

FEEDBACK

MLA – FOSTERING PROSPERITY

APRIL/MAY 2018



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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: Chris and Rachel Macqueen with their sons Asher, Joe and Lewis and dog Molly at their Flinders Island property, 'Skyhaven'. (Page 30) Image: Kara Rosenlund.

On farm cover: 'Sass'. (Page 9) Image: Aticia Grey, Pilbara Working Dogs.

Have your say!

We'd love to hear from you

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📺 [meatandlivestock](https://www.youtube.com/channel/UCmeatandlivestock)

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A NOTE FROM THE MD...



MLA has undoubtedly hit the ground running this year, and will continue to keep up the pace.

It's the year of major events for the Australian red meat industry and MLA is proud to play a pivotal role in each of them. While Beef Australia, LambEx and Red Meat 2018 all provide excellent networking opportunities, they're also important platforms for showcasing the latest research, development and marketing initiatives in our industry.

Beef Australia 2018, the beef industry's premier event, is just around the corner and will be held in Rockhampton, Queensland, from 6–12 May. MLA is a principal partner of the expo and has been busily working behind the scenes to bring attendees a true celebration of 'Australian Beef: the Greatest.'

As I highlighted in my address at Red Meat 2017 in November, the consumer is king. It's the consumer who should ultimately determine every action we take. This will be a major focus at Beef Australia where MLA will be introducing one of our latest initiatives - the Paddock to Plate story. Consumers can immerse themselves in the story of Australian beef production using virtual reality headsets, and through the 360° technology, are able to learn exactly where their beef comes from.

Starting with the consumer and working our way back to the producer, MLA's 'fork to farm' trade stand provides an in-depth look into how we're fostering beef's prosperity. Here, visitors will be able to talk one-on-one with members of our team about driving productivity and profit in their business. They will see the latest innovations, discover practical tools to help their businesses, check out demonstrations from celebrity chefs

(including our own Sam Burke – see page 42 for an update on one of his latest ventures) and access marketing insights from more than 100 countries across the globe. These insights, collected by MLA over a number of years, will be available in digital format and provide detailed information on exactly what factors are driving demand for our product overseas.

This year, MLA will also host our annual Global Markets Forum at Beef Australia. Our expert international team, along with some special guest speakers, will be in Rockhampton to share the latest insights from Australia's major export markets and discuss MLA's role in growing global demand for red meat.

Ensuring red meat has a prominent place on the plate is, of course, the reason for MLA's existence – but it's the consumer who ultimately decides where our product sits at their table. For the past 20 years, we've worked hard to ensure our product is a world leader in provenance and traceability, eating quality, integrity and sustainability, but there will always be new areas to explore and innovative research to learn from. MLA will continue to prioritise research, development and marketing to ensure Australian red meat's premium reputation is maintained.

For those of you travelling to Beef Australia in May, I hope you enjoy your visit and look forward to meeting you there. For those at home, please don't hesitate to get in touch and let me know your thoughts on *Feedback* magazine.

Richard Norton
MLA Managing Director

✉ [E: managingdirector@m्ला.com.au](mailto:managingdirector@m्ला.com.au)

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The facts on lab-grown meat

A global demand for protein, an innovative food industry and consumers who seek sustainable, ethical meals are behind one of the latest culinary trends: meat grown in a lab.

Meat that isn't really meat is not new – plant-based alternatives to ground beef such as Quorn mince (made from edible fungus) have been around for years.

Now there's a new product on the market that promises to deliver the 'holy grail' of meatless meat by replicating the sensory experience of beef.

Laboratory-based or *in vitro* meat is a cultured product created from cellular material.

Cellular agriculture isn't just making headlines for the novelty factor; it has potential to be another competitor for red meat, so MLA is keeping a close eye on its evolution.

MLA Chief Marketing and Communications Officer Lisa Sharp said while it's early days, lab-based meat could take some market share from traditionally-produced proteins.

"Plant-based products boast vegan and vegetarian attributes, but lab-grown meat is a different proposition – it is meat, but produced in a different way," she said.

"It asks consumers to accept not a substitute, but an artificial replication."

Lab-grown meat is tipped to win consumer favour as it responds to two global mega trends:

- **Health and wellbeing:** lab-based meat promises to provide good nutrients without the 'nasties', as it's created in a sterile environment and ingredients can be manipulated to improve human health aspects.

- **Ethics and sustainability:** consumers want ethical treatment of workers, humane treatment of animals and sustainable stewardship of natural resources.

The good news is that Australian red meat producers can also meet consumer-driven trends.

"The Australian red meat industry is committed to continuous improvement of the health and welfare of our animals and care of the environment, and we need to promote the integrity of our practices to consumers," Lisa said.

"Consumers are already voicing concerns about eating synthetic 'Frankenfoods' – they want natural, unadulterated food, which farmed red meat can provide."

After price and nutrition, the top attributes consumers look for when buying meat are:

1. **Quality grading or guarantee**
2. **Safety certification**
3. **All natural/100% natural.**

Red meat also provides many nutritional benefits. The *Australian Dietary Guidelines* recommend consuming 130g of cooked red meat every second day as part of a healthy, balanced diet to meet iron and zinc requirements.

High-profile investors such as Richard Branson are taking a stake in lab-based meat, but that doesn't mean lab-grown meat will be appearing on a menu near you anytime soon – at least not under Australia's strict food protocols.

However, in the US, dishes like the Impossible Burger (a vegan burger which looks like a juicy beef patty) are paving the way for public acceptance of synthetic foods.

MLA is monitoring the roll out of lab-grown meat in the US to gauge consumer reactions and understand whether it stands to be an addition to, or a substitute for, consumption of farmed red meat.

US studies show that consumers are willing to try lab-based meat but not keen to replace farmed meat with synthetic alternatives.

For now, price is a barrier; in the US, ground beef costs \$3.52/pound (\$7/kg) compared to \$2,400/pound (\$5,291/kg) for lab-grown meat, but this is tipped to come down with private investment and increased demand.

"Taste is another barrier, as naturally-produced red meat still boasts an eating experience which lab-based products can't yet deliver," Lisa said. ■

Sources:

US Bureau of Labor Statistics Dec 2017; Forbes January 2018 and MLA Global Consumer Tracker 2017.

✉ Lisa Sharp
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Finding the best path to neutral

Pathways have been identified for Australia's red meat industry to achieve carbon neutrality by 2030.

Research commissioned by MLA has revealed the Australian red meat production and processing sectors could achieve carbon neutrality by 2030. The pathways are at varying stages of development; however, the good news is producers can take action now to reduce emissions and, at the same time, lift productivity. They can do this by:

- reducing emissions per unit of production through improved animal genetics and management practices
- minimising emissions through measures such as improved savannah burning methods in northern Australia
- sequestering carbon into soils and biomass using grazing systems and appropriate vegetation management practices.

MLA is also investigating a range of less-advanced pathways including feed additives, vaccines and legumes to reduce enteric methane fermentation in grazing livestock.

Substantial investment is required to further develop and implement these pathways and MLA will develop an investment plan in the next 12 months.

MLA Managing Director Richard Norton said the suggested pathways were realistic and didn't require the heavy hand of government regulation to implement.

"What is required is the commitment of industry, the right policy settings from federal and state governments, and a continued investment in research, development and adoption of innovation within industry," he said.

"The red meat industry has already reduced its share of Australia's total emissions from 20% of Australia's 600 million tonnes total emissions in 2005 to just 13% in 2015, while also helping to reduce Australia's overall emissions to 525 million tonnes over the same period."

Richard said the dividends from setting a carbon neutral goal would include:

- increased productivity on farm and through the red meat industry supply chain
- additional farm income from carbon mitigation projects
- a major contribution to government targets on emissions reduction
- furthering the strong assurance to consumers of the quality and integrity of our naturally produced, great tasting Australian red meat.

Turn to page 14 to learn about the multiple pathways employed by cattle producers Bob and Ann Davie to achieve carbon neutral status on their Victorian property.

☒ To find out more about recommended pathways to carbon reduction contact:

Doug McNicholl
MLA Value Chain
Relationship Manager
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Know the facts

- Red meat has always had competition – 'lab-grown meat' is another protein alternative.
- Global demand for protein is a growing market for all proteins, including farm-based meat.
- Our red meat is backed up by:
 - world-leading animal health and welfare practices and production integrity systems, such as LPA
 - environmental sustainability of production systems
 - human health and wellbeing benefits of naturally-produced red meat e.g. iron, protein and zinc
 - taste and satisfaction attributes, demonstrated through MSA.
- 31% of consumers are willing to try laboratory-based meat but of these, only 7% are willing to consider replacing farmed meat with lab-based meat.
- In the US, 37% of millennials plan to buy more vegetarian and plant-based food products in the next year.

Sources:

Wilks M, Phillips CJC (2017) *Attitudes to in vitro meat: a survey of potential consumers in the United States*. doi.org/10.1371/journal.pone.0171904

Mintel's *Global Food & Drink Trends 2018*. mintel.com/global-food-and-drink-trends

Changing gears

Here are tools and resources for producers wanting to understand more about farm emissions and techniques to reduce carbon output while increasing productivity:

- Australian Farm Institute's FarmGas Calculator and tools to examine the impact of different reduction scenarios: farminstitute.org.au/calculators/farm-gas-calculator
- Find tools, resources and research reports at: mla.com.au/environment-sustainability
- National Livestock Methane Program outcomes: mla.com.au/nlmp
- Reducing Emissions from Livestock Research Program outcomes: mla.com.au/reIrp



Taking red meat to the classroom

Teachers and students now have access to a wide range of new curriculum-linked resources on cattle and sheep farming.

Rolled out in January and February, the online-based resources have already attracted more than 1,500 page views and 850 unique downloads. They join a suite of existing resources available through MLA's community engagement program.

'Cattle and sheep farming today' teaching resources explore farming and food production within the red meat industry, where students learn about sustainable farming practices, red meat nutrition, food production and the use of science and technology in agriculture.

Resources include an interactive digital board game, facts for students, a six-topic unit of work, extra cross-curricular lesson ideas, activity sheets, curriculum tables (for Years 4–8) and extra resources including videos and websites.

All resources are curriculum-linked to support the teaching of science, humanities and social sciences, technologies and design with links to literacy, history and sustainability for primary and middle years.

The program also takes students onto the farm with Primary School Virtual Excursions, which are organised so students can engage with producers live on video stream and see and hear what they do on farm. ■



Find the new resources at primezone.edu.au or forteachersforstudents.com.au

Getting goatmeat on more plates

Got an idea for goatmeat? MLA wants to hear from you.

A feasibility study into opportunities to encourage goatmeat consumption in Australia has identified that value-adding could create more demand and potentially generate \$13 million for the industry annually.

MLA commissioned the study, 'Value adding goatmeat for domestic consumers', and is now seeking co-funding partners to act on its findings.

The study looked at new usages, occasions and opportunities to inform strategies for putting goatmeat 'on the map' with Australian consumers.

Several value-add proposals are presented in the study's final report, with insights around defined consumer segments and key occasions.

MLA Goat Industry Project Manager Julie Petty said while Australia was one

of the leading exporters of goatmeat in the world, goatmeat was not widely consumed domestically, except by diners at restaurants, and among some ethnic consumers remaining true to their cultural heritage.

"In the past 20 years, several secondary proteins have risen to prominence beyond the restaurant scene, to become mainstays of supermarket offerings, where most Australians buy their meat," Julie said.

"There are lessons from the success of secondary proteins that goatmeat can learn from and adapt to grow demand while remaining true to the product's qualities and character.

"Young families, adventurous cooks, millennials, empty nesters and professional couples were identified in the study as consumer segments that could add goatmeat in their repertoire of meal occasions if convenient meal solutions were presented to them."



✉ For a copy of the report or to discuss goatmeat ideas contact Julie Petty
E: jpetty@mla.com.au

🖥 A short webinar on the results of the project can be found at mla.com.au/goatmeat-webinars

Hands-free farming

A pioneering study into the role of autonomous drones and sensors within the Australian red meat and livestock industry is underway.

The project – a collaboration between MLA and the Aerodyne Group – aims to develop solutions that run as a ‘silent service’, removing the need for producers to manually control drones and other automated sensors to capture, analyse and report on farm data.

Following extensive industry advice, MLA and Aerodyne have developed nine focal points for the first program of works:

1. **Fence monitoring:** autonomous sensing and software to identify and categorise damage
2. **Herd location:** algorithms to measure herd behaviour, distribution and movements
3. **Bull tagging:** ‘smart’ tags to ascertain bull location in relation to a herd
4. **Weed location:** autonomous sensing to identify weeds (particularly those hazardous to livestock), and software algorithms to provide advanced analytics and prescribed preventive data
5. **Feral control:** identification and analysis of pests and feral animals
6. **Feedbase monitoring:** algorithms to sense and categorise ground coverage and produce detailed pasture analytics and reports
7. **Water monitoring:** sensors and algorithms to autonomously measure tanks, troughs, rivers and dams; identify dead stock, unsafe water and bogged animals
8. **Feedlot:** a reporting solution to support decisions for water time, feed time, isolation and growth factors
9. **Tagless ID:** a system for reliable identification of non-tagged animals.

The \$5.1 million collaboration combines Aerodyne’s award-winning drone-based enterprise solutions with MLA’s insights and producer networks, and is funded through MLA Donor Company (MDC).

Aerodyne believe the red meat industry is poised to embrace the latest wave of advances in automation and connectivity.

Aerodyne CEO Kamarul A said: “Aerodyne are delighted to announce our involvement in this innovative and disruptive project. Integrating drones and other autonomous technology into a smart, connected network of sensors gives us the opportunity to completely change the way that large-scale livestock and agriculture operations are managed.” ■

✉ Sean Starling
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Road safety changes

New Chain of Responsibility laws for Australia’s heavy vehicle industry are coming in mid-2018. These laws, which will be enforced by the National Heavy Vehicle Regulator, impact producers’ heavy vehicle use in two ways:

As a producer who contracts transport services to another operator

Some relevant areas of responsibility may include:

- avoid requests, instructions, requirements or demands that may influence the driver to speed or drive while fatigued — whether written in a contract or made verbally
- ensure stock or loads are ready to load on time so that a driver is not unduly delayed and pressured to speed or exceed fatigue hours
- ensure safe access, while on your property, for the heavy vehicles and advise drivers of any relevant local knowledge
- ensure you consult with your transporter and other parties in the chain when setting timeframes for pick-up and delivery.

As a producer who operates their own transport

The most relevant areas of responsibility will include:

- what and how much is loaded onto the vehicle, how the weight is distributed and how the load is restrained
- that the vehicle is fit for purpose, mechanically safe and legally able to be used on a road
- that the driver, who may be you, is not tired and doesn’t work longer than they are allowed by the law
- that you understand the safety risks that your activities pose to the transport task – including packing goods for transport, scheduling travel and delivery times, and the impacts of delays in loading and unloading trucks
- avoid requests, instructions, requirements or demands that may influence the driver to speed or drive while fatigued – whether written in a contract or made verbally. ■



nhvr.gov.au/cor

Is it fit to load?

There are now three online resources producers and transporters can use to ensure correct procedure when managing the transportation of livestock.

1. The new Fit to Load Guide video

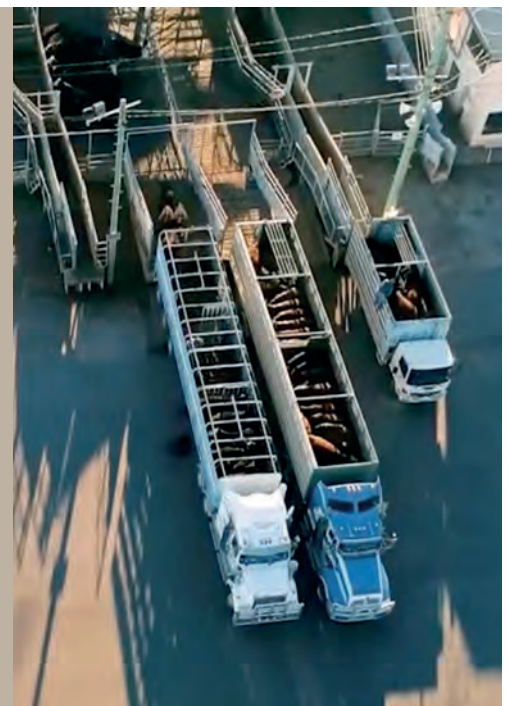
Created by MLA, the video shares the key messages regarding the preparation and transportation of livestock, particularly for sale or processing. The video reinforces the message ‘if in doubt, leave it out’. Watch the video at youtube.com/meatandlivestock

2. Is it fit to load? A national guide to the selection of animals fit to transport

Developed by MLA with extensive industry input, the guide offers detailed information on assessing animals for road or rail transportation to any destination. Download the guide at mla.com.au/fittoload

3. Australian Animal Welfare Standards and Guidelines

Livestock producers and transporters must operate under the standards and guidelines for their state or territory when transporting livestock. The full guidelines can be viewed at animalwelfarestandards.net.au/land-transport ■



ON FARM

RESEARCH IN ACTION



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IN BRIEF



Manabotix Managing Director Dr Stuart McCarthy and Senior Mechatronic Engineer Daniel McLeod with the prototype vehicle-mounted bunk scanner.

Planning with scanning

A prototype sensor system has been developed to determine feed remaining in feedlot bunks.

Feed bunk management is traditionally undertaken by a human bunk caller, whose role directly determines feed allocation for pens of feedlot cattle for a 24-hour feeding cycle. The objectives of this process are to consistently maximise feed intake, while minimising feed wastage and digestive disorders such as bloat and acidosis.

MLA Feedlot Project Manager Dr Joe McMeniman said the grainfed levy-funded project aims, for the first time in the world, to determine both the precision and accuracy of humans to estimate feed remaining in feed bunks compared to the prototype vehicle-mounted sensor system.

"Automation and robotic solutions company, Manabotix, has developed a prototype vehicle-mounted bunk scanner, which has been undergoing in-field trials at Mort & Co's Grassdale Feedlot," Joe said.

Manabotix Managing Director Dr Stuart McCarthy said the vehicle-mounted prototype's primary sensing element is based on light detection and ranging technology.

"The scanner has an onboard computer which takes in all of that information. It predicts how much feed is remaining and then it publishes the result at the end of measuring each bunk. It can work in day and night conditions," Stuart said.

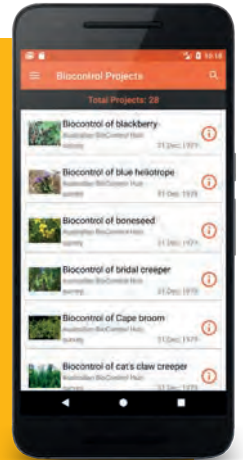
"The system is highly repeatable and we're finding within 5% (on average) of the actual amount of feed remaining in the bunk." ■

✉ Dr Joe McMeniman
E: jmcmeniman@mla.com.au

📺 Watch a video of the prototype bunk scanner in action at youtube.com/meatandlivestock
Search 'bunk management'.

Weed watch

MLA is currently involved in several projects to improve the management of invasive weeds, resulting in new tools and control strategies for producers. Here are three new resources to take control of weeds:



- **Silverleaf nightshade:** new best practice management guidelines have emerged from the Silverleaf Nightshade Project, an MLA-funded collaboration between Murrumbidgee Landcare and NSW Department of Primary Industries. Research has shown a systematic approach using a dual-action control over the growing season from spring to autumn is needed. A new fact sheet on dual-action control is now available for download.

📄 Download the fact sheet at silverleafnightshade.org.au/node/3745

- **Gorse:** Scientists have relocated more than 1,000 gorse soft shoot moths from Tasmania to Ballarat in an effort to control gorse, a Weed of National Significance. The Agriculture Victoria project is part of a broader national collaboration being led by MLA through the Australian Government's Rural Research and Development for Profit programme to implement biological control of six high-priority weeds. More than 20,000 moths have been released across south-east Australia since 2015.

Gorse infests more than 11,000ha across Victoria. The large, prickly weed reduces agricultural productivity and biodiversity, harbours pests and contributes to fire hazards. Control is difficult because gorse produces thousands of seeds that can survive for decades in soil.*

📄 agriculture.gov.au and search 'approved projects'

- **Biocontrol Hub app:** A new biological control smartphone app developed by Agriculture Victoria and CSIRO's Atlas of Living Australia team allows producers to access information about the gorse soft shoot moth and other biological control agents. They can also record field observations, adding to the Atlas of Living Australia.* ■

📄 The free app is available for iOS and Android devices.

*Biological control of gorse and development of the Biocontrol Hub app is funded by Agriculture Victoria, MLA and the Australian Government Department of Agriculture and Water Resources as part of its Rural Research and Development for Profit programme.

Seeking syndrome solutions

Researchers have been in the paddocks collecting samples to identify which plants are hosting a virus linked to subterranean clover red leaf syndrome.

The Western Australian Department of Primary Industries and Regional Development and the University of Western Australia (UWA) will undertake the sampling program for soybean dwarf virus.

It is part of a broader project also funded by MLA and Australian Wool Innovation to better understand the virus and its impact on sub-clover.

A management package will be developed as part of the project to provide producers with advice on prevention and management strategies for future seasons.

Department research officer Paul Sanford (pictured taking samples) and UWA researcher Kevin Foster are co-leading the work.

Department officers have been working with producers to examine the cause of sub-clover red leaf syndrome last season, when large patches or whole paddocks of clover turned red and died.

“The probable cause was identified as soybean dwarf virus, after the department’s laboratory tests revealed 80% of the plants with visible symptoms tested positive for the virus, compared to only 2% of the plants that appeared healthy,” Paul said.

“We suspect other factors, including environmental stress, time of infection and root diseases, contribute to the severity of the syndrome.

“Soybean dwarf virus is not a seed-borne virus but is spread by aphids. If we can control the aphids there is a good chance we can manage the syndrome.”

Plant and soil samples are being collected from up to 50 properties across the southern agricultural region.



“Sampling will focus on properties previously identified as having the syndrome in 2017, including an area from Brookton to Esperance, sites from the department’s green bridge survey and producer group properties identified through UWA research,” Paul said.

MLA WA Program Manager – Value Chain, Development and Adoption, Dr David Beatty, said this research followed extensive consultation with producers.

“Sub-clover is still an incredibly important part of our pasture systems, which makes it so important to support livestock producers by finding both short-term and long-term solutions,” he said. ■

✉ Dr David Beatty
E: dbeatty@mla.com.au

Contraception investigation

A single-shot vaccine to sterilise female cattle and boost productivity in northern breeding herds is being developed using ground-breaking biotechnologies. The projected outcome is the development of a contraceptive vaccine effective for at least 12 months.

The three-year project is being led by the University of Queensland (UQ) with investment from MLA.

How will it work? Professor Michael Holland, of the UQ School of Veterinary Science, is leading the project with fellow UQ researcher Professor Michael McGowan. Professor Holland has worked on immune responses and vaccines that can induce temporary contraception in a range of pest and domesticated livestock species since the early 1990s.

His team has tested several naturally occurring and synthetic proteins that show promise for use in a slow-release vaccine specifically for female cattle.

These proteins target the outermost layer of the female egg, called the zona pellucida, provoking an immune response and preventing egg fertilisation.

Benefits: Animal welfare outcomes will be improved by eliminating the need for surgical sterilisation of female cattle (spaying or ‘webbing’).

It would save time for producers if they could treat stock annually at the time of regular mustering, reduce cattle stress, cut potential losses from surgical spaying and address some animal welfare concerns associated with current sterilisation procedures.

The vaccine would offer more flexible management of cattle fertility. ■

✉ Professor Michael Holland
E: mike.holland@uq.edu.au

Over the fence

'Over the fence' follows a group of producers from around Australia as they manage their operations over the course of a year and respond to the challenges that arise in a modern beef enterprise. This is the fifth and final instalment in the current series.



SNAPSHOT:

Nick Radford,
Penola, South Australia



Area: 3,690ha

Enterprise:
Breeding Angus cattle

SEASONAL CHALLENGES:

We haven't had any summer rain. We're feed budgeting for winter, which is a normal state of affairs for this time of year. However, we're still in a good position as we probably have more feed than usual. This is handy because we're calving down 550 heifers.

PROGRESS ON LONG-TERM GOALS:

Employees have been fencing, carving up a few paddocks. They've also fenced off the centre pivots, following some paddock management strategies I learned in the Pasture Principles course.

The cows have had their pre-calving treatments of all-trace boluses (nutrition) and a backline (parasite control).

For the first time, we have enough suitable bulls (with low birth weight traits) to go around the heifers. In February I bought new bulls,

more suited to joining mature cows. I'm finding it's getting easier each year, as we get more numbers.

HANDY TOOLS:

The soil moisture probes we installed (see December 2017–January 2018 *Feedback*) have been successful. During heatwaves, the probes allowed us to see how much moisture was lost. Losses, particularly in the deeper soil profile (which I thought would have been protected), were considerably more than expected. As a result, next time I will pre-water more ahead of a heatwave.

I plan to get more of these probes for the other pivots. Because our soil types and drainage vary between paddocks, we can't just use one probe as a guide to the whole property. We really need one for each centre pivot. ■

ACTIVITIES OVER THE NEXT TWO MONTHS:

- > Putting bulls out.
- > Marking calves.
- > Continue fencing.

✉ Nick Radford
E: nickradford5@bigpond.com

📄 Pasture Principles for managing pastures: macquariefranklin.com.au/current-projects





SNAPSHOT:

Johnny Gardner,
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:

Our 2017 grain harvest was not fantastic, as it got too wet and we struggled with weed control. We'll revise this strategy and look at alternatives to support our mixed farming system in the future.

Our lambs have sold well, with 3,500 being sold straight from pasture and the rest finished to market compliance through the summer crop and a feedlot. It wasn't all smooth sailing though; one experiment with supplements left us with a reduced growth rate – lambs still reached their specification weights but it just took longer. We're currently averaging 21.5kg carcass for all lambs. In spite of that setback, we've been lucky with good prices.

Prior to joining the ewes, we focused on adequate nutrition and monitoring condition and faecal egg counts. It's been a good pasture growth season and that comes with the 'bonus' of internal parasites. We did regular worm counts and caught problems early. Our ewes are in great condition and I'm looking forward

to seeing the results of weaning early.

Our goal is to have all ewe lambs over 45kg ready for joining at nine months. Currently they're just under the goal weight and, while rain to promote pasture growth would be nice, we're driving weight gain through supplementary feeding.

PROGRESS ON LONG-TERM GOALS:

To achieve higher carrying capacity, we're subdividing larger paddocks from 60ha to 20ha to allow better pasture utilisation. We've completed that with three paddocks and linked water supply to all, and will do more each year.

Another focus is to allocate capital into reducing the risk associated with having a high stocking rate. Investments are directed to fodder supply, water and general infrastructure.

My parents have moved off farm and I'm now six months into running the entire operation. It's been an amazing challenge and I'm grateful to my family for the opportunity. I'm putting

things in place to allocate my time in the right areas, while educating myself and staff members. We have two fantastic staff members – Zach and Will – who are completing their Certificate III and Diploma in Agriculture at RIST in Hamilton.

HANDY TOOLS:

The NSW Department of Primary Industries' feedlot calculator has been a great tool, allowing us to really monitor our costs. ■

ACTIVITIES OVER THE NEXT TWO MONTHS:

- > Fertiliser and lime spreading.
- > Pasture improvement planning.
- > Paddock renovations.

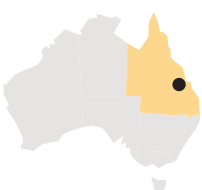
✉ Johnny Gardner
E: southmokanger@outlook.com

🖨 NSW DPI's feedlot calculator: go to dpi.nsw.gov.au and search 'feedlot calculator.'



SNAPSHOT:

Carlie and Lauchie Ward,
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:

Rainfall across the properties has been variable, with excellent summer rainfall for Emerald and Bajool, while Dingo finds itself with a more marginal season unfolding. To deal with this, we've marketed the second half of our number six steers and our better-condition cows to conserve fodder for incoming weaners.

We'll also sell an early draft of heavier number sevens earlier than usual, unless a significant seasonal break occurs. We're also implementing a creep-feeding trial at Bajool, to attempt to create a heavier weaner should we have to turn them off earlier. This will hopefully improve the condition score of the cows (increasing pregnancy test percentages and decreasing time to market for dry cows).

PROGRESS ON LONG-TERM GOALS:

Most calves have been branded, leucaena has been planted and is awaiting rain, weeds have been sprayed, lantana has been knocked over, dry lick and M8U (a nutritional supplement) has been maintained and some 'capital works' jobs have been completed before stock work begins again. We're gradually working towards our business goals and are slowly beginning to run a more effective and efficient business. We've realised the enormous cost of staff turnover, so we're working towards trying to limit this, while maintaining a good working team. ■

ACTIVITIES OVER THE NEXT TWO MONTHS:

- > Continuing our work health and safety system upgrade.
- > Implementing better human resource management.
- > Monitoring and adjusting our genetics program to suit our climate and ultimately satisfy our customer.


✉ Carlie and Lauchie Ward
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Enviro-farming

Bob and Anne Davie have created a carbon neutral beef production system on their Phillip Island property.



Bob Davie (right) produces premium beef backed up by environmental stewardship – he is pictured with chef Alejandro Saravia, who serves up Gippsland Natural Beef at his Melbourne restaurant, Pastuso.

SNAPSHOT: Bob and Anne Davie, 'Bimbadeen', Ventnor, Phillip Island, Victoria 



Area: 128ha	Enterprise: Angus stud, agri-tourism, free-range eggs, honey	Livestock: 280 cattle, breeding Angus bulls and producing beef for Gippsland Natural	Pasture: Perennials including legumes, grasses, clovers and chicory	Soil: Red volcanic to black soil to grey, clay-based soils	Rainfall: 782mm
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Beef producers Bob and Anne Davie are committed to productivity and conservation, recently adding 'carbon neutral' to their list of environmental credentials.

Their diverse enterprise is home to beef, honey, agri-tourism, free-range eggs and, now, carbon farming.

Over the years the Davies have planted 48,000 trees to create wildlife corridors, fenced off remnant vegetation and waterways, and reduced soil salinity.

In 2009 they began reducing greenhouse gas emissions and carbon accounting.

In July 2014 their farm became carbon positive – a status Bob believes can be achieved on any farm to underpin the environmental credentials of Australia's red meat industry.

"We're just trying to do our little bit – it gives us a good feeling that we're trying to help the planet," he said.

His strategies are wide ranging and include running feed-efficient cattle and planting deep-rooted pastures and crops to absorb carbon from the atmosphere and store it in the soil.

Carbon farming practices

Early turn-off: Bimbadeen cattle are destined for premium Melbourne foodservice and restaurants under the Gippsland Natural banner, which pioneered the Enviomeat brand (brand development was supported by an MLA CoMarketing project), with an environmental management system compliant with ISO14001.

The Davies turn off steers and heifers at 250–300kg (carcase weight) by 16–18 months of age. Their cattle have achieved weight gains in excess of 1.5kg/day on grass in winter in steer trials.

They select genetics for carcase quality, moderate frame and high growth rates and maintain an even plane of nutrition with improved pastures and shelterbelts for protection.

"This allows us to turn cattle off quicker, saving months of methane emissions," Bob said.

Manure management: The Davies use rubber-tyred smudge trailers to incorporate semi-dried manure in the soil, to retain carbon.

Pasture selection: Bob works with agronomist Mark Roberts of Basix Trace Elements to identify crops and pastures which aid carbon farming.

They're trialling species that build soil carbon while also providing the nutrients required by the following crop to avoid fertiliser application.

In one trial paddock of legumes and deep-rooted species, soil carbon content increased from 160t/ha to more than 200t/ha in two years. Moisture retention also improved.

Bob said the formula was simple.

"Carbon sequestration in soil is the best way to remove CO₂ and grow crops – every 2.7 tonnes of total organic carbon sequestered into the soil as a result of photosynthesis removes 10 tonnes of CO₂ from the atmosphere," he said.

Recycled water: The Davies have hosted RMIT University research, including trialling application of biosolids to rejuvenate salt-affected paddocks.

This paved the way for trials this year to irrigate carbon-capturing crops with recycled water from Westernport Water, and Bob believes it will be possible to capture 300t/ha of carbon.

Getting it right

Soil tests are conducted in government-approved laboratories under the Clean Energy Regulator's approved methodologies to record increased and decreased tonnes of total organic carbon (TOC)/ha.

The first soil tests established a baseline of 67.72 tonnes of TOC/ha – no carbon below this baseline is allowed to be traded or offset.

Offsets such as greenhouse gas emissions are removed from the carbon inventory – Bimbadeen's audited emissions for 2017 were 578.05 tonnes.

Bimbadeen's most recent carbon test was 100.47t TOC/ha; with a total carbon sequestration of 12,861.82t TOC. ■

✉ Bob Davie
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💻 bimbadeenphillipisland.com.au
gippslandnatural.com.au
Methods for measuring soil carbon sequestration in agricultural systems:
cleanenergyregulator.gov.au/ERF
Calculate your enterprise's greenhouse gas emissions and the financial performance of different emissions-reduction activities with the FarmGAS tool:
farminstitute.org.au/calculators/farm-gas-calculator

LESSONS LEARNED

- 1. Draw a line in the sand:** Test soil carbon to obtain an initial baseline of carbon stocks. You can only trade carbon above this.
- 2. Know your emissions:** A greenhouse gas audit will establish your footprint – deduct this from your carbon total to establish carbon neutrality.
- 3. Start capturing carbon:** Build up carbon with measures such as reducing energy use on farm and growing carbon-sequestering plants.
- 4. Keep up to date:** New methods for collecting and measuring soil carbon sequestration in agricultural systems came into effect on 8 February 2018.

Interested in carbon farming?

Gippsland Natural, a producer-owned cooperative operation, is organising a program to assist producers with carbon farming, which Bob sees as a crucial step towards making the industry carbon positive.

"We hope that, in the future, producers can receive a premium for carbon-neutral beef," he said.

"Gippsland Natural will pay an incentive to their suppliers for carbon-neutral beef, and Bimbadeen will also provide a discount to companies (such as foodservice providers and restaurants) that are offsetting their greenhouse gas emissions if they reduce their emissions on an annual basis."

Gippsland Natural leases its own processing facility and packages carbon-neutral beef from Bimbadeen. Other producers will be supplying after the carbon-neutral program is established.

"Gippsland Natural is also looking at its processing footprint, and may engage with our current abattoir to see if we can offset the processing footprint for our beef utilising Bimbadeen's tradeable soil carbon," Bob said.

Key to mixed enterprise success

What does it take to successfully and profitably integrate cropping and livestock enterprises in southern Australia? That question has just been answered by a two-year project specifically targeted at mixed enterprise producers.

‘The profitable integration of cropping and livestock in southern Australia’ project, funded by MLA, studied three years of benchmarking data from 100 mixed enterprises in WA, SA, Tasmania, Victoria and NSW.

It found the top 20% of mixed farming producers were retaining almost 30% of turnover as net profit, while the remaining 80% of producers were retaining less than 10%.

Agribusiness consultant Simon Vogt from Rural Directions (pictured) helped coordinate the project and said the superior profitability achieved by top 20% producers was a function of four primary profit drivers.

These drivers are:

- gross margin optimisation
- developing a low-cost business model
- people and management
- risk management.

“We found each of the primary profit drivers were supported by secondary and tertiary profit drivers, which also needed to be optimised,” Simon said.

“For example, behind gross margin optimisation for livestock are turn-off

weight, reproduction rate, adult fleece value (in sheep), stocking rate and price received.

“Behind gross margin optimisation in a cropping context are yield (a function of agronomy and timeliness), variable cost control, crop rotation, crop sequencing and price received.”

Project data was gathered from nine agro-ecological zones and Simon said results were quite zone-specific. However, he said there were some common themes identified which apply nationally.

“Across all zones, the top 20% of producers are achieving superior performance in both their livestock and cropping enterprises,” Simon said.

“They’re not doing an exceptional job in one and a mediocre job in another; they’re doing both well.”

Another theme to emerge was the need to plan and structure a management calendar to ensure there was no conflict or overlap during peak activity windows.

“Mixed enterprises have a greater level of complexity so they require a greater level of planning and

management to do well,” Simon said.

Simon said they also found having a mixed enterprise was difficult to justify on the principle of diversification against commodity price risk.

“It really needs to produce stronger long-term profit outcomes than what a single enterprise could achieve to truly justify it,” he said.

“Historically, people say mixed enterprise is good because if prices are down for one enterprise, they are often up for the other.

“However, potentially, what you do when you increase enterprise complexity is add internal management risk. So you may not actually reduce risk, just shift it.

“Managing based on price is often a misleading focus. Our weapon in a commodity business is to have a low cost of production by being highly productive.”

The project team has developed a set of management guidelines for each of the nine agro-ecological zones and, in the past few months, has delivered 18 workshops to producers in those zones. ■

RESEARCH IN REVIEW

PROJECT NAME

The profitable integration of cropping and livestock in southern Australia

RESEARCH ORGANISATIONS

Rural Directions, Macquarie Franklin, RCMG, Farmanco

FUNDING ORGANISATION

MLA

GOAL

To understand what it takes to integrate cropping and livestock enterprises in a profitable manner in each of the different mixed enterprise regions across southern Australia.

BUDGET

\$475,810

DURATION

January 2017–July 2018


 Simon Vogt
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Table 1: Summary of national results of ‘The profitable integration of cropping and livestock in southern Australia’ project.

Variable	Average producer returns	
	National upper 20%*	National lower 80%*
Return on equity (%)	7.8%	1.4%
Return on assets managed (%)	7.8%	3.9%
Profit (% income)	28%	5%
Gross margin/ha (cropping)	\$664	\$431
Gross margin/ha (livestock)	\$392	\$241

*National mixed farming producers ranked by return on equity.

Decades of refining the mix



Matthew Pointon, with his offsider Ernie.

Matthew Pointon's family has been running a mixed farming business on 'Ballater' for almost 130 years, so they've got a bit of experience balancing cropping and livestock.

Matthew operates the farm business with his wife Susan and parents John and Karen in the Curramulka district of South Australia's Yorke Peninsula.

They have been benchmarking for several years and were happy to contribute data to 'The profitable integration of cropping and livestock in southern Australia' project, representing the SA high-rainfall zone.

"My family's been on the home block for almost 130 years and involved in cropping and Merinos for most of that time. We've been producing prime lambs for about 20 years," Matthew said.

Ongoing benefits

Matthew said in their case, a mixed enterprise was a profitable and sustainable system – both agronomically and economically – and fitted with the family's attitude to climatic, financial and agronomic risk.

"As with every farming system, it takes some refinement to get the systems balanced, and of course they're constantly evolving due to rotations, improvement in practices and the like," he said.

"The biggest challenge for us is labour: there's no doubt livestock require a lot of labour. There's always something needing to be done with livestock, and usually when you would prefer to be doing something else."

Matthew said the biggest benefit of having livestock in the mix was that they provided a risk management tool on a number of levels.

"Livestock represent a different money stream," he said.

"While the livestock market is connected to the grain market in some ways, it is separate, so there's potential for one to be down while the other is up, which spreads our financial risk.

"On a day-to-day level, stock do well on our country and we use them agronomically for stubble management and, particularly at the moment, for mouse control. Mice can be a big issue

and last year we found paddocks where we grazed stubble fairly early didn't get as damaged by mice later on."

Doing your sums

Being involved in the mixed enterprise project reinforced the importance of having data to back up decisions.

"The project gave me a better understanding of where our dollars go and therefore better decision-making tools," Matthew said.

"We had to make some decisions in our Merino enterprise last year due to climatic conditions and, having just taken part in the project, I had accurate data and knowledge fresh in my mind.

"Having that data, and knowing it was good, meant I could make those decisions with confidence."

Matthew's tips for mixed enterprises in the SA high-rainfall zone:

1. Be flexible

It's good to plan, but locking yourself in to a set plan can be a problem when it can all be undone by climate, or some other risk factor. Being able to react to changes and risks is a big plus.

2. Know where your money goes and where it comes from

This goes hand-in-hand with having a flexible program. If you're thrown a big challenge, understanding the numbers means it's a lot easier to make decisions.

3. Make timely decisions

Identify trigger points early and, when you hit them, make a decision and act. Again, being flexible and understanding the numbers will make decisions easier. ■

✉ Matthew Pointon
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SNAPSHOT: Matthew and Susan, John and Karen Pointon, Yorke Peninsula, SA



Enterprise:
Self-replacing Merino flock and prime lamb production, using White Suffolk rams over Merino ewes

Pasture:
Improved medic-based pastures

Soil:
Brown loam

Rainfall:
400mm

Realising herd potential

Good genetics, through strategic bull selection, is one of the keys to unlocking the full potential of a breeding herd managed under good nutrition, according to Queensland producers Rodney and Paula Wright.

The couple, who produce Brangus–Droughtmaster weaners at Mt Ossa, have completed a Breeding EDGE workshop and were invited to provide feedback at a pilot workshop for the newly updated Breeding EDGE course.

The information and skills gained from those workshops now help them make more informed genetic improvement and herd management decisions.

“This country here can be challenging at times for stock,” Rodney said.

“Nutritionally, the dry season can be tough and, during the wet season, huge rainfalls can reduce the quality of feed. The cattle also have ticks and buffalo flies to contend with.”

Rodney and Paula (pictured) control-mate their herd for three months, pregnancy test, remove ‘empty’ breeders and use nutritional supplements. However, their experience with Breeding EDGE has enabled them to further fine-tune their breeding and selection programs.

“We need a suitably adapted but softer-styled animal that is early maturing, fertile, and has good early growth, temperament and market suitability,” Rodney said.

Since the workshop, the couple has a tighter set of criteria of what they want from a bull and a breeder, and feel they have the skills to select an animal that will genetically complement and improve their herd.

They also have a better understanding of heritable female fertility traits.



“We learnt a lot from the courses – in particular, if you haven’t got the genetics in your herd, you can’t get full value from your paddock nutrition, or bang for your buck from supplement feeding,” Rodney said.

“We now understand objective bull data and that drives our bull selection decisions – the availability of performance data is a must.

“We are looking for estimated breeding values (EBVs) and BULLCHECK information (formerly Veterinary Bull Breeding Soundness Evaluation), including semen morphology and percentage of normal sperm.”

Bulls are selected based on:

- **fertility:** above average scrotal size
- **offspring information:** such as age of puberty of their heifer calves
- **birth weights:** focusing on lower birth weights to improve cow and calf survival rates, particularly in maiden heifers
- **days-to-calving EBVs:** breeders have

a short joining period, and lower or negative days to calving improves the chances of calving early and getting back in calf (this information isn’t always available)

- **parentage:** dam and sire histories are also studied; both should be out of a cow that has calved every year, in the right calving interval.

“In summary, we’re looking for well-balanced bulls with good measured traits such as scrotal size, semen and morphology, fats, eye muscle area, temperament, and good structure of the sheath, feet and legs, etc.,” Rodney said.

The one trait the couple won’t compromise on is temperament.

“We’re a small family operation. Often it’s just Paula and me, and we can’t afford to have anything that has questionable temperament,” Rodney said.

“We pride ourselves on our weaner offering each year being quiet and well-handled.” ■

SNAPSHOT: Rodney and Paula Wright, ‘Cluny’, Mt Ossa (near Mackay) Queensland



Area: 2,600ha	Enterprise: Brangus– Droughtmaster weaners	Target markets Store sales to be grown out for domestic/export trade	Pasture: Signal, Humidicola, Mekong, Pangola, Rhodes, stylos, natives	Soil: Heavy clay-based and loam soils	Rainfall: 1,650mm
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MARKETING TIPS

- > Use BREEDPLAN and BULLCHECK data in combination with visual appraisal to make bull selection decisions.
- > Don't obsess over growth traits at the expense of other important traits such as fertility and temperament.
- > Buying sound bulls of high genetic merit can rapidly increase your herd's rate of performance and profit.

✉ Rodney and Paula Wright
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🖥 Breeding EDGE courses
mla.com.au/events
futurebeef.com.au/events

Breeding EDGE

For upcoming Breeding EDGE courses, keep an eye on the FutureBeef website's calendar at futurebeef.com.au/events

Three-day Breeding EDGE workshops are planned for:

- Port Hedland, WA, 17–18 April
- Katherine, NT, 30–31 July, 1 August
- Kununurra, WA, 8–10 August

✉ Felicity Hamlyn-Hill
T: 0428 113 732
E: felicityhamlyn-hill@bigpond.com

Lifting calf survival

A cross-section of the northern beef industry took in the latest calf survival research outcomes at the MLA-sponsored Calf Alive symposium held at Capella, Queensland, late last year.

Calf loss is best defined as the losses that occur between a positive pregnancy diagnosis and failure to produce a weaner. It encompasses abortions, perinatal calf losses and calves up to weaner age, with most losses usually (but not always) occurring around calving.

Economic analysis of northern Australian beef businesses has shown that each calf loss has a value of (reduces business income by) more than \$400.

Research team leader Professor Michael McGowan said the Calf Alive symposium was a practical blend of research outcomes and on farm management strategies, presented by international authorities such as veterinary epidemiologist Dr Tom Kasari and Dr Frank Garry, both from the US, as well as Dr Dahlan Dahlanuddin, from Indonesia.

Northern Territory pastoralist Dan Lynch, who has beef breeding operations in the Top End and the southern Gulf, spoke on his 'rest and rotation' strategy to improve live weight production.

Kylie Schooley, a beef producer from south-east Queensland, described her journey to improve beef production and reduce calf losses.

Paraway Pastoral's Northern Australia Operations General Manager, Geoff Murrell, chaired the event and shared his experiences for maximising calf survival.

Michael said the broad range of speakers demonstrated the barriers to calf survival, and also that strategies to minimise those losses are fundamentally similar around the globe.

"The key messages from our research have application and relevance to most breeding enterprises," he said.

Take-home messages:

- Body condition and nutrition of the breeder cow during pregnancy and early lactation have a profound effect on calf viability.
- Dystocia (calving difficulty), which is more prevalent in two-year-old heifers, is affected by genetics and nutrition and has a big impact on calf survival.
- Any factor reducing colostrum intake in the first 24 hours after birth or milk intake in the first days of life threatens calf survival.
- Effective infectious disease and predator control will assist calf survival.
- Solutions to address calf survival challenges require diagnosis of the cause and accurate analysis of critical control points. ■

RESEARCH IN REVIEW

PROJECT NAME

Calf Wastage Phase I

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

More research required to validate whether an identified and ranked list of management interventions to increase calf survival would be viable, practical and profitable.

✉ Professor Michael McGowan
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Turn over to read how producer Dan Lynch is improving calf survival.

Gaining more calves

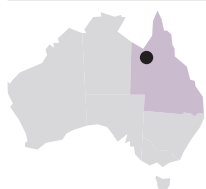
For Dan Lynch's beef enterprise, herd management, breeder nutrition and predator control are the three most influential factors affecting calf survival between pregnancy testing and weaning that he's been able to address.



LESSONS LEARNED

- > Effective predator control, including coordinated baiting programs, is an effective strategy to promote calf survival in some regions.
- > Be aware of extreme weather events and place vulnerable stock in the most sheltered paddocks.
- > Breeder nutrition at calving (body condition score 3.5 to 4) is critical to calf survival.

SNAPSHOT: Dan Lynch, 'Tara', 80km north of Cloncurry, Queensland



Area:
20,000ha

Enterprise:
Brahman breeding operation, steers grown out to feeder weights

Livestock:
1,400 breeders (normally 2,000)

Pasture:
Mitchell, Flinders, blue, button and feathertop grasses

Soil:
Black, red, self-mulching clay, pulled gidgee country

Rainfall:
400mm

With a foot in two camps – Queensland and the Northern Territory – Dan has worked hard for almost 20 years to maximise his number of calves weaned. While he’s made significant gains, he accepts there is still a lot the industry doesn’t know about why losses occur.

At his Queensland property ‘Tara’, calf survival has risen from 87% to 93%, with the bulk of that increase occurring over the last 17 years.

“The improvement is mostly due to removing cows from the herd that fail to present with a calf at branding, ensuring cows’ body scores are at 3.5 to 4 at the start of calving, providing adequate pasture, a 750m grazing radius, controlling dingos and implementing a segregated breeder system which ensures breeders with baby calves aren’t mustered,” he said.

“A pack of dingos can do a lot of damage. We don’t need to cull them all; it’s just about finding the ecological balance.”

Dan (pictured) said other factors influencing calf survival are the time of calving (ideally in a period of high nutrition, going into the wet season) and extreme weather events.

“Excessive heat during November–December can have a significant impact on calf survival, as can early monsoons, which produce prolonged rain periods adversely affecting calving cows on black clay soils,” he said.

“There’s not a lot you can do about heat, other than calve cows in paddocks with plenty of shade if you have a mix of country.”

Dan’s NT property ‘Stapleton’ was purchased four years ago, along with part of its cattle herd.

In the first year, his calf survival rate was 76% in a region where 80% is not unusual.

“Across the Top End, average calf survival for first-calvers is 83.6% and, for cows, 86.5%,” he said.



“Calf losses were due to dingo predation and, after a few years of taking part in coordinated 1080 baiting campaigns with neighbouring properties, as well as baiting prior to calving, we now lose only 11%.”

Dan is still keen to further increase survival of his calves.

“Reproduction, mortalities and growth rates are the challenges in this environment,” he said.

“Ideally, cows should be calving in body condition score 3.5 to 4 (on a scale of 1–5) but we have very low crude protein pasture, as low as 2% through the dry season.

“We have been supplementing protein and energy for the last six weeks of pregnancy, but we’re resigned to the fact that we’re going to have to do it from pregnancy testing right through to calving.”

At ‘Tara’, Dan uses a rotational cell-grazing system which enables “100% even utilisation of pasture and wet season spelling for every paddock” to boost breeder body condition and

increase kilograms of beef turned off per hectare.

“Calf survival is a big challenge for northern Australia and, if we know what causes those losses, and look at the cost-benefit analysis of various management interventions, it would mean significant extra income for industry,” he said.

“In the Katherine region, if an average enterprise with 2,000 breeders could improve their calf survival from 80% to 90%, it would mean an extra \$104,000 in the pocket.

“In NT alone, we have about 1.25 million breeders and heifers. If we could increase calf survival in first-calf heifers (where losses are highest) to an average of 87%, and in cows to 90%, it would produce an additional 43,400 calves a year, generating an extra \$18.5 million for the industry.” ■

✉ Dan Lynch
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SNAPSHOT: Dan Lynch, ‘Stapleton’, 80km south-west of Katherine, Northern Territory



Area: 160,000ha	Enterprise: Brahman breeding operation, steers grown out to feeder weights	Livestock: 3,000 breeders	Pasture: Mitchell, Plume sorghum, Ribbon, Kangaroo, Silky browntop, Cockatoo, Desert bluegrass, Soft spinifex, Native couch, Pigeon, Purple spike, annual sorghum and wanderrie	Soil: Red earth plains are deep red clay loams, red sandy and gravelly desert soils and ironstone ridges and hills	Rainfall: 860mm
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Picking better pastures

If you've ever wanted to know what pasture variety would perform best in your environment, help is here.

The new Pasture Trial Network (PTN) tool is an independent online resource for producers compiled by an industry-wide alliance.

MLA Donor Company, every major pasture seed company in Australia, the Australian Seed Federation, producers and state government departments have all had input into producing this rigorous assessment of how our most common pasture varieties perform across different temperate regions.

Australian Seed Federation President Bill Fuller said the PTN, while still in its infancy, already offers valuable information to help producers choose varieties that not only best suit their climate, but also help them understand timing (early or late maturing) and dry matter production.

"It makes sense that if producers choose a variety at the top end of the performance table, they're going to go a long way to improving their profitability," he said.

"It's often tempting for producers to buy seed based on the cheapest prices.

"While saving a few dollars, lower-performing varieties may ultimately reduce overall farm performance and profitability.

"The PTN trials will give producers a tool to assess higher-performing varieties and to maximise farm performance."

The results so far reflect the outcomes from five trial sites around Australia:

- Blayney (central-west NSW)
- Wangaratta (north-east Victoria)
- Stockinbingal (south-west NSW)
- Cressy (Tasmania)
- Casterton (lower south-west Victoria).

However, there are currently 60 trials underway in 25 locations in every state of Australia, and the results from these sites will expand the capability of PTN in coming years as more trial data is compiled and presented on the PTN website.

"What we have now is just a starting point. Gradually, the PTN will increase the number of varieties, species and geography that we will have rigorously tested, independent information on," Bill said.

"Further, it could be expanded to include forage crops, tropical zones and more."

Bill said despite having information from a limited number of trial sites available, producers from across temperate Australia could still use the resource.

"When using the website, producers shouldn't focus so much on the trial site closest to them, but on the ones that are most climatically similar.

"The rankings between varieties don't change much between similar environments, regardless of location."

PGG Wrightson Seeds Australia research scientist Martin Harmer said that when using the PTN tool, producers should first consider what season they most need forage supply in, and then sort the varieties by season and forage yield.

"The products that perform well in those seasons might offer the best value on farm," he said.

"Being able to compare these products in a rigorous, independent manner is something we haven't been able to do before.

"It presents a great opportunity to change the pasture seed marketplace and create incentive for investment and innovation."

Martin is hopeful the PTN tool will evolve to also offer a variety value-ranking system, along the lines of the economic index for perennial ryegrass that is used in Ireland, New Zealand and Australia. ■

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🖥️ PTN tool: tools.mla.com.au/ptn
ASF pasture seed database:
asf.asn.au/seeds/pasture-seed-database



Primed for performance



Tony Roberts isn't afraid to experiment with pastures. He has tried several varieties of phalaris, cocksfoot, lucerne and sub-clovers. More recently, he's looked at the benefits of red-legged earth mite-resistant clovers and where prairie grass might have a place.

"I find looking at new species really interesting and I'm very lucky to have a group of high-functioning producers in the region who are generous with sharing their experience and advice," he said.

To select the pasture varieties best suited to his property and production system, Tony (pictured) relies heavily on local trial feedback provided by the Perennial Pasture Systems (PPS) producer group. PPS is currently running an MLA-funded Producer Demonstration Site examining 'best fit' annual pastures (see story page 25).

He has also started exploring the new Pasture Trial Network (PTN) tool that helps producers choose varieties that suit their climate and also tells them whether they

are early or late-maturing, and the expected dry matter production.

For Tony, the past decade has been dominated by pasture renovation, and having the support of the PPS producer group and the PTN has enabled him to use a suite of tools, information and test scenarios prior to investing in varieties.

"The farm has gradually evolved from a full native pasture base 40 years ago, to a balance of high-performance species on the arable country and natives on the hills," he said.

Originally, the family used oats in cropping rotations to level paddocks, improve fertility and clean up weeds before introducing the

original Australian phalaris and some sub-clovers to their grazing system.

"In recent years, we've used triticale as a cropping rotation, which we strip and bale for our own stock feed, to prepare paddocks for permanent pasture," Tony said.

"For my first (permanent) sowing experience, I took a measured approach. I mixed the two 'Australian' phalaris varieties (3kg/ha) because it's proven in this area, and the then-new cultivar Holdfast (3kg/ha). As a test, I also sowed one part of the paddock with straight Holdfast to monitor it.

"Holdfast's production has proved to be well ahead of Australian, but fertiliser and good grazing management are key to its persistence."

Trikkala sub-clover was sown at a rate of 8–10kg/ha as a companion variety to his Australian–Holdfast phalaris mix and, more recently, Tony has moved to Holdfast GT (6kg/ha).

"I've also been investigating alternatives to phalaris as it can have its issues and, as I work off farm, I need to manage that risk," he said.

"The new varieties of cocksfoot offer improved palatability and production compared to the old, so during the past three years we've planted 15ha of SF Greenly/SF Lazuly (10kg/ha) with Narrikup and Rosabrook sub-clovers (10kg/ha).

"When comparing animal health, I've noticed significantly reduced (up to 80% less) dags on stock running on the cocksfoot mix compared to phalaris."

Tony has also planted SF Jeronimo prairie grass (8kg/ha) as a mix with the new cocksfoot.

"It's a grazing brome with a large awned seed," he said. "It's quick to establish and highly productive into winter but will set seed early to recruit plants for the following year.

"The prairie grass performs in early winter to give us production which is ideal for lambing. We let it seed and the cocksfoot takes over production for the rest of the season, producing an abundance of dry matter into early summer."

Next on Tony's radar is exploring red-legged earth mite-resistant clover varieties.

"From my experience and the local trials, there's a significant visual difference in plant health between the red-legged earth mite-resistant varieties and Trikkala," he said.

"The resistant varieties seemed unaffected by the pest without any decline in palatability." ■

✉ Tony Roberts
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💻 PTN tool: tools.mla.com.au/ptn

SNAPSHOT: Tony Roberts, 'Glenlofty', Ararat, Victoria



Area: 628ha	Enterprise: Prime lambs, wool	Livestock: 300 Merino ewes, 600 composite (Suffolk–Merino–Charollais) ewes	Target markets: Saleyards – Horsham, over-the-hooks	Pasture: Phalaris with sub-clover, cocksfoot, lucerne, natives	Soil: Grey and red clay	Rainfall: 600mm
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Making sure the pastures fit

Pasture variety selections are a big-picture consideration, according to Matt Kindred.

"I like to think of each paddock having a specific job, but they all need to complement each other," he said.

"With establishment costs of about \$300–\$400/ha, you want to be as sure as you can about your choices."

Matt (pictured), a member of western Victoria's Perennial Pasture Systems producer group, starts the selection process with the end goal in mind.

"Everything in a farm system is inter-related," he said.

"You need to consider soil types, fertility, paddock size and use, feed demands, market choices and your long-term pasture goals."

Through his MLA-supported pasture group, Matt has access to numerous pasture trial results, some of which are now included in the new Pasture Trial Network (PTN) tool (see story page 22). The PTN is designed to help producers make the best pasture variety choices for their region and fodder needs.

"It's a great guide, user-friendly and I like the way it's zoned," he said.

"I'll be consulting it, but we are fortunate with the group;

we're doing five to six local trials a year and nothing beats the informative value of trials so close to home."

Matt's farm has its challenges. While 75–80% of it is suited to phalaris, cocksfoot and sub-clovers, he has another block near the Grampians in a higher rainfall zone (600mm) with free-draining, high nutrient-leaching soils.

"I've struggled to find pastures that will fit there," he said.

"I don't want to lose the native pastures, they're very hard to get back. I'm thinking possibly a kikuyu (variety) which are more common in WA."

Matt said the past decade has presented some challenging environmental conditions, and some areas require renovation.

"I put about 20% of the property into a cropping rotation for grain and hay to feed our sheep, and use this to improve the soil fertility and reduce the weed burden before the area is sown down to a perennial pasture," he said.

"My high-production paddocks sown each year

tend to be a short-term ryegrass or arrowleaf clover set up for a specific job, for example, Merino lamb weaning or prime lamb finishing.

"For a longer-term outlook (20-plus years), I sow a phalaris/sub-clover paddock each year with the aim of increasing pasture production and stocking rate, and I always make sure I have paddocks that are free of grass seeds." ■

LESSONS LEARNED

- > Everything in the farm system is interrelated and pasture choices need to reflect long-term goals.
- > Information from local pasture trials is invaluable.
- > Every paddock should have a job to do in terms of contributing to the farm enterprise.

✉ Matt Kindred
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🖨 PTN tool: tools.mla.com.au/ptn

SNAPSHOT:

Matt Kindred,
Stawell, Victoria



Area:
1,000ha

Enterprise:
Prime lamb and wool production

Livestock:
5,000 sheep

Target markets:
Domestic and supermarket trade

Pasture:
Phalaris, sub-clover, cocksfoot, ryegrass, annual pastures, natives

Soil:
Sandy loam with varying clay content

Rainfall:
500mm





Finding the perfect mix

In western Victoria, where perennial pastures dominate livestock systems, producers are trialling high-value annual forage options to diversify the feedbase.

For the next three years, the region's Perennial Pasture Systems (PPS) group will investigate 'best fit' annual pastures for local conditions through an MLA Producer Demonstration Sites (PDS) project.

PPS project manager Rob Shea said perennial pasture establishment is an important part of the lamb production system in the Wimmera region. However, with sowing and establishment costs of up to \$450/ha, it can be risky if the right amount of rain doesn't fall at the right time.

According to Rob, a recent trend among producers is to complement perennial pastures with a small area of high-production annual forage species, especially ryegrass.

"The aim is to try to fill a feed deficit during winter and early spring, when quality pasture is required for pregnant or lactating ewes," he said.

"We need to protect long-term perennial pastures from overgrazing early in the season."

The group's PDS project involves setting up 12 local trial sites on member properties in the next three years.

Trials will help members and other producers in the region better understand the production, financial

and grazing management benefits of incorporating high-production annual forages, such as annual ryegrass and arrowleaf clover, in the region's perennial grazing systems, which are typically based on phalaris species.

Through the PDS trials, production measures such as pasture growth rates, sheep liveweights/condition scores and overall cost-benefit analysis will be conducted.

Producer perspective

Simon and Yvette Brady, group members hosting one of the PDS sites, hope the trials reveal annual species to help them increase the carrying capacity of perennial pastures.

Their goal is to develop a feedbase to improve livestock productivity, increase ground cover, reduce salinity risk and minimise nitrate leaching.

Grazing is restricted to light gravel and sandy soil areas not suited to cropping, which are sown to phalaris-based perennials.

Sheep are contained for supplementary feeding from late summer until after the autumn break, allowing pastures to rest to help fill the feed gap during early winter and spring.

Up to 100ha of Arrowleaf clover and Winteroo oats are sown each year as part of the cropping rotation.

Simon (pictured second from right at a 2017 field day) said the aim is to provide quality fodder in the pasture phase, while building soil nitrogen (N) to be used in the cropping phase.

Grazing sheep on annual pastures and oats during winter allows the phalaris pasture to be spelled in preparation for spring lambing, while providing flexibility.

"When we graze the oats, we put sheep on the crop about six weeks after sowing – which is done around the time of the autumn break – and rotate them in small areas using semi-permanent fencing," he said.

"We can often harvest that crop after grazing."

Simon said this type of fencing for cell-type grazing is a relatively low-cost option that has potential to boost the carrying capacity of the phalaris pastures in spring to about 15–20 dry sheep equivalent (DSE)/hectare on areas that would traditionally carry 5–8 DSE/ha.

"What we've seen in the trial to date is that we're able to run about 25 DSE/ha on the annual pasture and oats area," he said.

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SNAPSHOT: Simon and Yvette Brady, 'Jallukar Park', Rhymney, Victoria



Area: 1,400ha	Enterprise: Cropping and Merino sheep enterprise producing wool and prime lambs and opportunity cattle trading	Livestock: 6,000 sheep	Pasture: Phalaris-based perennials	Soil: Light gravel and sandy soils	Rainfall: 550–600mm
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Accelerating genetic gain

Australia's red meat industry is speeding towards a genetics revolution, with an MLA-driven research initiative set to deliver some important tools for producers along the way.

The National Livestock Genetics Consortium (NLGC) was formed in 2016 with the game-changing goal of delivering \$400 million in industry improvements by doubling the rate of annual genetic gain for commercial livestock by 2022.

MLA Program Manager for Genetics Hamish Chandler said \$80 million worth of research in more than 30 projects is now underway.

The NLGC directs MLA and MLA Donor Company investment in livestock genetic research by using grassroots consultation to identify research, products and services required by industry.

"The consortium is a stakeholder-driven process governed by a taskforce which includes producers, researchers and processors to ensure investment in genetics research is relevant and targeted," Hamish said.

Hamish said the NLGC's education and adoption strategy is essential for the uptake of new technologies and acceleration of genetic gain.

"Prior to the formation of the NLGC, MLA surveyed 2,000 beef and sheep producers to gauge their willingness to adopt new genetic technologies, and the clear message was they want to see the value proposition before changing the way they choose animals," he said.

"Research must demonstrate how genetic merit can contribute to the bottom line, by improving productivity and profitability in commercial livestock businesses."

To help meet this goal, the taskforce assesses projects against the NLGC's goals of delivering research which genetically improves drivers of profit,

such as market compliance, growth rates, fertility and production efficiency.

Successful NLGC projects must reflect the research themes of cultural change in the use of genetics, linking genetics to consumer outcomes and productivity, and novel or disruptive innovation in genetics.

Research is already underway on:

- optimising temperate-climate cow herd efficiency
- developing and implementing multi-breed genetic evaluation systems for beef
- accelerating genetic gain for productivity and profitability in northern beef with genomic technologies
- genetics relating to Merino meat value and lifetime performance
- decision support tools to aid the adoption of genetic research.

"We've seen significant developments in genetic evaluations over the past 12 months, with single-step evaluation for sheep and some beef breeds which opens the door for a full set of breeding values based on a DNA test," Hamish said.

"We could soon see tools for producers to easily and cheaply assess the genetic potential of commercial cattle to suit specific markets, such as long or short-fed lot feeding, or estimate eating quality traits of prime lambs."

MLA and its NLGC partners are also investing in 'disruptive' research, which can change the way things are usually done.

"We're looking outside traditional agricultural disciplines to human medicine and the data management industry to find new technologies and tools which could be overlaid with livestock genetics," Hamish said. ■

RESEARCH IN REVIEW

PROJECT NAME

National Livestock Genetics Consortium

RESEARCH ORGANISATIONS

MLA, MLA Donor Company and numerous industry collaborators

FUNDING ORGANISATIONS

MLA, government departments, research authorities and breed organisations

GOAL

Deliver \$400 million in industry improvements by doubling the rate of annual genetic gain in the commercial livestock industry value chain.

✉ Hamish Chandler
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🖥 mla.com.au/NLGC

The NLGC Taskforce represents:

- northern beef industry
- southern beef industry
- breed societies (two)
- researchers (three)
- Merino producers
- prime lamb producers
- integrated supply chain
- processors
- adoption and extension.

Looking to the benefits

Meet two NLGC Industry Taskforce members:

Beef producer:

Brett Coombe, Roxborough Brahmans, Moura, Queensland

Sheep producer:

Mark Mortimer, Centre Plus Merinos, Tullamore, NSW

Why is it important to have producers involved in the NLGC?

Brett: It's essential to have producers on the NLGC as I think it's the only way to evaluate the projects with a balance between researchers, funding agencies and the ultimate users of the technology – producers.

Mark: It provides grassroots input into MLA's research and development process. The producers on the NLGC taskforce have the opportunity to identify holes in the chain which could be targeted by specific research.

What research do you think is especially promising for producers?

Brett: The work that was done through the Beef CRC showed tremendous variation in reproduction rates between tropical beef breeds. If ongoing research and the emergence of genomics can provide better measures of fertility and easier ways to assess this trait, we will see more profitable commercial enterprises.

Mark: I'm excited about a lot of the research I've already seen, but for the sheep industry it would have to be genetic research into the areas of eating quality and reproduction.

What is one genetics breakthrough that you think would be 'game changing' for the industry?

Brett: We're nearly at the stage where we can take a simple hair sample from our weaner heifers and identify those with the greatest potential for lifetime reproductive performance. If we can multiply the number of bulls with similar genetic merit, the industry can reap the rewards.

Mark: Feed efficiency is very difficult to measure so it would be the 'holy grail' if we could measure it directly. ■



Queensland beef breeder Brett Coombe



NSW sheep producer Mark Mortimer

The model of ewe efficiency



Anthony Shepherd working with a producer to measure sheep.

A group of 13 producers from around Australia are using MLA Donor Company's (MDC) Producer Innovation Fast-Track program to refine a system that will allow them to quickly develop a flock of highly efficient ewes through early identification of key performance traits.

In Anthony Shepherd's career as a sheep consultant overseeing the management and direction of flocks around Australia, he's learned two things: producers want to take on the latest technology but don't often have the time; and when they do, it needs to offer clear, concise, usable data.

"The technology is there and available," said Anthony, who is coordinating the project.

"If you can show producers how to access it, when and how to use it and then act on the findings, they have the power to make rapid gains."

The project brings together the latest tools to create a template which can be applied to any ewe flock to find the "best employees on farm". That is, the

ewes which perform best according to measures of reproduction, growth rates, wool and meat production, health status and lifetime performance of their progeny.

"While we're ground truthing it, the producers want to see how simple these technologies are and be empowered to use measurement tools themselves," Anthony said.

"The data capture we'll have access to in the near future is mind blowing and, if producers know how to incorporate them into everyday farm management practices and act on the results, the potential to improve flock productivity is massive."

Anthony said underpinning the project was the opportunity for him to act as a 'coach' to a team of producers.

"We're all learning as we go and they're learning just as much from each other as they do from me. I'm learning from them exactly how to apply these tools for benefit in a busy farming enterprise," he said.

"In turn, these producers then encourage their neighbours and other producers to take on these technologies, which has whole industry benefits."

How does it work?

The group of producers (seven from NSW, four from WA and two from Victoria) will measure the performance of their commercial nucleus breeding ewes using electronic identification, pregnancy scanning, Pedigree MatchMaker, Smart Shepherd and/or DNA recording, with weighing and condition scoring of the ewes and weighing of their lambs at important times.

Anthony is also exploring ways of recording data on the performance of the ewes' progeny.

"What we're looking for is the most efficient ewe. Not just the ones who carry multiple lambs but those who raise them to weaning with good weight gain, year after year, and are highly efficient at feed conversion," he said.

"If we can have a ewe who does all that and weighs only 50kg, then she's more valuable than one which weighs 80kg. It all comes back to carrying capacity which means \$/DSE/ha.

"Essentially we can rank commercial ewes on what they yield in progeny live body weight.

"A 50kg ewe weaning a 30kg lamb is much more efficient than an 80kg ewe weaning that same 30kg lamb."

Through the Producer Innovation Fast-Track program, Anthony has connected with Smart Shepherd, a new eID/bluetooth tag system developed for pedigree identification shortly after the birth of a lamb. Smart Shepherd has been involved in an MLA Donor Company-funded research project and Anthony is talking to the company about rolling it out across his project. ■

Supercharging genetic knowledge

While the introduction of DNA testing for sheep has been a huge breakthrough, a group of ram breeders is working on speeding up the rate of genetic gain by boosting it with phenotype information.

The Superwhites Ram Breeding Group, comprising White Suffolk breeders from around Australia, is participating in MLA Donor Company's Producer Innovation Fast-Track program on a project to improve the rate of genetic gain in hard-to-measure traits, like eating quality and lean meat yield. It's also

facilitating an increased understanding of new genetic tools and their applications for the 17 participating producers.

Established 22 years ago, the group fosters co-operation and progress by assessing 4,000 rams/year to create a shortlist of 10 superior rams whose genetics are progeny tested each year across the member flocks. It's estimated that sires from the group influence almost one million lambs/year.

Back story

While ram breeders have been quick to embrace DNA testing, the Superwhites Ram Breeding Group felt

the power of DNA-driven information could be turbo-charged with the addition of phenotype testing of eating quality traits on slaughtered animals.

The project

Seventeen flocks across Australia are participating with more than 2,000 young males being DNA tested and then a percentage of cull animals (300 in total) being slaughtered for phenotype measurement of carcass and eating quality traits using technologies and measurements such as DEXA, shear force and intramuscular fat.

Superwhites group member and project coordinator Troy Fischer said while this is initially a short-term project, it will accelerate innovation for the entire White Suffolk breed by speeding up the rate of genetic gain in improved eating quality and lean meat yield.

"If we continued on our path of selection for faster growth and more meat yield without any selection pressure on marbling and tenderness, we would steadily erode the eating quality of lamb," he said.

Outcomes to date

"Collecting phenotypes for shear force and intramuscular fat is expensive – around \$200/lamb, so the Producer Innovation Fast-Track program is assisting us to collect this data that would be somewhat cost prohibitive on our own," Troy said.

According to Troy, this project could impact

commercial sheep production within five years through continued improvement on these traits during that time.

"We want to ensure our rates of genetic progress are the best they can possibly be and this project is enabling us to utilise measurements which can be applied for a direct commercial outcome – that is breeding rams that will produce lambs with the best eating quality," he said.

The group expects to see the slaughter data provide significant additional accuracy than just standalone DNA testing.

"While DNA testing is valuable, combining it with slaughter data makes it really powerful," Troy said.

"The participating studs are hugely supportive of the project and standing by waiting for the information to come through.

"We organised a teleconference with 24 hours notice the other day, and 16 out of 17 participants joined in. I've never seen that level of engagement before."

Sheep CRC researchers and Sheep Genetics staff have been involved in group teleconferences. ■

✉ Troy Fischer
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🌐 mla.com.au/fasttrack



SA producers Troy and Nette Fischer

Using every blade of grass



SNAPSHOT: Chris and Rachel Macqueen and Chris' father, Malcolm, Emita, on the west coast of Flinders Island, Tasmania 



Area:
935ha

Enterprise:
Beef production targeting Tasmanian feedlot sector

Livestock:
950 Angus breeders

Pasture:
Improved with perennial pastures, mainly cocksfoot, ryegrass and some lucerne

Soil:
Sandy loam down to heavy clays

Rainfall:
730mm

Island life has its perks, but it's not all fishing and surfing for Chris Macqueen, who's building a simple yet productive beef business on Flinders Island.

The third-generation islander's family property, 'Skyhaven', is just one of 40 farms on the tiny island north-east of Tasmania.

Although Chris (pictured with Rachel and their sons Asher, Joe and Lewis) has purchased 300ha since 2012, land on the island is tightly held – so he focuses on lifting productivity.

For the past three years, on an average 875ha (reflecting land purchases), the Macqueens achieved an average dry sheep equivalent (DSE) of 16,133 for the entire property and a mid-winter stocking rate of 14 DSE/ha. The business generated \$903/ha of income, \$379/ha net profit and produced 357kg of beef/ha (or 57.6kg/ha/100mm rain).

Despite high production potential due to a moderate climate and reliable rainfall, a recent run of springs with lower rainfall has put pressure on the highly-stocked property, so the Macqueens have established simple principles to overcome seasonal challenges.

1. Be ready to de-stock

Stock are managed so they're always in a saleable condition, to avoid price penalties if a quick sale is required.

"We join cows for six weeks and heifers for four weeks to achieve a tighter spring calving," Chris said.

"This allows us to wean early if required to take pressure off breeders."

Cows are pregnancy tested six to seven weeks after joining, so dry mature breeders can be sold early to relieve grazing pressure.

2. Make every blade count

After weaning, the mob is split into calves, older cows and younger breeders and rotationally grazed to aid pasture utilisation. Rotations are set to leaf emergence rate, usually 70–80 days in winter and 25–30 days in spring.

Chris has participated in MLA's More Beef from Pastures and Macquarie

Franklin's Pasture Principles programs, and is part of a benchmarking group led by Holmes and Sackett. He draws on the advice of his stock agent Scott Woods and agronomist Richard Mollineaux, and rates his peers a valuable resource.

"One thing locals have taught me is to push stocking rates to utilise every blade of grass," he said.

Chris prefers to fertilise with nitrogen for productive pastures rather than feed out fodder.

"It's expensive to cut, store and feed hay to up to 2,750 head (breeders, calves and young cattle) through a dry spring. We sell rather than feed, to free up the best pastures for young cattle," he said.

"We also put back what we take out of our pastures to keep soil fertility up."

Annual soil tests identify deficiencies and, based on the results, up to 22 units of phosphorus/ha are applied annually.

3. Match-making

"It's about knowing what enterprise and what animals will meet your targets in your environment. For us, it's medium-framed cattle that are easy going, productive and adaptable to the seasons," he said.

Chris sources sires for carcass traits and growth rates so steers can reach 450kg by December for the Tasmanian feedlot market.

"We also match pastures to our soil and climate – cocksfoot and lucerne on sandy areas and ryegrass on heavier soils."

4. Forward planning

Chris uses regular feed budgets to assess when stocking rates need to be lightened.

The biggest logistical challenge of grazing on the island is organisation. It costs \$40/head to send cattle on the eight-hour boat trip to Tasmania; boats need to be booked in advance and shipping shuts down over Christmas.

"You can't ship cattle off-island or bring in fodder quickly when you're running such large herds. It requires military organisation and speedy decision making," Chris said.

5. Building a sustainable business

These strategies helped Chris to scale-up the business with recent land acquisitions, but he's always looking ahead.

He meets with an accountant quarterly to monitor their budget, and runs regular models to test the sustainability of the business against scenarios such as increased interest rates or depressed markets.

"Our capital spending is a bit high at the moment, but we're taking advantage of good interest rates to improve fences and pastures so we can get the farm set up for future sustainability," Chris said. ■

LESSONS LEARNED

- > Keep your business simple. It allows you to adapt according to the environment and markets.
- > Farm according to the environment and don't try to make an enterprise fit if it doesn't match the conditions.
- > Enjoy what you do – it's important to the success of a business.

✉ Chris Macqueen
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Chris was a speaker at the 2017 MLA-supported Tasmanian Red Meat Updates. The 2018 event is on 27 July. Register at redmeatupdates.com.

💻 More Beef from Pastures: mbfp.mla.com.au
Pasture Principles for managing pastures: macquariefranklin.com.au/current-projects

Foundations for the future



Meet Georgia Reid, one of the current participants in the MLA Donor Company (MDC)-supported Livestock Consulting Internship.

Managed by Meridian Agriculture, the Livestock Consulting Internship is a partnership between MDC and consulting firms to provide interns with industry experience, skills and knowledge to accelerate their livestock consulting careers.

The program provides personal development support, practical skills and access to industry networks, and the interns undertake a Graduate Certificate in Agricultural Consulting through the University of New England.

Over the two years, the interns also identify, develop and implement a major industry research project, giving them a real-world understanding of the delivery of research and development.

Agricultural consultant Ed Riggall of AgPro Management has a growing

business and was keen to invest in someone in the early stages of their career. The investment from MDC gives Ed the flexibility to encourage Georgia, his intern, to attend a wide range of learning opportunities. These may be part of the program, or more informal opportunities such as field days and industry events.

Here WA-based Georgia (pictured) explains to *Feedback* her career aspirations and what she's already learning through the internship.

Tell us about your background:

I come from a mixed farm in south-west WA and have always been in the agricultural industry. I completed an Agricultural Science degree at the University of Western Australia, with an honours year investigating the impact of media coverage of the 2011 live export ban on WA livestock producers.

After a stint with the Royal Agricultural Society working in education and 'agvocacy', I was keen for a more hands-on role working with producers.

What benefits have you experienced through the program?

With this support, there's less pressure on me to be 'commercially viable' while I upskill, and this gives more leeway for personal and professional development. This is an opportunity that's unique and invaluable.

I'm enjoying the UNE course. We've selected units that align with what I'm doing at work to create a nice synergy. Most recently this was a unit on meat science, which involved taking carcass measurements to see how different finishing methods affected meat quality and the price producers received.

What sort of projects are you working on at the moment?


Together with Ed, I'm working on producer-driven feedbase projects investigating pasture manipulation (spraying timing), grazing cereal crops and the role of chaff carts as a feed gap resource (an MLA-funded Producer Demonstration Site). Our team is also involved with a grower group, Lakes Farming Information and Technology, looking at alternative legume pastures and crops for heavy soils.


A highlight has been learning about benchmarking and understanding the often misunderstood drivers of profit and productivity. I feel so privileged that clients are willing to share their data with me – it's been by far the greatest and most valuable learning curve of the internship.

And in the future?

I'm keen to see projects on increasing efficiency, particularly from the feedbase, and for new projects to build on what has been learnt previously to avoid reinventing the wheel.

Research needs to include or build on what we have learnt from previous projects, which may have been carried out elsewhere – there needs to be greater sharing and collaboration of the data, and increased producer involvement, not just consultation. ■

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 mla.com.au/rural-professionals

Doing business better

Agri-Business Development Institute (ABDI) director Gordon Stone hates it when he hears people refer to themselves as ‘just a cattle producer’ or ‘just a farmer’.

“Many run multi-million dollar businesses and in any other industry would regard themselves as the CEO or managing director,” he said.

This perspective is a cornerstone of ABDI and, since 2011, the institute has worked with more than 160 farming businesses to meet the challenge of changing.

During the last 18 months, more than 50 businesses have completed an ABDI program supported by MLA Donor Company (MDC) to specifically improve the skills of producers, advisors and others in the beef value chain.

“Many people are confident in their production skills, but are looking for help to manage the business and people side of things,” Gordon (pictured) said.

“They feel they could be doing more to capitalise on opportunities in today’s marketplace but don’t know where to start, or who to go to for support.”

Some of the changes participants have made as a result of the programs include:

- taking a more customer-oriented approach in a commodity marketplace to position themselves differently to other suppliers

- identifying niche market opportunities
- positioning a multi-generational business to meet the expectations of all family members
- taking their business to the next level by orderly, planned expansion.

The ABDI mantra is ‘to create high-performing, self-managing, saleable and profitable agri-businesses’.

While some producers might balk at the term ‘saleable’, Gordon said this doesn’t necessarily mean a business has to be sold.

“It is about creating a disciplined, healthy business that is attractive to investors,” he said.

“Investors may be banks, external financial investors, or the younger generation who want to invest ‘sweat equity’ or financial capital into their family business.”

All the programs centre around ‘12 Pillars of Business Best Practice’ to guide participants in defining their personal and business vision and implement steps to change factors such as managing finances and people, operating in a more corporate way, succession, value-adding, marketing and communication.

Gordon said it can be a confronting process.

“We encourage participants to take personal responsibility and step into the roles which reflect their skills and interests, such as CEO, financial manager, sales and marketing manager or human resources manager,” he said. ■

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LESSONS LEARNED

How to do business better

- > Be ready to work on your business, not in it.
- > Invest time to develop your business.
- > Create a vision. Ask yourself, what do I want out of life? What do I want my business to do for me? What am I really good at? What do I enjoy doing?
- > Involve everyone. Encourage all family members to be involved in business development, so everyone comes along on the journey.
- > Don’t rush change. It takes time to change the business.
- > Prepare to be challenged. Taking control of your destiny can be a confronting experience, but the business-mentoring programs provide a supportive environment with like-minded people.
- > Be open to new ideas.

2018 calendar:

ABDI 12-week Business Intensive Program (two-day workshop plus home learning and mentoring):

- Dalby: 30 April–1 May
- Emerald: 24–25 May
- Biloela: 7–8 June
- Wagga Wagga: 21–22 June

ABDI 12-month Agri-Business Management Program (three two-day workshops, mentoring and regular group catch-ups):

- Brisbane: 17–18 May
- Wagga Wagga: 20–21 September



Beating the **ticking clock**

Jeanne Seifert and her husband Ian Stark are travelling on the fast-track – it might sound ambitious, but it's based on the realities of their vision for their beef business.

"We're both aged in our 50s, so we don't have the luxury of time to develop our business," Jeanne said.

"Two years ago, we realised we had a vision of where we wanted to go but didn't know how to get there – we needed direction for the most effective and time-efficient way to progress our enterprise."

They signed up for a 12-month Agri-Business Development Institute (ABDI) program supported by MLA Donor Company. It built on the MLA's Business EDGE program they completed four years ago.

"Business EDGE was life-changing for us; it gave us access to advisors who provided clear, specific and relevant advice," Jeanne said.

"It emphasised to us that although we were debt-free, we ran a marginally profitable enterprise on marginal land. So, we took a leap of faith and expanded the business.

"We bought 2,500ha of backgrounding/fattening country at Jandowae and although we're now in debt, we're profitable and have economy of scale."

After this, Jeanne felt their enterprise was operationally under control but she wanted to know more about the business side.

"In response to increasing demand for our genetics and our vision to expand, we felt a business mentor could provide valuable guidance and tools to help us safely and confidently onto the right and, importantly, the quickest pathway to success," she said.

The ABDI program threw up some tough questions for Jeanne and Ian, but provided a framework to move their business forward.

"The program helped us identify what we were both good at. While I enjoy collecting and analysing data, Ian didn't

LESSONS LEARNED

- > Begin with a clear vision of the end-goal in mind.
- > If you keep doing what you've always been doing, you will keep getting the same result.
- > Seek advice to learn from others, and ensure that what you change takes you in the right direction.
- > You need to work on your business as much as in your business.
- > About 10% of your customers generate about 90% of your income.

feel he could afford to spend time out of the paddock," Jeanne said.

"He now feels that he could and should spend valuable time in the office managing his areas of responsibility."

Jeanne said another light-bulb moment of the business development program was formalising their vision.

"The ABDI program provided a framework to treat our enterprise like a business asset, and enabled a shift in our thinking towards a corporate governance and management structure which will support our expansion plans."

Jeanne is understandably passionate about Belmont Reds – she is the daughter of Dr George Seifert (the geneticist in charge of developing the breed in the 1960s), the largest breeder of registered BREEDPLAN-recorded Belmont Reds in Australia, and president of the Belmont Australia Association.

Her industry vision is to grow the commercial profile of the breed, while on a personal level she and



Jeanne and Ian with Seifert Belmont Red yearling bulls at Wonga.

Ian aim to maximise the potential of their enterprise.

"As owner-operators, our lifestyle is intertwined with our business but we don't want to be slaves to it," she said.

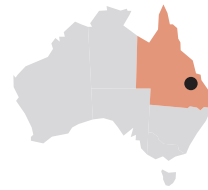
Jeanne and Ian are enhancing operational efficiency and managing risk by:

- developing job descriptions for their one full-time and two part-time employees to give clarity about responsibilities and identify skills gaps



SNAPSHOT:

Jeanne Seifert and Ian Stark,
'Seifert Belmont Reds', Crows Nest and Jandowae, Queensland



Area:
6,000ha

Enterprise:
Seedstock producers of Belmont Red genetics

Livestock:
1,100 breeders

Pasture:
Crows Nest: spear grass
Jandowae: improved pastures include Rhodes, buffel, bambatsi, Wynn cassia and seca stylos. Included is 280ha of leuceana and 320ha of cultivation.

Soil:
Crows Nest: decomposed granite
Jandowae: mix of brigalow, belah and box soils and some spotted gum ridges

Rainfall:
650mm

✉ Jeanne Seifert
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- instigating formal planning meetings to forecast operations and improve communication
- developing a better understanding of financial and business planning
- improving communication with all stakeholders including their bank and their customers
- looking for new ways to grow their business, such as satellite bull-breeding herds
- investing in expertise, including a business mentor, and soil and pasture advisors to improve land management.

"The strength of a year-long course is that it provides time to make permanent the changes to your own culture and mindset," Jeanne said.

"It's hard to measure the economic impact of this immediately, but we are confidently shaping our beef enterprise into a more profitable, resilient, sustainable and valuable asset." ■

Supporting the growing herd

Trials are underway to lift conception, calving and weaning rates in maiden heifers.

As its name suggests, WA's Esperance-based Association for Sheep Husbandry, Excellence, Evaluation and Production (ASHEEP) group was set up to investigate ways to lift sheep productivity. However, growing cattle numbers in the region – driven by improved returns and re-establishment of grazing on former blue gum plantations – has led to the group expanding its focus. The group has identified reproductive performance as a key business driver and has started an MLA-funded Producer Demonstration Site which will explore using fixed-time artificial insemination (FTAI) to boost productivity.

The challenge: ASHEEP cattle sub-committee member Ryan Willing (pictured) is finding optimising heifer conception rates a challenge due to issues of dystocia and managing joining weights and periods.

The producer: Ryan said his breeders achieve an average 90% pregnancy rate and a resulting 96% calving and 99% weaning rate from older pregnancy tested in calf (PTIC) cows. Maiden heifer rates are typically lower at 84% conception, 85% calving in those which conceive and 95% weaning from those which calve successfully.

“We’re addressing it by selecting sires with good estimated breeding values for reproductive traits, using tighter joining and getting nutrition right through pasture improvements,” Ryan said.

“At present, the heifers have a six-week joining period with bulls at a stocking rate of 5% for the first three weeks and then 2% for the second cycle. Cows are given nine weeks at 2–3%.”

Another option gaining momentum locally is to integrate FTAI into heifer joining.

It offers potential to further tighten joining and calving periods, allowing heifers an earlier return to oestrus and improving the odds of conceiving at second mating.

The research: Ryan is hosting one of the 20 PDS trial sites, comparing conception, calving and weaning rates and second year conception rates between maiden heifers randomly selected to mate with bulls, or to undergo one round of FTAI. He has just over 200 heifers in the MLA PDS program, half of which will be joined for seven weeks and the remainder will be artificially inseminated on the first day of the mating program (and will join their siblings 10 days later).

“We hope to see a tighter calving pattern from the FTAI heifers, two weeks earlier than what is typical for the district, and then having a bit longer to gain extra weight and cycle again earlier,” Ryan said.

“It is hoped it will improve the second mating conception rate by 5%.”

Dr Enoch Bergman of Swans Veterinary Service in Esperance – a fellow ASHEEP cattle sub-committee member – is helping coordinate the PDS trials and said about 10% of Esperance cattle producers were already successfully using FTAI for heifers.

Enoch said by synchronising heifers to undergo AI on the first day of the mating season, there was opportunity to increase early season calf deliveries and provide the PDS heifers with two additional opportunities to conceive within a tight seven-week joining. Other potential benefits could include:

- reduction in dystocia in maiden heifers by 40–75% (based on anecdotal evidence from local producers already using FTAI)
- reduction in calf and heifer loss by being able to access semen from bulls in top 5% of breed for calving ease/birth weight
- a drop in ‘empty heifers’ from 15 to 10% and a further reduction in ‘empties’ following the subsequent joining. ■

SNAPSHOT:

Ryan Willing,
130km east of
Esperance




Enterprise:
A self-replacing Angus herd


Livestock:
600 breeders

Pasture:
A kikuyu base with perennial ryegrass and annual clovers

Soil:
Sandy loam

Rainfall:
525mm

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Producer Demonstration
Site funding at
mla.com.au/pds



SUPPLY CHAIN

DELIVERING VALUE

CALCULATING THE TRUE VALUE OF CUTS

Processors, retailers and producers can now calculate returns on almost 350 different commercial lamb cuts.

The Lamb Carcass Value Calculator, developed by the Sheep Cooperative Research Centre (CRC) and MLA, allows users to input their carcass data and expenses, then calculate potential profits from different cut end-point specifications.

The calculator's developer, industry consultant Chris Smith, said the new version incorporates data collected to calibrate lamb dual-energy X-ray absorptiometry (DEXA) technology.

"We consulted with processors and supermarkets to work out which cuts to target and that helped us decide how to break up the carcass and which portions we needed to weigh," Chris said.

"The result is over 300 different commercial cuts, versus about 34 in the original version."

Chris has also worked with Western Australian consultant and butcher Rafael Ramirez to create a butcher edition of the calculator.

MLA Program Manager Sheep R&D and Objective Measurement Richard Apps said the calculator was originally designed to be used by processors and retailers, but is also useful for producers marketing their own branded products.

"At current prices, we could see a \$35–\$40 difference in retail value between a 2-score and a 4-score 23kg carcass," Richard said.

"Being able to calculate the different profit potentials of those carcasses, based on different cut options, is a valuable tool."

The calculator's update was funded under the Sheep CRC's 'Quality based sheep meat value chains' program.

A similar calculator is planned for beef carcasses and will use previous boning data, plus trial data to be gathered during the calibration of the beef DEXA unit at Tey's Rockhampton plant this year. ■

✉ The Lamb Carcass Value Calculator can be accessed by contacting:

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BUILDING CAPABILITY 

TOP GONG FOR AUSSIE MEAT JUDGES

Australia's Intercollegiate Meat Judging (ICMJ) team broke a 17-year drought earlier this year when they won a United States meat judging competition for the first time since 2001. The team followed up its success by winning a second US competition a week later.

The competitions were part of a month-long annual tour of the US industry, sponsored by MLA and the Australian Meat Processor Corporation. ICMJ builds industry leadership capacity by exposing students to US production systems and supply chains.

The team of five students (selected from the Australian competition) comprised Emily Webb Ware (University of Melbourne), Lachlan Woods (Charles Sturt University), Jake Bourlet (Charles Sturt University), Bridie Luers (Murdoch University) and Harriet Moss (Murdoch University). The team was coached by Tim Ryan (MLA's Market

Analyst), Nick van den Berg (project manager and producer) and Sarah Stewart (meat scientist).

In addition to champion honours at the first competition, the Southwest Invitational hosted by Texas Tech University, the team won beef judging and grading, overall questions and was reserve champion for pork judging.


In the individual categories, Emily Webb Ware was overall beef champion and scored highest-placed individual, while Lachlan Woods took out champion in pork judging.


At the second competition, the National Western held in Denver, the team once again claimed victory as the champion team. Along with top honours, the team also returned home with trophies for highest team in placings, questions, pork judging and lamb judging.

The team visited a broad cross-section of some of the biggest players in the US

meat industry, including the JBS, Tyson and Cargill beef-processing facilities, 44 Farms and Gardiner Angus studs, Five Rivers Feedlot, and the Smithfield Crete pork and Mountain State Rosen lamb plants. They also visited numerous universities, including Texas Tech, Texas A&M and Kansas State, and discussed industry issues and the latest research with leading meat scientists at the US Meat Animal Research Center and animal welfare specialist Professor Temple Grandin.

The 2018 Australian ICMJ workshop and contest will be held at Charles Sturt University, Wagga Wagga, NSW, on 3–8 July. In addition to the competition, the 2018 program will include industry guest speakers, interactive workshops, hands-on training and a careers expo. ■

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Carcase competitions helping careers

Before starting her Bachelor of Science and Bachelor of Veterinary Medicine and Surgery degrees at Murdoch University in Perth, Bridie Luers (pictured) had never heard of meat judging. Now she's a champion at it and it's taken her to locations near and far.

Here, the farm girl from Kellerberrin in the WA wheatbelt shares her love of assessing carcasses and explains how it could set her career direction.

Tell us about yourself:

I've been involved with my family's enterprises (a sheep and wheat farm and a stock and station agency) since I was a kid, and they definitely helped shape my interest in livestock production, especially sheep. Since beginning my veterinary studies and attending pracs all over the state on farms and stations, I've developed a real passion for beef production, especially in the north. In November I'm due to graduate and I'm hanging out to move back to the country. Initially, I'm planning to work as a rural mixed-practice vet, then hopefully I can focus more on cattle, sheep and horses. I particularly enjoy bovine and equine reproduction medicine.

How did you get involved in meat judging?

Before starting university, I had never heard of meat judging and could have never imagined how many opportunities it could give me and how far it would take me.

Each year Murdoch takes a team of 10 students to the Australian Intercollegiate Meat Judging competition and I was lucky enough to be accepted into the 2017 team. We trained for the whole of semester one with night lectures to learn the theory, and early morning

sessions in the chillers to put our judging into practice. We then competed at Wagga Wagga, NSW in July, and the top 10 were selected for further training and development.

From there I was lucky enough to be selected for the 2018 Australian meat judging team.

What is it about meat judging that makes you love it?

The best part is the people. I've met some truly inspiring people, some really forward-thinking industry leaders, and made some really great mates.

The competitions are great fun and the principles of meat judging are important to know as they underpin our grading systems. What I love even more is that they provide a way to get a lot of like-minded people together to discuss industry issues, current research and future visions.

Share some of the highlights of the US trip:

- A visit to Kallion Farms, a Brahman seedstock operation in Texas: the breeding herd come from DNA-testing over 3,000 head of Brahman cattle. With the use of embryo transfer, they've strongly selected for fertility, docility and carcass quality. And they aren't kidding when



they say they focus on docility. Going out into the paddock and having a whole cow-calf herd run up to you for a pat proved that.

- 44 Farms, an Angus stud in Cameron, Texas: this operation has grown from 82 to 8,000 registered Angus cows in 15 years, with a further 3,500 recipient cows. The team at 44 Farms is all about providing the best service to their customers and maintaining excellent client relationships. They recently opened their own shopfront, 44 Farms Steak, and they had one of the most impressive on-farm sale barns I've seen.
- During our time in Fort Collins, Colorado, we were lucky enough to have breakfast with (animal welfare and handling specialist) Temple Grandin. It was really interesting learning about her research in production animal welfare and listening to what she believes are the core principles of livestock handling. Getting to meet one of the biggest influencers in the industry is something I will never forget.
- And, of course, winning both the Southwest Invitational and the National Western Intercollegiate Meat Judging competitions.

Has ICMJ helped shape your plans for the future?

Yes, definitely. ICMJ has really opened my eyes up to the Australian livestock supply chain.

There are so many elements of production, processing and marketing which I never fully understood or didn't know about, and which are not covered in detail in my veterinary degree. To be a competent production animal veterinarian, the medicine is really only one part of it; I think it will be essential to have a good understanding of the supply chain from paddock to plate to be able to work effectively alongside producers.

How do you like your red meat served up?

Beef – I love a good medium-rare rib eye steak with baked sweet potato and steamed vegetables.

Lamb – can't go past a lamb roast with roasted vegies, or my mum's rosemary-crumbed lamb cutlets. ■

✉ Bridie Luers
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AUSTRALIA ON A JAPANESE PLATE

Koji Fukuda is a proud Japanese Aussie. In 2015 he was made an official Lambassador in an Australian Government and MLA initiative to boost Japanese interest in Australian lamb.

It's a title worn with pride by the chef who celebrates all things Australian food in his restaurant Terra Australis, which he opened in Tokyo in 2016.

Koji (pictured) was born in Osaka and, after graduating from high school, he began his culinary career at the Hilton Osaka. At 26, Koji headed to the Auckland Hilton as a founding team member of Luke Mangan's first restaurant, White. He then went on to become Executive Chef at Otto's in the Metropolis Hotel, Auckland.

In 2006, Koji returned to Japan as sous chef at Mangan's first Asian-based restaurant, Salt Tokyo, before spending time at Glass Brasserie in Sydney and at the opening of Salt Grill in Singapore.

Salt Tokyo called again in 2011 and he returned as Executive Chef, remaining until 2015 when he left to pursue his dream of opening his own restaurant.

Terra Australis opened on Australia Day 2016 to give Tokyo a taste of Australia from paddock-to-plate. Drawing on the finest local and Australian ingredients, Koji presents a contemporary fusion of styles that reflects Australia's multicultural style with elements of Asian, British and French cuisine.

In 2017 he opened two more restaurants in Ebisu and Marunouchi.

Koji was featured in the autumn edition of MLA's foodservice e-magazine *Rare Medium*. See story opposite. ■



Quick-fire five with Koji:

Best thing about Aussie lamb?

It stands out for its quality and flavour.

Favourite cut?

Rack of lamb, you can never go wrong.

Next big food trend in Japan?

Fermentation.

Best advice you've received?

It's never too late to be who you might have been.

Your chef idol?

Marco Pierre White – he is the man!

SERVING IT UP

RARE MEDIUM

Two new digital resources have been rolled out to provide chefs with accessible education and inspiration about Australian beef, lamb, goat and veal.

With two key platforms – a seasonal e-magazine and new website – Rare Medium seeks to close the knowledge gap about red meat production and encourage whole-carcase use.

“We want to ensure foodservice professionals have access to information through the supply chain – not just cuts and how to cook them, but how those cuts were derived and how the animal was raised and treated through each stage of production,” said Mary-Jane Morse, MLA’s Foodservice Manager.

The Rare Medium website provides whole-carcase education and includes complete beef and lamb carcase breakdown videos with Troy Wheeler from Meatsmith in Melbourne. It also provides clear and concise supply chain information, insights into production systems and dish inspiration from leading chefs.

The first stage of the website covers the basics of production and preparation from paddock-to-plate.

Stage two, scheduled for later in 2018, is a dedicated training module – designed with chefs and culinary educators to supplement and enhance chef knowledge.

The seasonal e-magazine draws on industry innovation and creativity to inspire foodservice through timely, engaging and informative content.

“Stepping out of the kitchen and up to the plate for the e-magazine debut issue was chef Dave Verheul from Embla and The Town Mouse in Melbourne,” Mary-Jane said.

The e-magazine’s first edition showcases innovation on farm, rethinks cut usage, explores how Australian lamb is used globally and celebrates chef creativity through videos, animations and high quality imagery. It includes a visit by Dave to the Gilmore family’s Tattykeel sheep stud in central NSW, where he roasts a whole lamb over an open fire.

The winter beef edition will be co-edited with chef Duncan Welgemoed from Africola in Adelaide and will be available from April. ■

Watch the videos, check out the resources and read the autumn lamb edition of the e-magazine at raremedium.com.au



FOOD INNOVATION BLAST-OFF

Innovators will be encouraged to explore new opportunities for red meat food products through a new partnership between MLA Donor Company (MDC) and food and agriculture accelerator Rocket Seeder.

The activities, offered free of charge to participants, include ‘design sprint’ workshops, a ‘design challenge’ and a 14-week start-up accelerator program, which also offers mentoring, co-working and additional support and services.

Workshops involve guided group activities such as idea generation, prototyping and pitching. They will focus on four key themes for the Australian red meat industry: personalised nutrition, snacking-on-the-go, healthy ageing and sustainable food consumption and packaging.

“Changing consumer trends and lifestyle choices represent new high-value growth opportunities for the Australian red meat industry. With global demand for protein increasing, and red meat being an important part of the Australian diet, the opportunity for novel, meat-based food products to capture a share of the market is strong,” said Michael Lee, MDC’s High Value Food Frontiers Program Manager.

Rocket Seeder Managing Director Jeffrey Bourne said the program was specifically designed to provide an integrated suite of activities to connect and drive innovation and entrepreneurship for the Australian red meat industry. ■

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🖥️ rocketseeder.com

RED MEAT READY FOR TAKE-OFF

With help from MLA, seven dishes featuring Australian beef and lamb will be served at 30,000 feet when American Airlines introduces a new menu on flights from Sydney and Los Angeles during the next year.

The dishes landed on the menu following a four-month process of creating, fine-tuning, costing and tasting before being 'approved to fly' by American Airlines.

Heading the menu overhaul has been Gate Gourmet's regional executive chef for the Asia Pacific region, Jeremy Steele (pictured opposite). Gate Gourmet is part of the global Gate Group, which services end-to-end airline catering from 200 facilities in 60 countries.

When Jeremy was first briefed by the airline to create new protein concepts, a first port of call was to MLA Corporate Chef Sam Burke and MLA Retail Training Facilitator Kelly Payne.

"MLA provided education, motivation and inspiration to me and my team to build beef and lamb recipes that I can then present confidently to my airline carrier customers," Jeremy said.

"MLA presented secondary cuts of red meat like lamb shoulder, beef brisket and rump cap.

"These cuts provide us with a winning combination in terms of price, flavour and texture and they are very on trend at the moment."

MLA also provided Jeremy and his team with an understanding of Meat Standards Australia (MSA).

"My executive chef Franck LeBon immediately saw the benefits of MSA and the way it guarantees eating quality to our passengers," Jeremy said.

"He was excited by the prospect of delving into the data to see the impact different cooking methods have on eating quality."

What's on the menu?

In November 2017, Jeremy and his team presented 16 new protein concepts to American Airlines. Seven beef and lamb dishes made the cut, which were:

- 16-hour Moroccan-spiced lamb shoulder (cooked *sous vide*) with gremolata and pearl couscous
- Wagyu burger with tomato relish and gherkins
- Wagyu beef short rib (cooked *sous vide*), smoked mashed potato and oyster mushrooms
- grilled beef fillet, miso hollandaise and duck fat roasted potatoes
- Philly-style steak sandwich with spicy tomato relish and sautéed onions
- slow-cooked lamb (cooked *sous vide*) with liquorice gravy
- beef stroganoff and parsley potatoes and baby carrots.

150 tonnes of Australian beef and lamb was used by Gate Gourmet in 2017.



Once heated in foil trays, first class and business class meals are plated by cabin crew according to a picture. This ensures all meals look restaurant quality.





Five-star dining

“Today’s consumer is more discerning than ever,” Jeremy said.

“We’re monitoring Instagram for food trends and I sample what the competition is dishing up by flying on different airlines.

“We’re also experimenting with new cooking methods like *sous vide* to ensure red meat maintains its texture and flavour and eats well at altitude.”

Now, more than ever, the consumer wants to know the story behind their meal.

“They don’t just want to know they’ll be dining on beef; they want to know it’s Jack’s Creek beef brisket,” Jeremy said.

“We can’t afford to stand still. That’s why MLA’s involvement has brought us real benefits so my team and I can deliver red meat dishes that are delicious, innovative and cost effective to our airline carriers and passengers.”

Partners in the kitchen

As MLA’s Corporate Chef, Sam Burke spends most of his time with foodservice companies, getting to know the demands they are facing. Sam’s work with Gate Gourmet was no exception.

“Their pressure points became my pressure points. It can take many months of trialling, tasting and then reworking dishes to ensure they hit the mark,” Sam said.

“One of the highlights in my job is working with companies like Gate Gourmet to deliver something that their customer is going to love.

“We need to keep beef and lamb top of mind with foodservice companies like Gate Gourmet or we risk having red meat substituted with chicken or pork.” ■

✉ Sam Burke
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From Grafton to Gate Gourmet

Jeremy was born and bred in Grafton, NSW and then apprenticed to a local restaurant. His career then spanned Fiji, the Cook Islands and the Middle East, covering nursing homes, pubs, fine dining establishments and restaurants for hotel groups including The Ritz Carlton Hotel Company.

His Australian heritage informs many of his menu choices.

“When I was asked to create a dessert for an American airline, I turned a tiramisu into a Tim Tam tiramisu,” he said.

As Gate Gourmet’s Regional Executive Chef, Jeremy oversees the daily production of 120,000 passenger meals while working with dozens of airline carriers who are requesting new offerings for their menus across first, business and economy classes.





The UK – our original trading partner

It's hard to believe, but nearly 60 years ago the UK market was a similar size to today's Korean market for Australian red meat. So what happened, and does the future look any brighter?

MLA's International Business Manager for Europe Josh Anderson said while our agricultural interests have remained aligned (the UK is still the largest foreign investor in Australian agricultural land), trade has changed significantly.

“When the UK joined the European Union in 1973, Australia's preferential access to the market was closed off and new EU import tariffs and quotas were applied,” he said.

These quantitative restrictions by the EU were to protect their heavily subsidised domestic sector from agricultural imports, which still remain in place today.

By the mid-1980s, the UK was taking less than 2% of Australia's rural exports.

However, the UK still remains a highly valuable export destination and is the single largest market for beef and sheepmeat exports in the EU, importing 34% of all beef and 71% of all Australian sheepmeat exports to the region in 2017. This was despite EU-imposed low-volume quotas, which have remained more or less unchanged since the 1970s.

A core part of MLA activities in the UK is promoting Australia's reputation as a trusted supplier of high quality red meat and highlighting the opportunities and shared benefit for collaboration between our red meat industries.

The other element of MLA's role in the UK is to understand market dynamics and potential implications to trade and future market access.

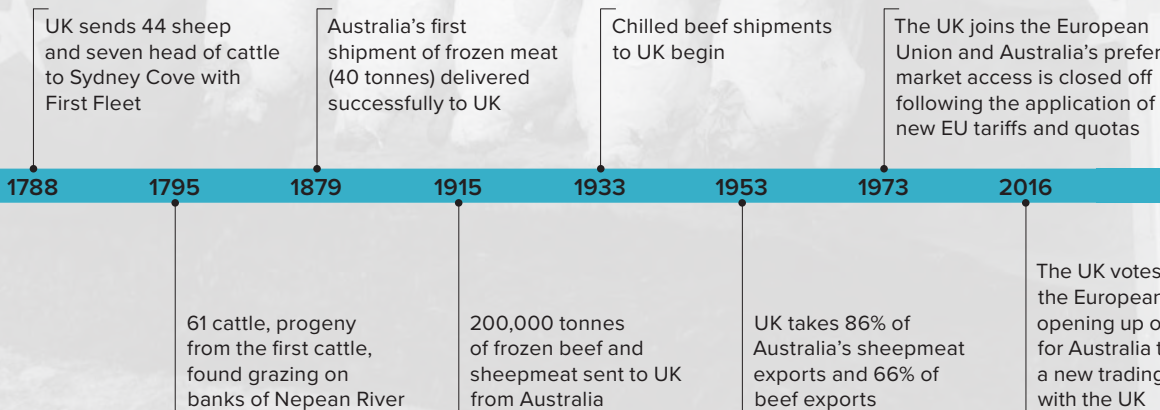
The UK's recent political decision to depart the EU will require them to develop a new international trading regime and adjust bilateral relations accordingly. (See story on Jason Strong and the market access taskforce on page 45).

Considerable potential exists for the Australian beef, sheepmeat and goatmeat sectors to expand market share in the UK. Today the UK is not self-sufficient in red meat, importing roughly one-third of its red meat requirements to feed its growing population of 65 million.

Currently the majority of product goes into the high quality foodservice sector as restaurants and high-end steak chains prefer Australian beef and sheepmeat for its consistent size and quality. ■

mla.com.au/marketsnapshots

HISTORY OF RED MEAT TRADE BETWEEN UK AND AUSTRALIA



HIGH COMMISSIONER FLIES THE FLAG



The Hon Alexander Downer AC (pictured) is Australia's outgoing UK High Commissioner and was previously Australia's longest serving Minister for Trade. Here he shares his view with *Feedback* on the future of trade between the two long-standing trade partners.

Australia and the UK share an exceptionally close relationship – with shared heritage and cultural influence and significant economic ties. In fact, the UK is the largest agricultural investor in Australia. British investors own more land down under than the entire UK landmass.


However, our agricultural sector faces heavy restrictions in its ability to service the discerning British consumer.

Our red meat producers deserve a trading partnership with our British friends, which encourages economic growth and does away with the restrictive tariffs and quotas of the past.

I have worked assiduously with the UK government and British farmers to remind them of the strong ties between our agricultural sectors and the mutual benefits from taking a more liberal approach to trade. In doing this, I have also worked closely with MLA and members of the industry to promote access to Australian red meat.

I am confident Brexit will open new opportunities for Australia's red meat and livestock sector in the future. ■

UNITED KINGDOM



UK's population:

- 65 million

Australian exports to the UK (2017)

- Beef – 6,041 tonnes; value \$79 million
- Sheepmeat – 10,927 tonnes; value \$87 million

UK consumption

- 262,666 tonnes
- 3.8kg of sheepmeat/head/year
- 67% of all imports are leg cuts, compared with the rest of the world whose orders comprise, on average, 15% leg cuts

Import tariffs

For beef:

- 7,150 tonnes of country specific High Quality Beef quota (20% in-quota tariff)
- Shared access to 45,000 tonne global grainfed beef quota (0% in-quota tariff)
- Access above these quotas via import duties is 12.8% plus up to €3/kg

For sheepmeat:

- 19,186 tonne country specific combined sheepmeat/goatmeat quota with 0% in-quota duty
- Access above this quota via import duties of 12.8% plus up to €3.1/kg

Industry takes up the task



Australia exports red meat to 100 different countries but the EU is one of our most important markets for high-value red meat products.

According to the chair of Australia's EU and UK Red Meat Market Access Taskforce, Jason Strong (pictured), Australia consistently provides the EU market with the high quality product that consumers demand.

Here Jason speaks to *Feedback* about the road ahead.

What is the EU and UK Red Meat Market Access Taskforce and what role does it play?

The Taskforce is responsible for guiding and driving improvements in Australian beef, sheepmeat and goatmeat market access into the EU and UK.

Established by industry through the Red Meat Advisory Council, it comprises commercial and peak council representatives from each sector and draws heavily on the collective commercial expertise of its members.

Our core role is to identify and monitor any issues arising from potential changes to market access conditions, to mitigate any risks and advocate for favourable trade reform.

What are the Taskforce's priorities in 2018?

It's shaping up to be a big year because of the potential changes in the way we access the EU. There are three clear and immediate priorities for our industry and the Taskforce to focus on – positioning Australia for positive outcomes in the EU free trade negotiations, defending the high quality grainfed beef quota, and ensuring industry has a strategy for the UK Brexit process. ■

Want to know more? Check out mla.com.au/market-snapshots for a more in-depth look at key markets.



A brand-building food lover

If you've ever fed your pet Pedigree, grabbed a jar of Dolmio sauce to make bolognese or munched on Maltesers at the movies, your purchasing decisions may have been influenced by Graeme Yardy.

Graeme (pictured) is MLA's new Domestic Market Manager and he's no stranger to Australia's diverse marketplace.

Most recently Graeme was Head of Marketing at Horticulture Innovation, the research and development corporation for fruit, vegetables and nuts. Prior to that he held senior sales and marketing roles with Mars in Australia and North America. Mars is behind some of the most recognised brands in the world, such as Pedigree and Dolmio.

Applying strategies and managing the evolution of marketing platforms to keep red meat on Australia's plate is Graeme's new challenge.



Q:

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

I have responsibility for the consumer brand building and business development activities in the Australian market for beef, lamb and goatmeat.

My role is to lead my team of eight to create insight-driven marketing programs to encourage consumers to continue making red meat a staple in their meal repertoire.

From the 'You Never Lamb Alone' or the 'Australian Beef: the Greatest' ad campaigns, to working with retailers to grow their red meat sales, to advising on menus for foodservice, the team is passionate about generating demand for Aussie red meat.

I was drawn to the industry for a number of reasons. In Australia, we produce the best fresh food in the world and many of us take it for granted – especially in the city where it's easy to be disconnected from the land, where our food comes from and the work and care that goes into producing it. I want to help people see the value and benefit in choosing well-raised Australian red meat.

It also helps that I love food. And to combine my career with a passion has been my goal. Whether it's the pure enjoyment of a barbecue with family (my weekend ritual) to discovering, to my joy, that lamb is the only protein my two-year-old son Cooper will eat, to working with professionals who care deeply about their product, food is a big part of my life.

Q:

What are the best parts of your job?

I've really enjoyed sitting down with producers and understanding the care that goes into raising their herds and flocks, to create the best product possible. But also hearing the challenges they face, and working out where I can add value for them. It's been a great learning experience so far.

The wonderful thing about this role is you get to see the end-to-end supply chain and I'm really passionate about understanding the consumer. Harnessing these insights will mean we can better answer the needs of consumers, resulting in continued strong demand.

Q:

How do you like to eat your red meat?

Outdoors. In our house we barbecue whenever we can – usually a great medium-rare scotch fillet or a slow-cooked lamb shoulder with Greek flavours like lemon, oregano and olive oil. My wife also makes the best beef burgers, which are a family favourite. ■

✉ Graeme Yardy
E: gyardy@mla.com.au

Feeding the family (today and tomorrow)

The bonus to cooking a large family meal is the leftovers the next day.

Here's how to turn one meal into two with recipe ideas from MLA's 'Autumn Family Favourites' campaign, rolled out by the Australian Butchers Guild through butchers and retailers during March and April.

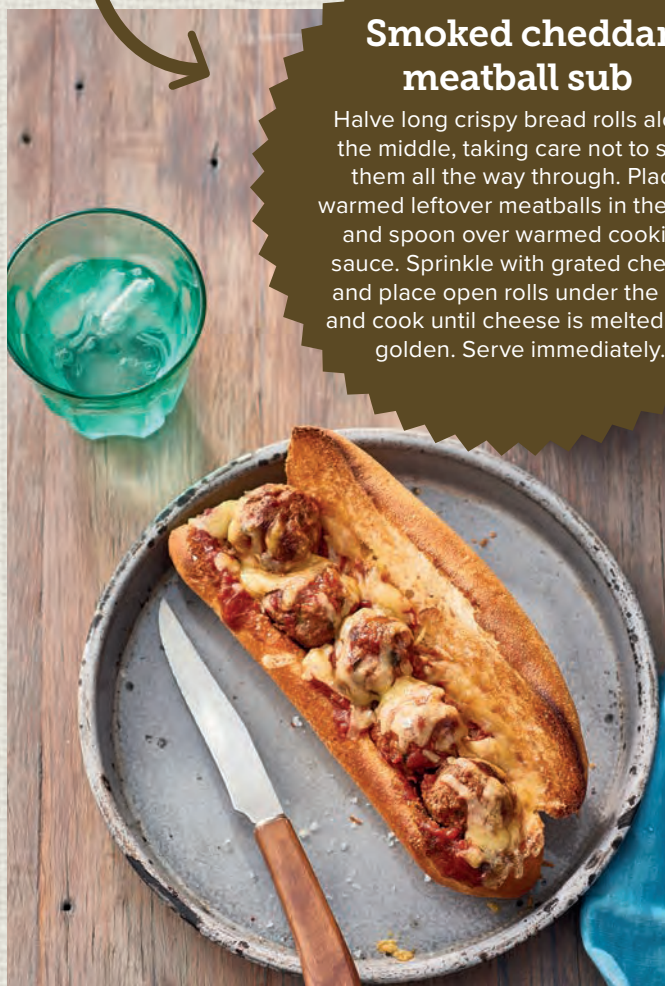
Barbecue-glazed smoked cheddar meatballs

SERVES 4-6

- 1kg lean beef mince
- ¾ cup coarsely grated smoked cheddar cheese
- 1 tsp garlic powder
- ½ cup roughly chopped flat-leaf parsley
- Salt and cracked black pepper
- ¼ cup smokey barbecue sauce
- 400g can crushed tomatoes
- ⅓ cup beef stock
- Steamed vegetables, to serve

1. Mix mince, cheese, garlic powder, parsley, salt and pepper together until fully combined. Roll into walnut-sized balls.
2. Heat a little oil in a large non-stick frying pan over medium heat. Cook meatballs in batches until browned all over. Return all to the pan.
3. Add combined barbecue sauce, crushed tomatoes and beef stock to the pan and stir to coat the meatballs. Simmer over medium heat, stirring regularly until sauce is reduced and syrupy and meatballs are cooked through. Serve with steamed vegetables.

And the next day...



Smoked cheddar meatball sub

Halve long crispy bread rolls along the middle, taking care not to split them all the way through. Place warmed leftover meatballs in the rolls and spoon over warmed cooking sauce. Sprinkle with grated cheese and place open rolls under the grill and cook until cheese is melted and golden. Serve immediately.

Join the action



MLA's fork to farm seminar

Monday 7 May at 2pm-5pm
James Lawrence Pavilion



MLA's Global Markets Forum

Wednesday 9 May
James Lawrence Pavilion



Fostering beef's prosperity: fork to farm journey

MLA trade site, P1 adjacent to
the Walter Pearce Pavilion



Celebrity chefs Curtis Stone, MLA's Sam Burke and Tarek Ibrahim

The Celebrity Chef Restaurant



Carcase value adding demos

Monday – Friday
The Butcher's Kitchen



The 360° Paddock to Plate immersion tour

Enquire at MLA's trade site



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