our genetics is very progressive and focused on the quality of the product.

"We're interested in the future of the sheepmeat industry and where this focus on eating quality is heading."

Robert said this focus has the potential to attract a premium for quality product.

"You don't want to be in the position where you've missed the boat," he said.

"I think eating quality is gaining traction within the industry. It's consumer driven. If it's what the consumers are asking for, it's what the processors will ask for from us.

"It's pretty challenging to make a profit from agriculture, but MSA allows you to differentiate yourself in the marketplace."

Robert said MSA guidelines reinforced "good stock management".

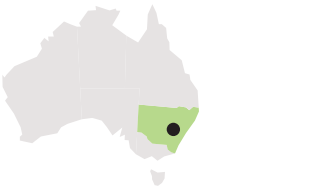
"It's something we've always taken very seriously here, so the MSA framework has backed up what we do," he said.

To help maintain eating quality consistency, Robert supplements his flock's diet with grain during months where grass is light on.

The grain consists of a mix of oats and wheat, with some supplementation products for the wellbeing of the stock. ■

SNAPSHOT:

Robert Armstrong,
'Yullundry',
Cumnock, NSW



Area:
2,000ha

Enterprise:
Prime lambs, beef, cropping

Livestock:
3,000 self-replacing Primeline ewes and 200 self-replacing beef cattle

Pasture:
Mixture of improved temperate grasses and legume species, and some native pastures

Soil:
Red and grey loam

Rainfall:
600mm

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LESSONS LEARNED

- The potential to receive premiums for MSA-branded products has been the main driver behind adoption in the sheepmeat industry.
- Improving eating quality of lamb will assist in generating a point of difference in the market.
- Good stock management is one of the guiding principles of MSA.

PRODUCTIVITY

Boosting calf survival

Research has revealed the greatest risk to calf survival occurs in the first week of life.

Queensland Department of Agriculture and Fisheries researcher Jarud Muller recently conducted a study of 14 Brahman cows, in moderate body condition, to monitor their milk delivery after calving as well as the growth of their calves.

The research team found insufficient milk delivery – in particular, delayed full lactation at calving – may be a significant contributor to calf mortality.

"Half the calves grew at about 1kg/day for the first three days after birth, while the other half barely maintained their birth weight. This strongly suggested either failure of the cow to produce sufficient milk or failure of these calves to suckle effectively," Jarud said.

Jarud said all the calves had the same birth weight, but their varying growth rates during the first week showed cows' milk production and delivery may be critical to calves' ability to thrive.

Researcher Dr Geoffry Fordyce, of the University of Queensland, said Jarud's preliminary work, while not on a commercial scale, helps inform the northern beef industry that a substantial number of cows take several days to achieve full lactation.

"We're hoping to investigate whether there is genetic variation in this ability; however, until we can demonstrate this, we assume that most of the effect is management, nutrition and environmental."

Geoffry said milk estimated breeding values (EBVs) do not show if a cow will initiate lactation quickly.

"A milk EBV is related to the amount of milk delivered over lactation and, at this point, there is no evidence of there being any relationship between that and a cow's ability to initiate full lactation at calving," he said.

Tips to boost newborn calf survival:

- Avoid mustering during calving – losses are greater in maiden heifers, so manage these extra carefully.
- Sustain moderate-to-good cow body condition at the point of calving and calve when adequate feed is available.
- Ensure there is sufficient feed within 2km of water.
- Determine the phosphorus status of the breeder paddocks and, if acutely deficient, provide phosphorus during late pregnancy and lactation – each litre of milk needs a gram of phosphorus.
- Use strategic supplementation to rectify other deficiencies, especially protein, in pregnant cows.
- Provide adequate shelter, such as trees, and well-drained areas in calving paddocks.
- Vaccinate pregnant cows against major endemic diseases to boost colostrum antibodies.
- Cull cows with bottle teats or a very large udder at calving, and do not breed with bulls out of cows that have poor udders and teats. ■

RESEARCH IN REVIEW

PROJECT AIM
To improve calf survival in northern beef herds.

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–March 2017

KEY FINDINGS TO DATE
- Milk delivery immediately following birth has a significant bearing on calf survival.

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futurebeef.com.au and search 'calf loss'
mla.com.au/cashcow
beefcrc.com

All calves had the same birth weight (i.e. the same starting point) but their varying growth rates during the first week showed that cows' milk production and delivery is critical to calves' ability to thrive.

ANIMAL WELFARE

Welfare at work

Consolidated Pastoral Company (CPC) is lending its support – and its cattle – to two cutting-edge research projects under the new Strategic Partnership for Animal Welfare Research, Development and Adoption.

The $35 million research collaboration is a 50:50 partnership between MLA Donor Company (MDC) and some of Australia's leading research bodies, including the universities of Sydney, Melbourne and Queensland.

CPC is involved in two projects: 'Reducing mortality rates', with University of Sydney, and 'Objective, robust, real-time animal welfare measures for the Australian red meat industry', with University of Sydney, Allflex and Australian Country Choice (ACC).

A focus on welfare – animal and human

"CPC takes animal welfare and our team's welfare very seriously," Chief Executive Officer Troy Setter (pictured) said.

"We got involved because we thought these projects aligned with our continuous improvement strategy, as well as our values. We more than comply with the various animal welfare codes of practice and legislation, both in Australia and offshore, but we want to discover what implementable improvements are out there that we don't know about yet.

"Good animal welfare is good for our animals and our business. The less stress our animals are under, the more productive they are."

Troy said improved animal welfare also offered benefits to staff.

"Our team in Australia and Indonesia really care for our livestock and it's important that we continue to look at ways of improving animal welfare," he said.

"For example, we've started using Tri-Solfen to reduce pain for calves at marking. It's been trialled on two properties this year and is now rolling out to more properties.

"We had a managers' meeting this week and everyone was really interested in learning how they can use it. None of us likes seeing an animal in pain if we can prevent it."

Working in partnership

University of Sydney senior research fellow, Dr Cameron Clark, is leading the 'Objective, robust, real-time animal welfare measures' project, which will use both on and off-animal monitoring technology on CPC properties, ACC feedlots and the university's farms.

"The on-animal monitoring will use Allflex animal monitoring devices such as ear tags and collars to record and remotely monitor individual animal behaviour states in real time, including states such as rumination, eating and activity levels," Cameron said.

"The goal is to look at particular situations of compromised welfare, such as when an animal is sick, under heat stress or is hungry, and determine what behaviours cease or increase.

"These profiles and transitions between behaviour states will be compiled into a system to record and alert producers to each animal's welfare state, as well as the potential cause.

"This will help producers manage on an individual animal basis, rather than just a herd basis, and enable intervention early."

'Off-animal' monitoring will involve the use of mobile monitoring platforms ('robots') from the Australian Centre for Field Robotics at University of Sydney.

"The mobile field platforms will remotely monitor individual animal volume through time. Change in volume is a good indicator of animal welfare, as animals putting on weight are typically in good health," Cameron said.

"It will also measure feed biomass in the more extensive environments, to help make strategic decisions on when animals need to be moved. Feed biomass impacts animal performance as well as long-term herbage performance." ■

RESEARCH IN REVIEW

PROJECT NAME
Strategic Partnership for Animal Welfare Research, Development and Adoption

PROJECT RESEARCH ORGANISATIONS
Consolidated Pastoral Company, University of Sydney, University of Melbourne, University of Queensland, CSIRO, Allflex, Australian Country Choice, primary industries departments, commercial animal health companies.

RESEARCH GOAL
Improve red meat industry animal welfare practices.

BUDGET
$35 million

DURATION
2017–2022

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Changes to LPA underway

Changes to the Livestock Production Assurance (LPA) program designed to strengthen and further safeguard Australia's status as a world leader in red meat safety, integrity and traceability, come into force on 1 October.

The changes are:

1. Two new additional requirements to LPA accreditation: on farm biosecurity and animal welfare practices.
2. LPA accreditation will have to be renewed every three years with an assessment and a $60 (plus GST) fee.
3. Online learning modules will be available to help producers with accreditation.
4. Offline learning modules and assessments will be available at a cost of $20 (plus GST).
5. Free electronic LPA National Vendor Declarations (eNVDs) will be available. ■

What do producers need to do?

If you are already LPA accredited	If you are not LPA accredited
• Familiarise yourself with the new biosecurity and animal welfare requirements.	• Work through the LPA online learning modules for first-time accreditation.
• When accreditation is due (you will get two months' notice), complete the assessment and pay the fee.	• Undertake the online assessment and, if all questions are answered correctly and you agree to abide by LPA, accreditation will be granted.
	• From 1 October, you will need to pay the fee as part of this process.

To meet LPA accreditation requirements from 1 October – either when applying for the first time or when renewing accreditation – you will need to understand your obligations regarding:

Biosecurity

All LPA producers will need to have a farm biosecurity plan and implement best practice biosecurity on farm. Producers will also have to complete the LPA learning module to ensure they are meeting requirements. Beef producers who have developed a farm biosecurity plan as part of their approach to Johne's disease (J-BAS) management will not need to complete another to meet LPA requirements.

Download a biosecurity plan template at animalhealthaustralia.com.au

Animal welfare

LPA-accredited producers will need to demonstrate their on farm handling of livestock is consistent with the Australian Animal Welfare Standards and Guidelines. Those responsible for livestock management will need to have a copy of the Standards and Guidelines, be familiar with its content, complete the LPA learning module and be prepared to advise and oversee others handling their stock.

Download the Standards and Guidelines at animalwelfarestandards.net.au

Electronic NVDs

Electronic NVDs (eNVDs) will be available through the LPA service centre and licensed software providers. It is also possible to print the eNVDs, as not everyone is able to receive them electronically.

It is not compulsory for producers to change to eNVDs. You can continue to use paper LPA NVDs (which will remain at $40 including GST per book) or you can print the eNVD free of charge.

Find a software provider at mla.com.au/envd

Support systems

Resources to help you work through LPA changes

LPA helpline: 1800 683 111

mla.com.au/lpa

E: lpa@mla.com.au

Watch a series of videos on LPA on farm responsibilities at **mla.com.au/integrityvideos**

For fact sheets, resources, important links and templates go to **mla.com.au/integrity**

Kitty shares dual view on integrity

Kitty Sheridan understands the value of Australia's livestock integrity systems as both processor and producer.

Kitty is responsible for Strategic Operations with Teys Australia, Naracoorte and coordinates each day's production across 18 different market programs.

Despite living in South Australia, she is also involved in her family's cattle trading business in Dubbo, NSW.

"In 2015 I was the South Australian representative for the NAB Agribusiness Rising Champion Initiative," Kitty said.

"I was invited to join a sub-committee of Cattle Council and I chose the Industry Systems and Food Safety Sub-Committee. It relates directly to my work with Teys and it's also something I am interested in as a producer.

"Teys can't process cattle unless they are Livestock Production Assurance (LPA)-accredited, so ensuring the highest level of LPA compliance is important to us to ensure supply, as well as to give our brands a point of differentiation in the market.

"As a producer, I understand how important it is to our market access to protect Australia's great reputation for clean and green product.

"Consumers around the world want to know where their food comes from and how it's produced, particularly in terms of food safety and animal welfare, and we can't afford not to respond."

Kitty said she doesn't expect the new LPA compliance requirements to be too onerous.

"Most farmers I know keep a farm diary or at least write everything they do on farm in a pocket notebook, so that's a good basis for establishing the necessary record-keeping," she said. ■

KITTY'S TIPS FOR EFFECTIVE COMPLIANCE

- Keep a farm diary and record all animal movements and health interventions.
- Take advantage of existing online resources, including Animal Health Australia's on farm biosecurity plan template.

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animalhealthaustralia.com.au and search 'farm biosecurity'

Watch Kitty, along with other producers, explain what integrity means to her at mla.com.au/integrityvideos

SNAPSHOT: Kitty Sheridan and parents Phil and Sue Sheridan, 'Tralee', Dubbo, NSW

Area: 910ha

Enterprise: Trade cattle, self-replacing flock of maternal crossbred ewes and cropping

Livestock: 300 trade steers and heifers, 200–300 Wiltipoll–Australian White ewes

Pasture: Lucerne, sub-clover, chicory and phalaris base, sometimes rotated with a sub-clover and digit grass summer pasture mix

Soil: Loam on top of clay

Rainfall: 625mm

MANAGEMENT

Back and better than ever

After fire destroyed their property in 2015, Troy and Nette Fischer's resilience, goal setting and careful decision making, along with support from the community, has ensured a return to productivity in less than two years.

Every producer has no doubt, at times, wished they could start with a clean slate and design their paddock layout, yards and pastures from scratch. For Troy and Nette Fischer, extreme circumstances led to a fresh start.

In November 2015, a fire engulfed 80,000ha in South Australia, including the Fischers' property, where it destroyed 650 White Suffolk stud sheep, 1,000 round bales of hay, sheds, machinery and 35 kilometres of fencing.

In the days following the fire, Troy and Nette, along with Troy's parents Brian and Rhonda, turned their immediate focus to the management of the surviving 550 ewe and ram lambs.

"We had so many questions: where to run these lambs, how to replace the breeding ewes, how to use all the offers of help, will our insurance come good and where do we start? It was overwhelming," Troy said.

According to Troy, a critical part of the post-fire management was dividing up key roles.

"No one person could keep on top of it so, very early on, we divided up the workload and gave individuals areas of focus," he said.

"We also made a decision to accept all offers of help."

Troy focused on the stud flock rebuild, while Nette handled the resources required; most importantly, procurement of key infrastructure, insurance and financial management. Brian focused on livestock transport and fences while Rhonda ensured helpers were fed and looked after.

Agistment was found within five days at a fellow stud breeder's farm at Farrell Flat, which ensured their ovine Johne's disease MN3 status was not compromised.

The flock rebuild focused on three main goals: to conduct the annual stud ram sale in September 2016, to ensure enough lambs were dropped in 2016 to have a ram sale in 2017, and to continue genetic improvement. About a month after the fire, Troy asked six White Suffolk stud owners to contribute elite breeding ewes to an embryo transfer program. All agreed and Troy selected 20 ewes, which produced 300 embryos. Another stud breeder loaned 70 stud ewes to obtain a drop of lambs. The Fischer family also purchased breeding ewes.

A flock of 800 ewes and 300 rams returned to the property in April 2016 and were housed in a confinement feeding yard.

"Biosecurity was a big issue for us – we were bringing in sheep from nine properties across Australia and were quite anxious about the risk of introducing new diseases or weeds to our farm," Troy said.

Every sheep was drenched and vaccinated on entry into the feed yard and drenched again before being moved out to the pasture paddocks. The Fischer family also decided to feed all of the donated hay in the feed yard to reduce the risk of foreign weed invasion.

Pregnant ewes were managed according to Lifetime Ewe principles, receiving hay up to the late stages of pregnancy, when they were also supplementary fed grain. The ewes were moved out to pasture just prior to lambing in July and August.

With numerous decisions to make as part of the rebuild, the Fischer family sought advice from professionals and engaged a consultant to help them with whole-farm planning and decision making.

The first 2016 drop of Ashmore White Suffolk stud lambs, born only six months after fire destroyed the Fischer family's farm at Wasleys, SA. Despite no pasture and a charred and dusty landscape, they continued to thrive.

"The fire gave us a unique, once-in-a-lifetime opportunity to re-evaluate how the farm was set up. We also had a lot of decisions to make, down to what type of fencing we would erect, farm layout and key machinery purchases," Troy said.

"It was really important to have someone with an independent view to look at our business and provide advice on

LESSONS LEARNED

- View disasters as a once-in-a-lifetime opportunity to change.
- Adequate insurance is critical.
- Divide the workload and develop appropriate time frames.
- Make calculated decisions.
- Seek independent advice.
- Accept offers of help.
- Look after each other, exercise tolerance and take time off for physical and mental health.

which direction to head and where to focus our limited financial and labour resources."

A central laneway is being built to aid stock movement, all gateways have been widened to a standard 10 metres to ensure easy machinery access and sheep yards are being constructed to improve labour efficiency.

Nearly 18 months down the track, the Fischers' farm productivity has increased. This year they will drop 900–1,000 stud lambs and hold two ram sales. A wet winter in 2016 contributed to rapid pasture growth and broke crop yield records at harvest. ■

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Making More From Sheep modules on planning, pasture, grazing and genetics: makingmorefromsheep.com.au

sheepgenetics.org.au

SNAPSHOT: **Troy and Nette Fischer,** 'Ashmore', Wasleys, SA

Area: 440ha

Enterprise: White Suffolk stud sheep and cropping

Livestock: 750 stud ewes

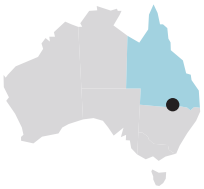
Pasture: Annual pastures sown with oats and medic

Soil: Brown clay over limestone, black cracking clay, red loam over clay

Rainfall: 400mm

MANAGEMENT

SNAPSHOT: **Nic Perkins,** ‘Nelyambo’, Dirranbandi, Queensland



Area:
8,097ha

Enterprise:
Merinos (wool and sheepmeat), trade cattle, forage crops and rangeland goats

Livestock:
1,000 goats and 4,000 ewes

Pasture:
Buffel, medics, herbage, natives and succulents

Soil:
Belah, coolabah, box, sandalwood and wilga

Rainfall:
500mm

Generating goat growth

Producer Nic Perkins (pictured) believes MLA-funded on farm trials measuring the benefits of supplementary feeding goats have revealed opportunities for better management of rangeland flocks.

A participant in the first and second trials, Nic has committed up to 320 goats to the project and, during the first trial, compared the growth performance of animals fed a complete ration (costing about $600/tonne) with goats restricted to pasture and browsing.

“Feeding the complete ration didn’t stack up financially,” he said.

“However, the project did open the door to some new possibilities worth trialling, including sourcing cheaper feed, for example, crushed lupins and cottonseed, and whether sex segregation could improve weight gain.”

Nic believes the results from the initial feed trial need to be interpreted within the context of the seasons.

“We had good seasons during the trial, so the goats not supplementary fed were still on good quality pasture and herbage,” he said.

“It probably tells us that you don’t bother feeding them in good seasons but our next trial, using crushed lupins, is starting now and conditions are much tougher.”

LESSONS LEARNED

- Feeding an expensive, complete ration to rangeland goats during good seasons isn’t viable.
- Segregating young billies for supplementation could be more beneficial.
- Self-feeding bins, with enough supplementary feed for 200 goats for up to one month, significantly improve efficiency.

Nic Perkins
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FEEDBASE

Growing more goats

Queensland and NSW producers (including Nic Perkins, see page 34) are taking part in rangeland goat trials to test whether supplementary feeding can improve growth rates, market compliance and enterprise profitability.

During the first six months, 768 goats weighing an average of 15kg were fed 1–2% of their body weight in commercial pellets daily.

At the end of the trial, the supplemented goats weighed an average of 26.8kg, and the unsupplemented goats weighed an average of just under 1kg less.

At $660/tonne delivered, the feed cost $19/head for the six months, which resulted in an additional one kilogram of live weight.

The proposal would be considered viable if feed cost was $400/tonne delivered.

New trials are investigating if less costly, locally sourced options such as lupins and cottonseed will assist growth rates.

RESEARCH IN REVIEW

PROJECT AIM
To investigate the growth rates in young rangeland goats and whether supplementation improves weight gain.

RESEARCH ORGANISATIONS
MLA and Goat Industry Council of Australia

FUNDING
$320,000

DURATION
2015–2017

KEY FINDINGS TO DATE
Goat growth increases with supplementary feeding but the gain may not be sufficient to be financially viable unless cheaper feed options are sought.

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Do we expect too much from soil carbon?

Soils with high levels of carbon have been found to have greater water holding capacity, maximum nutrient availability and increased yield potentials.

But, the question remains: do we expect too much from soil carbon? Rachelle Meyer, a PhD student at the University of Melbourne, has been working for the past four years to find the answer.

Rachelle has completed extensive research on soil carbon and its benefits to help producers mitigate and adapt to climate change. Through her work, which feeds into the larger MLA co-funded project, 'Whole-farm systems analysis of greenhouse gas abatement options for the southern Australian grazing industries', Rachelle modelled scenarios based on four soil types from two regional sites in western Victoria to Hamilton and Birchip.

Her research revealed:

- **High-carbon soils:** These yielded greater dry matter, which equated to increases in production valued at $26–$95/ha/year, depending on the soil type. Given that soil carbon is easily lost but not easily recovered, maintaining this asset is important for pasture productivity.
- **Low-carbon soils:** Sites with these soils were able to offset a higher percentage of greenhouse gas emissions, whereas sites with high-carbon soil offset few emissions. Thus, in soils where carbon is increasing over time, the on-site benefits are increasing while the mitigation potential is declining.
- **Crops to pasture:** Switching from cereal and oilseed crops to pasture will help with accumulation of soil carbon and can increase soil productivity in the long-term, but in many cases will not offset emissions generated from grazing livestock.

"Producers should consider which soil system they are working with and how much carbon is already in their soil as part of any carbon-offset project planning," Rachelle said.

Adoption of a whole-farm carbon management approach could involve options such as tree planting, reduction of land clearing and improved grazing systems. ■

RESEARCH IN REVIEW

PROJECT AIM
Whole-farm systems analysis of greenhouse gas abatement options for the southern Australian grazing industries

RESEARCH ORGANISATIONS
Department of Environment and Primary Industries Victoria, Tasmanian Institute of Agriculture

FUNDING
MLA, Australian Wool Innovation, Dairy Australia, Department of Agriculture, Department of Environment and Primary Industries Victoria, Tasmanian Institute of Agriculture and University of Melbourne

DURATION
2013–2017

KEY FINDINGS TO DATE
- High-carbon soils had greater dry matter yields that equated to increases in production.
- Sites with low-carbon soil were able to offset a higher percentage of greenhouse gas emissions.
- Switching from crop to pasture will assist in accumulation of soil carbon and can increase soil productivity in the long-term, but it may not offset emissions generated by livestock.

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Contact Rachelle for the full version of her final report.

MANAGEMENT

Seeds cost producers and processors

The impact of 'seedy' sheep and lambs on processors is well known – increased labour costs, reduced throughput and downgraded product. Chris Smith, from AgBiz Solutions, said producers also bear multiple costs, including reduced growth rates, lower processor payments due to price penalties and lighter carcase weights after trimming.

Red meat industry consultant Chris Smith created MLA's Lamb Carcase Value Calculator, which contains a module for assessing the economic impact of grass seed contamination on processors' profitability.

In developing the processor-focused calculator, Chris conducted supply chain research which also revealed the negative impact of seeds on producers' profits when selling over-the-hooks.

"I found that as well as hurting processors, grass seeds represent a double blow for producers [at the processing plant]," Chris said.

"Not only can producers get price discounts per kilo for supplying seedy stock, they have reduced carcase weights due to the extra trimming which has to occur before they're paid."

Chris has used the calculator to provide some scenarios showing the cost of seeds to both processors and producers.

The scenarios (illustrated in the table on page 37) are based on a 22kg lamb carcase, fat score 3, with an over-the-hook grid price of $5.70/kg. The example carcases have a medium incidence of seeds (12–20 seeds) in each primal region.

The results show a loss of $22.58/head, or $1.03/kg hot standard carcase weight for the processor, and $3.71/head for the producer due to extra trimming prior to the scales. The producer would also receive a processor discount for supplying seedy stock.

"With a heavy infestation (>20 seeds), the processor losses can be in excess of $50/carcase due to the reduced throughput, extra staffing and primal downgrades," Chris said.

"For example, if the rack and loin had heavy seed damage, the trimming would remove the fat cover, resulting in these valuable cuts being downgraded to the eye muscle with the silver skin off, costing the processor $27/carcase for the cut downgrade alone."

Processor advocates long-term strategy

Thomas Foods International Lamb Supply Chain Coordinator, Dr David Rutley, said grass seeds have a negative impact on the entire value chain, from producers and processors, right through to distributors and customers.

Image shows carcases from a mob of 130 Merinos processed in March 2016. The mob had 100% seed contamination which had a high impact on the plant, slowing the chain down and requiring extra trimmers to trim hindquarters, forequarters, flanks and backbone. The wool was very dirty and the skins poor.

"Grass seed contamination impacts begin on farm with reduced growth rates, poor welfare outcomes and lower wool, skin and carcase values," David said.

"For the processor, we have to trim every seed off the carcase or risk losing markets. Apart from the time and labour that takes, it also affects meat quality, often putting the meat into a lower-value market."

David said there was a range of resources available to help producers manage grass seeds.

"MLA has put together resources such as the grass seeds manual *Winning against seeds*, and producers should also talk to their agronomists about grass seed management, particularly if they receive processor feedback indicating they have a problem," he said.

"There are short-term management strategies that can help in difficult years, but using an integrated mix of strategies over the long-term is the best method." ■

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Cost to producers

Carcase weight loss of 0.65kg due to extra trimming = $3.71/head (before processor discount for supplying seedy stock)

Cost to processors

The following costs were calculated using MLA's Lamb Carcase Value Calculator.

GRASS SEED COST ANALYSIS	Cost ($/head)	Cost offset ($/head)
Extra trim wastage recovery (S/F and boning room @ $0.20/kg)		$0.15
OTH price difference due to lighter carcase		$3.68
Extra S/F costs due to slower chain speed (down by one head/min)	$1.76	
Extra boning room costs (reduced kill plus additional pretrimmers)	$2.38	
Reduction in primal cut weight costs due to extra trimming	$5.62	
Primals downgrade costs	$16.65	
	$26.41	**$3.83**
GRASS SEED COSTS ($/HD)	**$22.58**	
GRASS SEED COSTS ($/KG HSCW)	**$1.03**	

Abbreviations: S/F – slaughter floor; OTH – over-the-hooks; HSCW – hot standard carcase weight.

WINNING AGAINST SEEDS

MLA resources to help manage grass seeds on farm include producer case studies, weed identification advice, strategies for managing grass seeds and an informational video. Links to *Winning against seeds* fact sheet and booklet: **mla.com.au/grass-seeds**

TAKING ACTION

Reducing the incidence and cost of endemic health conditions, such as grass seeds infestation, is the focus of a new $3 million three-year research project to be funded by MLA Donor Company (MDC).

The 'Reducing the Financial Impact of Endemic Conditions in Sheep' project will record 21 key conditions such as grass seeds, pneumonia, sheep measles, rib fractures and arthritis during processing. These health issues are estimated to cost the industry about $140 million/year.

Detection will be reported back to producers, along with information about how to address and manage animal health conditions on farm.

Funded by MDC and SA Sheep Industry Fund, the collaboration, which includes processors Thomas Foods International and JBS Australia, has been facilitated by the SA Sheep Industry Blueprint.

livestocksa.org.au and search 'sheep industry blueprint'

MANAGEMENT

Diet to reduce dark cutting

Short-term supplementary feeding in late spring and early summer could reduce dark cutting in grassfed cattle at slaughter.

The dark side

'Dark cutting' results from low muscle sugar (glycogen) at the time of slaughter, causing the meat to have a high ultimate pH.

Meat with a high pH (above 5.7) fails to meet Meat Standards Australia (MSA) requirements and is associated with inconsistencies, such as a darker colour and variable tenderness.

Dark cutting rates in Australia are currently estimated to be about 5%, with the highest incidences (10–14%) at the beginning and end of the pasture-growing season, when feed quality is at its poorest.

Dark cutting meat costs the Australian beef industry an estimated $55 million/year.

New research has found supplementary feeding grassfed cattle before slaughter during late spring and early summer could buffer the risk of dark cutting.

According to researcher Cameron Jose, Murdoch University, Perth WA, the rates of dark cutting for grassfed cattle in southern Australia can increase from 5–10% to 13–14% during the change of season from spring to summer, due to a decrease in pasture quality and availability.

The project evaluated the impact of nutritional supplementation for 14 days before slaughter. About 1,500 cattle in WA and SA were divided into treatment and control groups. Treatment animals were supplemented with 2.5kg/head/day of a high-energy pellet ration in WA, and 2kg/head/day of lupins in SA, while still grazing pasture for about 14 days before slaughter. The control animals grazed a similar quality pasture only.

Overall, there was a low incidence of dark cutting throughout the trial (3.17%) and supplementation had no effect on meat colour or pH. This may have been related to the good seasonal conditions.

However, pellet supplementation resulted in an increase in muscle

Short-term supplementary feeding during late spring and early summer has the potential to reduce dark cutting in grassfed cattle at slaughter, according to recent results of a research project led by Dr Peter McGilchrist (pictured).

glycogen of 0.13g/100g. Dark cutting risk increases when muscle glycogen levels are below 1.0g/100g.

Pellet supplementation also resulted in an increase in carcase weight of 2.72kg (when adjusted for starting weight) compared to the control groups. The same effects were not observed in the lupin treatment in SA.

"One of the most important factors in preventing dark cutting in meat is having sufficient energy in the cattle leading up to slaughter. Cattle need to be on a good plane of nutrition and still growing in the lead-up to slaughter, and not tapping into their energy stores," Cameron said.

"Less energy at slaughter contributes to low muscle glycogen levels, which results in meat with a higher pH. If meat pH levels exceed 5.71, the product is ineligible to be branded as MSA."

The project confirmed that nutritional intervention using commercial pellets rather than lupins was effective in increasing muscle glycogen stores of the treatment cattle at slaughter, despite there being no reduction in dark cutting.

"Supplementary feeding can be expensive, which is why we chose a restricted supplement which costs about $15/carcase for the two-week period," Cameron said.

"The carcase weight gain alone made the pelleted treatment economically viable, while the increase in muscle glycogen would also likely buffer at-risk animals against dark cutting."

The research recommends the use of high-energy supplementation to help cover the shortfall of energy in pasture in early to late summer, to prepare cattle against the risk of dark cutting.

"Producers need to prepare their cattle well for market. High-energy feed supplementation two weeks out from slaughter can assist with this," Cameron said.

"It doesn't have to be pellets, but the supplementation needs to provide at least 25 megajoules of extra energy per day."

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RESEARCH IN REVIEW

PROJECT AIM
To investigate the impact of short-term nutritional supplementation before slaughter on dark cutting rates in grassfed cattle.

RESEARCH ORGANISATIONS
Murdoch University and University of Adelaide

FUNDING
MLA

DURATION
March 2014–March 2017

KEY FINDINGS TO DATE

- Nutritional supplementation two weeks before slaughter led to low rates of dark cutting meat with no effect on meat colour or pH.
- Supplementation increased muscle glycogen stores at slaughter, which could provide a buffer against dark cutting.
- Carcase weight also increased, making the cost of supplementation economically viable.
- Lupins did not significantly increase glycogen levels or carcase weights.

NEW-LOOK SUPPLY CHAIN GROUP **FOR BEEF AND LAMB**

The Sheep CRC MLA Lamb Supply Chain Group (LSCG) is morphing to become the Supply Chain Group (SCG), incorporating beef supply chains. National coordinator Bruce Hancock said the core meat science focus remains the same.

"The focus of the new SCG is research, development and adoption of meat science, engaging with supply chains, and facilitating enhanced producer feedback to increase productivity and profitability," Bruce said. The introduction of the beef supply chain into the group is to harness findings from research which equally affect beef and lamb, such as processing technologies.

"Since 2007, the LSCG has focused on collaboration, co-investment and capacity building, and the critical success factor has been research embedded in the supply chain from day one, with commercialisation in mind at every step."

LSCG successes have included the development and adoption of dual-energy X-ray absorptiometry (DEXA) in association with guided robotic cutting in lamb processing, and uptake of the MLA Livestock Data Link online application by processors to improve producer feedback.

The new group will have 30–35 members from the Sheep CRC, MLA, Australian Meat Processor Corporation and state primary industry departments from NSW, Victoria, SA and WA. Lamb and beef supply chain collaborators will join as guests.

Bruce said a catalyst for the change was the Federal Government-funded ALMTech (Advanced Measurement Technologies for Globally Competitive Australian Meat) program, which is developing objective livestock measurement technologies for the beef, sheepmeat and pork industries (see page 8).

The LSCG has been funded by the Sheep CRC but, as part of the CRC legacy strategy, the group will transition to a 50:50 funding ratio from the Sheep CRC and ALMTech in 2017–18, then to 25:75 the following year, followed by full ALMTech funding after the Sheep CRC is discontinued in 2019.

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MLA to co-invest in $60m beef boning automation program

The MLA Board has given in-principle support to co-fund a $60 million program for beef boning automation research and development over the next five to seven years.

"With high labour costs – four times higher than our competitor, Brazil – Australia's beef processing sector needs to focus on increasing carcase value through more precise cutting and the introduction of objective carcase measurement technologies," MLA's Program Manager – Value Chain Technology, Darryl Heidke, said.

"MLA recognises that transforming beef boning with automation, in a similar way to lamb, will require significant investment.

"The strategic automation technology investment portfolio will leverage substantial co-investment contributions from technology providers and processors to achieve this goal.

"In particular, the investment will enable us to take lessons from the development of the lamb LEAP™ automation suite and the federally-funded objective measurement program, ALMTech. This will demonstrate proof-of-concept and subsequently deploy those lessons into commercial enterprises."

The next project to be funded by the program is a 50:50, $3.7 million partnership between MLA Donor Company (MDC) and Scott Technology, the developers of LEAP™ lamb boning automation.

"This project aims to use three-dimensional X-ray or computed tomography sensing technology to facilitate the precise cutting lines required for robotic break-up of a beef carcase," MLA's Program Manager – Value Chain Technology, Christian Ruberg, said.

The aim of the first part of the project is to develop technology for automated removal of the chine bone from striploins and cube rolls (increasing carcase yield and value), and to investigate automated fat trim removal and striploin and cube roll marbling measurement while deboning. ■

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Robotics in beef processing has been one automation breakthrough as a result of earlier MLA-funded research.

Research focus

The MLA strategic automation technology investment portfolio is investigating three key areas:

1. A revolutionary approach to beef boning, featuring a **three-way break-up of the carcase side into forequarter, middle and hindquarter,** instead of the conventional two-way quarter break-up. This approach facilitates full automation of the middle rib-and-loin deboning tasks, optimising the return of the most valuable primals (cube roll and striploin). It is also compatible with the conventional side, quarter and table boning systems now used by Australian processors. *This concept was presented to a beef processors' forum in December 2016, and co-investment with technology providers and leading processors is now being sought.*
2. **Development and use of dual-energy X-ray absorptiometry (DEXA)** to facilitate the precise scribing and cutting lines required for robotic break-up of the carcase. *MLA is now progressing this with several collaborative proposals.*
3. **Evaluation of three-dimensional imaging technologies for determining cutting lines** via three approaches to computed tomography (CT): medical CT, industrial cone beam and high-duty cycle airline baggage systems. *Proposals are in the process of being contracted.*

IN MARKET

GROWING DEMAND

ENGAGEMENT

VIRTUALLY AT THE FARM

More than 1,500 visitors to Brisbane's Ekka 2017 found themselves taking a flight around a Queensland beef property. And it was all from the comfort of an armchair.

MLA's new 360° paddock-to-plate experience used virtual reality 'goggles' to immerse their wearers in the beef supply chain.

Of the participants, 60% said they had never visited a beef cattle farm and 92% said they had a better understanding of the beef industry as a result of the virtual reality experience. When it came to attitude, 88% said they felt more positive about the beef industry.

Research indicates there are now about 20% less Australians from urban centres visiting cattle or sheep farms annually compared to six years ago. This, coupled with a rise in consumer interest in the provenance of food, led MLA to an innovative new way to engage the broader community about how red meat is produced.

MLA Chief Marketing and Communications Officer Lisa Sharp said one of the key objectives of the red meat industry and MLA was to meet the rise in consumer interest with engaging and fact-based tools.

"What better way to do this than an immersive 360° paddock-to-plate experience that simulates a guided tour of our beef industry and highlights the fantastic work of our Australian beef producers," she said.

"Tools like this help educate and engage consumers by delving into their interest in sustainability, quality control and animal welfare practices within our industry.

"It ties in with MLA's other key education programs, including supply chain paddock-to-plate tours, community engagement programs, domestic beef marketing projects and international marketing efforts."

A longer version of the video has also been produced providing more in-depth information about each of these crucial steps in the supply chain and will be used by MLA with trade customers both at home and in international markets.

mla.com.au and search 'virtual reality'

BUILDING RELATIONSHIPS AROUND THE BARBIE

Everyone loves a summer barbecue, so firing up the hotplate was MLA's approach to promoting Australian red meat and the importance of free trade with the European Union.

MLA Executive Chef Sam Burke wowed crowds with a Brussels backyard feast for 600 guests, which included 10 members of the European Parliament, trade and agricultural counsellors, Australian Embassy officials, European industry bodies and importers of Australian red meat.

Taking a turn on the barbie with Sam were Australia's Deputy Prime Minister Barnaby Joyce, Minister for Finance Mathias Cormann (both pictured with Sam below) and Simon Crean, who chairs the European Australian Business Council, as well as a delegation from the Sheepmeat Council of Australia.

"We've worked hard to build this network of contacts in Europe who support free trade with Australia," MLA EU International Business Manager Josh Anderson said.

"The support shown at our event is a true reflection of our industry's ongoing involvement in the market."

Free Trade Agreement (FTA) progress

The European Commission will table a draft FTA mandate after the European summer (estimated late September). Member states will then vote on the mandate before negotiating directives are adopted.

This paves the way for FTA negotiations to officially launch (estimated November) followed by the first round of negotiations (estimated early 2018).

"Homegrown agriculture and the need for imported food to keep the population fed are sensitive areas of negotiations," Josh said.

FAST FACTS

The EU:

- is home to 506 million consumers
- is worth approximately $412 million to Australian red meat producers annually ($292 million beef; $120 million sheepmeat)
- consistently ranks as Australia's highest value beef export market on a per kilogram basis, reaching $13.43/kg last year – almost double the global average
- will require an additional 354,000 tonnes of beef and 229,000 tonnes of sheepmeat by 2026.

"Producer-to-producer engagement (as carried out by the Australian representatives) is a vital part of cross-industry collaboration to establish a successful trading relationship for the future."

During their visit, Sheepmeat Council of Australia representatives compared notes with their European counterparts on the common supply and trading challenges, especially in the context of the UK exiting the EU.

"In our advocacy, it is important to cast the net wide, as all 28 countries will have input in ratifying the outcome of a trade deal with Australia. We must remember that our previous FTAs have been with just one country," Josh said.

"However, the EU is comparable to negotiating with one formidable family or at times, 28 very different siblings."

Brexit beckons

The first round of Brexit negotiations between the EU and UK began in July. Both sides are discussing big-ticket items like citizens' rights, the UK's financial bill, the Northern Ireland border and the thorny issue of post-Brexit trade rules.

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Find out more about the barbecue and how Australia's red meat industry is advocating in this important market by viewing MLA's recent videos:

youtube.com and search 'MLA Brussels'

A STRATEGIC APPROACH TO MARKETING

Last financial year Australia exported an estimated $11.2 billion worth of red meat to more than 100 markets. But if you thought those markets were all alike, think again.

MLA General Manager of International Markets, Michael Finucan, said Australia's red meat export markets were highly diverse – crossing cultures, religions, geopolitical regions, levels of economic development and consumer preferences.

"To ensure Australia capitalises on the range of opportunities in those diverse markets, MLA invests about $44 million a year in global marketing," Michael said.

"It is critical we use a targeted strategy to determine how best to invest those industry funds."

MLA's Global Markets Strategy uses a portfolio matrix approach to segment the global market opportunities.

The strategy is based on a wide range of variables that, when observed together, indicate future demand and highlight opportunities and challenges.

The matrix of 21 market factors or forces is used to determine how markets are classified. The variables are data driven and indicate market growth and risk (market attractiveness) and the potential for MLA to have an impact.

"'Market attractiveness' includes variables like household income, historical exports, forecast consumption, price sensitivity and competition," Michael said.

"MLA's 'ability to impact' includes variables like economic access, technical access, trade organisation and retail presence.

"Depending on the market classification, we will place different weightings on our strategic direction."

Strategies to be applied to the four market classifications include:

Develop: This market is likely to have a higher weighting of business development activities. This involves business-to-business activities targeted at importers, distributors and end users (supermarkets or restaurants) to increase their awareness of the positive attributes of Australian beef.

Grow: Depending on the segment, this will be a mix of business development and brand building. Programs will introduce the product to supermarkets and restaurants then support them to drive consumer trials.

Defend/maintain: In this type of market, Australia already has a strong presence with high levels of consumer awareness. We need to defend our position against competitors, so key strategies aim to increase consumer loyalty through brand-building activities.

Manage strategically: These markets generally have significant market access constraints, so the strategic focus is market access and reducing trade barriers.

"In some markets, we may run multiple strategies at one time. For example, in the Middle East we are currently running a 'defend' strategy for beef and a 'grow' strategy for lamb," Michael said.

He said markets were constantly monitored for opportunities and risks via MLA's network of international offices, with annual strategy reviews conducted in consultation with industry. ■

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MLA Global Markets strategy for determining investment in each market.

MARKET CLASSIFICATION	DEVELOP	GROW	DEFEND/MAINTAIN	MANAGE STRATEGICALLY
Description	Markets that show potential income growth and have a longer-term horizon potential	Markets with higher population growth, positive economic positioning and increasing household incomes	Existing markets with limited growth opportunities but with significant importance to the Australian red meat industry	Markets with restrictive access barriers or limited opportunities
Objective	Position Australia to capture growth opportunities	Maximise current growth opportunities	Protect position in the market/strengthen current position and maximise return	Minimise risk and identify future opportunities
Strategy	Monitor market opportunities and develop targeted growth strategies	Drive trial and usage through demonstration and education about the benefits of Australian red meat	Reinforce and remind the market about the benefits of Australian red meat. Also, drive brand value and demonstrate higher-value benefits	Develop strategies to minimise access barriers and maintain a watching brief
Example markets	Beef – China and Indonesia	Beef and sheepmeat – US	Beef – Japan and Korea Sheepmeat – Malaysia	Beef and sheepmeat – EU and UK
Strategy used in example markets	Business development	Mix of business development and brand-building activities, depending on the segmentation	Brand-building activities	Market access advocacy

MARKET FOCUS

LONG-TERM PROSPECTS BRIGHT IN KOREA

Australian beef exports to Korea reached record levels in 2016, with 180,000 tonnes worth $1.4 billion exported.

A recent MLA report, *The Korean beef market: Insights and prospects from an Australian perspective,* suggests that export level is now likely to be the 'new normal' and could remain that way for the next decade.

MLA Global Market Analyst Tim Ryan, who co-authored the report with fellow analyst Adam Cheetham, said while a number of short-term factors would affect the Korean imported beef market in 2017, the long-term prospects for Australian beef exports to Korea were positive.

Growth may be stifled in the short-term

"The report closely examines long-term macro drivers, but there have been several factors, including new anti-graft legislation to reduce corruption, the impeachment of President Park Geun-hye, concerns around import financing and job market uncertainty, that are affecting the Korean imported beef market in 2017," Tim said.

"Combined with those factors, Australian beef production is forecast to contract again in 2017, when at the same time US production and competition is on the rise. This means Australia may not be able to grow its share of the imported beef market in Korea in the short-term.

But long-term prospects are bright

With local beef production from the Korean Hanwoo herd predicted to peak at 355,000 tonnes by 2026 and total Korean beef consumption to grow to 903,000 tonnes by 2030, opportunities abound for beef exports into this market over the longer-term.

Korea is the largest per capita consumer of beef in Asia with Australia its single largest export supplier, closely followed by the US. Underpinned by economic growth and tariff reductions on imported products, per capita beef consumption is forecast to grow from 15.5kg in 2016 to 17.2kg in 2030.

"If Australia is able to defend existing market share, this will place beef exports to Korea at 180,000–200,000 tonnes shipped weight (swt) over the next decade, with prospects of 230,000 tonnes swt by 2030 – all of which would still exceed the record 2016 volume." ■

View the report at mla.com.au and search 'Korean beef imports'

Korea's population:

- 50.6 million in 2016
- By 2030, 23% will be aged over 65, compared to 14% today

Australian beef exports to Korea:

- volume – 180,000 tonnes swt
- value – $1.4 billion

Australian sheepmeat exports to Korea:

- volume – 8,970 tonnes swt
- value – $59.5 million

READY, SET, RETAIL

To offset competition from US beef in Korea, MLA has been working with exporters, distributors and Korean retailers to grow sales of Australian beef through a series of 'True Aussie' promotional campaigns.

MLA's International Business Manager for Japan and Korea, Andrew Cox, said the front foot campaigns included working closely with Korean retailers Homeplus and E-Mart Traders.

"Homeplus has 142 stores and is a loyal customer of Australian beef, with sales doubling over the past year," Andrew said.

"To formalise the cooperative relationship, MLA and Homeplus signed a new memorandum of understanding in April, with both parties making a commitment to supporting each other to grow sales."

Homeplus and MLA ran joint 'True Aussie' beef promotions in April and May which saw sales increase 226% in the two-month promotional period.

The Homeplus campaign included the launch of a 'True Aussie Beef Family Pack', encouraging families to enjoy high quality Australian beef at affordable prices. The campaign also included tasting events and giveaways.

MLA facilitated a 'True Aussie' beef spring promotion event at all 11 E-Mart Traders stores in April and May. E-Mart is a warehouse-style retailer and the second largest in Korea after Costco.

"E-Mart Traders offered 13 cuts during the promotion period, including steaks such as sirloin, tenderloin and strip loin as well as selections for grilling and braising," Andrew said.

"Sales of the cuts reached $3.7 million Australian dollars, up by 500% on regular sales."

MLA supplied nearly 400,000 'True Aussie' beef brochures containing information about cuts, prices and safety. 'True Aussie' banners were hung in stores, and large 'True Aussie' beef brand experience tents were erected in store.

MLA has also recently activated new 'True Aussie' beef promotions at other large Korean retailers, including E-Mart supermarkets, Lotte Mart and Lotte Vic Market.

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Trade agreements with Australia:

- Korea–Australia Free Trade Agreement (KAFTA)

Import tariffs:

- Beef – 29.3%. Under KAFTA this will be eliminated by 2028.
- Sheepmeat – nil

Korean consumption:

- Average total annual meat consumption is 122.2kg/person, of which 15.5kg is beef. In the 1960s, average total annual meat consumption was 21.6kg, of which 1.4kg was beef.

The three most important attributes for meat, according to Korean consumers:

1. Guaranteed safe to eat
2. Freshness
3. Family's favourite meat (beef ranked second only to pork).

(Source: MLA Global Consumer Tracker, 2016)

INDUSTRY INSIDER

A lifetime **love** of livestock

It was an adorable Hereford bull that ignited Dr Jane Weatherley's passion for cattle. She may have only been four years old and a visitor to a friend's farm, but there was no turning back.

"I remember wrapping my arms around his neck and thinking he was beautiful," Jane said.

The romance was fuelled further by her family's small beef breeding operation on Bruny Island where she grew up, just off the south coast of Tasmania. Jane retained her interest in farming and went on to complete an agricultural science degree and PhD at the University of Tasmania. Following a stint as a red meat extension officer with the Tasmanian Department of Primary Industries, MLA beckoned in 2006.

Producers will remember Jane from her roles in managing on farm adoption programs for MLA, but more recently she has led the way with a new MLA subsidiary company.

Dr Jane Weatherley: CEO Integrity Systems Company

Here Jane talks to *Feedback* about her current role with MLA:

Q:

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

I'm CEO of the Integrity Systems Company, a subsidiary company of MLA. I have the privilege and responsibility of managing industry's integrity systems which includes the National Livestock Identification System, Livestock Production Assurance and National Vendor Declarations.

I work with a great team of 32 people, who are all extremely committed to strengthening these programs. We work to ensure the reputation of our $23 billion industry is maintained for the safest product in the world.

Working in the red meat industry is always exciting with plenty of challenges, which is what I love.

It's an incredibly diverse industry too, with many career opportunities from working on farm right through to working with processors and understanding consumers and markets. You can make every post a winner if you have a go, and with all the different career opportunities available, you never know where you might end up.

Q:

What are the best parts of your job?

Being at the forefront of research and development and emerging technology is one of the best things.

Now I'm on a mission to find new technology and better systems that make it easier for producers to deliver on their responsibilities under the integrity systems programs.

These programs are what enable our industry to have market access to more than 100 countries around the globe.

I've always got great job satisfaction out of helping producers find ways to improve their business performance. Making it more efficient and easier for producers helps us deliver on our promise to strengthen the systems, so Australia can continue to stand by what we sell.

Q:

How do you like to eat your red meat?

You can't go past a barbecued scotch fillet, medium rare with pepper sauce and salad. I'd have that every night if I was allowed to! ■

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Serve up the greatest meat on earth

MLA's new 'Australian Beef. The Greatest' platform was launched in July. Here are two recipes from the campaign which showcase beef at its best.

You can enjoy more of 'Australian Beef. The Greatest' at australianbeef.com.au, by following 'Australian Beef. The Greatest' on Facebook and by checking out 'Australian Beef. The Greatest' on its YouTube channel.

Beef and lentil curry

SERVES: 4 • PREP TIME: 10m • COOK TIME: 40m

600g gravy beef, fat trimmed, cut into 3cm pieces
⅓ cup korma curry paste
1 tbsp olive oil
2 garlic cloves, crushed
1 brown onion, thinly sliced
3cm piece ginger, finely grated
2 cups (500ml) salt-reduced beef stock
400ml can light coconut milk
100g (½ cup) red lentils
100g (½ cup) green split peas
½ large cauliflower, cut into florets
⅔ cup frozen peas
1 bunch English spinach, roughly chopped
Greek yoghurt, lemon wedges, coriander sprigs and roti bread to serve

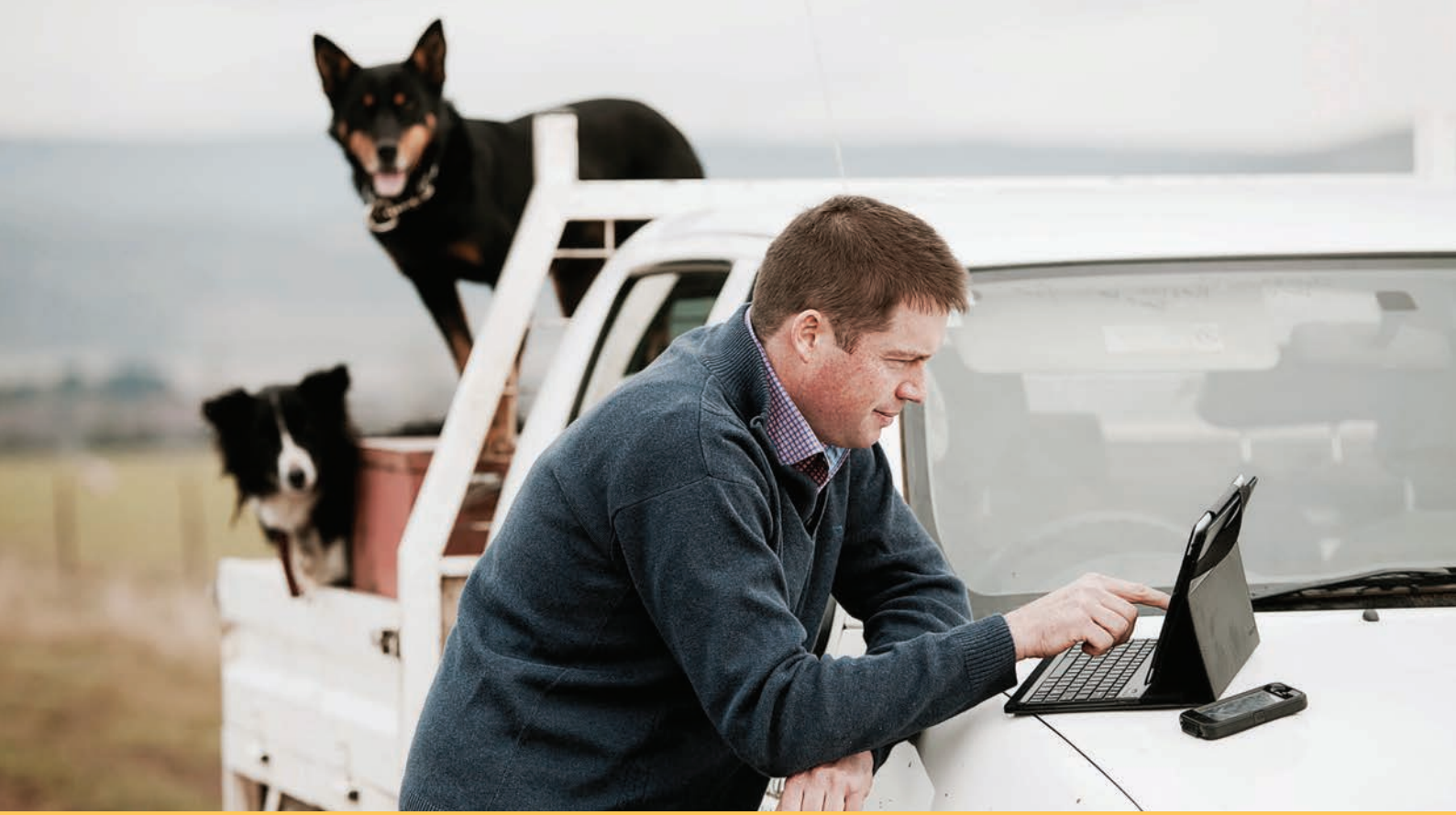
1. Place the beef and half the curry paste into a large snap-lock bag or glass bowl and coat the meat. Heat half the oil in a large saucepan over medium heat. Cook the beef for four to five minutes, turning occasionally, or until browned. Set aside on a plate.
2. Heat the remaining oil in the same pan over medium heat. Add the garlic, onion and ginger and cook for two to three minutes. Stir in the remaining curry paste.
3. Add the stock, coconut milk, lentils and split peas to the pan. Bring to the boil then reduce heat and simmer for 10 minutes. Return the beef to the pan with the cauliflower and simmer for a further 15 to 20 minutes or until beef and vegetables are tender. Stir though peas and spinach.
4. Serve with yoghurt, lemon wedges, coriander and roti bread.

Grilled scotch fillet with smoky eggplant and pomegranate salad

SERVES: 4 • PREP TIME: 45m • COOK TIME: 15m

4 scotch fillet steaks, trimmed
1 tbsp olive oil
1 large eggplant
1 punnet grape tomatoes, halved
1 Lebanese cucumber, diced
¼ cup flat-leaf parsley, leaves picked
1 tbsp lemon juice
1 tbsp caramelised balsamic vinegar
1 pomegranate, seeds removed and retained

1. Brush steak with oil and bring to room temperature.
2. Cut a few slits in the eggplant and place directly over a gas flame using tongs or roast in an oven. Cook for 10 minutes, rotating every few minutes as the skin chars and the eggplant softens. Remove to a tray and slice in half lengthways. Scoop flesh into a sieve set over a bowl and allow to drain for 20 minutes.
3. Preheat a barbecue or grill to very hot, season steak with salt and pepper and cook for two to three minutes per side (for medium steaks), then allow to rest.
4. Finely chop the drained eggplant until it becomes slightly mushy, then place in a bowl with balsamic vinegar and lemon juice, stirring until combined. Gently fold through tomato, cucumber, parsley and half the pomegranate seeds. Season with salt and pepper. Serve with remaining pomegranate seeds on top.



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