Beef Australia 2024 report
pages 4-8

FEEDBACK

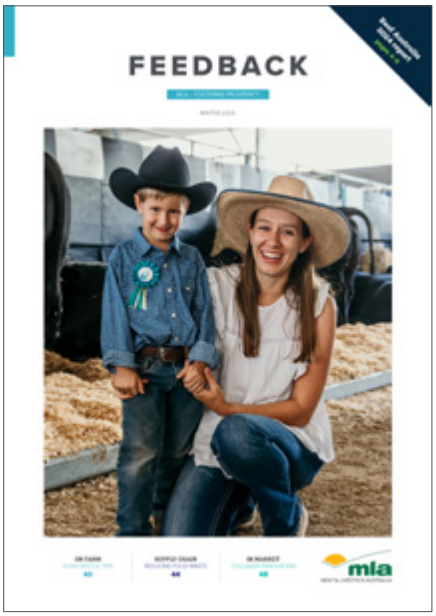
MLA – FOSTERING PROSPERITY

WINTER 2024

mla
MEAT & LIVESTOCK AUSTRALIA

FEEDBACK

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



Cover: Brahman producer Emily Heilig and her son Henry made the trip from Beerburrum, Queensland, to Rockhampton for Beef Australia 2024. Highlights for Henry, who celebrated his fifth birthday at the week-long event, included watching horseman Guy McLean perform, checking out the show cattle and watching the cattle judging. Beef Australia report starts page 4. Image: Lisa Alexander Photography.

Have your say!

We'd love to hear from you.

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A note from the MD

Welcome to the winter edition of *Feedback* magazine – the first edition since I started as MLA's Managing Director at the end of May.

This role is an honour and opportunity as it presents the chance to lead an organisation which is a major driving force behind our industry's marketing, research and innovation.

It's also an opportunity for me to return to MLA in a new capacity after previously having been the CEO at Herefords Australia. Prior to that, I worked with MLA in roles including Regional Manager for Europe and Russia, Manager of Meat Standards Australia (MSA) and General Manager for Research, Development and Adoption.

Bright outlook

There's plenty to be enthusiastic about for Australia's beef cattle, sheep and goat sectors, with significant opportunities globally and domestically.

There are headwinds around rising costs, inflation, seasonal variability, and various trade and market access issues – but the overall outlook is bright.

MLA has an opportunity to work with all of industry to accelerate growth and opportunities. A key component of this is developing the new five-year *Strategic Plan* which will run to 2030 and will align directly with the meat industry's strategic plan, *Red Meat 2030*.

MLA will soon begin consultation on the plan – this process will span several months and engage producers, peak industry councils, the supply chain, government, research partners, fellow Research and Development Corporations, and other key stakeholders.

It will build on our successes to date.

Programs like MSA enhance our industry's reputation and continue to deliver outcomes for the producers involved. This includes an estimated $259 million in farmgate returns for beef producers in 2022–23. Turn to page 31 to meet a producer who is being rewarded for their MSA cattle.

Our investment in genetics also allows our industry to continue to raise the bar, improving productivity, profitability and sustainability. Learn more about new genetic tools for sheep producers on page 28, and beef producers on page 14.

Driving on-farm profitability and productivity is crucial in our day-to-day work at MLA and technology plays a key role in this. Research and technology allow for innovation, but for innovation to be impactful, it needs to make its way into practical outcomes in the paddock.

This is why MLA's investments in adoption are crucial as they help bridge the connection between R&D and what's happening on-farm. Take a look at our new Transport Hub for an example of research in action on page 22.

Sustainability

We understand that for adoption to occur, producers need to be presented with a clear value proposition.

Sustainability – a fundamental priority for the red meat industry – needs to be delivered in terms of productivity, profitability and positive environmental and social outcomes. It must be practical, and it must drive real and tangible value for producers. Learn about a new tool for producers to demonstrate their environmental credentials on page 10.

Sustainability is bigger than just emissions and carbon. It covers almost everything we do in our businesses, and this is why industry's ongoing commitment to the Sheep Sustainability Framework (SSF) and Australian Beef Sustainability Framework (ABSF) is so important. These frameworks are industry-led, customer focused, and help to articulate industry's significant achievements in sustainability to plot a path for the future. The ABSF's *Annual Update* captures these achievements – read more about it in our Beef Australia 2024 report on page 4.

As well as the upcoming conversations with industry to develop the *Strategic Plan*, I'm looking forward to catching up with stakeholders at significant events coming up this year.

These include LambEx in Adelaide in August, MLA Updates in Perth in October, and the Annual General Meeting in November. I encourage producers to get along to these events to learn more about MLA, and have a chat with me. ■

Michael Crowley MLA Managing Director

Have a question for me? **mcrowley@mla.com.au**

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Adelaide, the city of lamb

With Beef Australia 2024 done and dusted (check out our report, starting page 4), the industry's sights are now set on South Australia, as Adelaide gears up to host LambEx24 in August.

MLA will be on the ground for the lamb extravaganza, from 7–9 August, so don't miss:

- new MLA Managing Director Michael Crowley sharing his vision for the industry
- our trade site showcasing the latest research, innovations, and MLA and Integrity Systems Company services
- lunchtime 'cuts to cuisine' sessions with chef Sam Burke and butcher Doug Piper.

Learn more at **mla.com.au/lambex24**

LambEx

A ewe-nique podcast

MLA has launched a new sheep genetics podcast which discusses how sheep producers can make best use of the genetic tools available.

Ewe-niquely Genetics, a podcast by Sheep Genetics, hosted by Chloe Bunter, Development Officer MERINOSELECT at MLA, features in-depth interviews with scientists, old and new faces from Sheep Genetics history, breeders and more.

The podcast aims to maintain and further increase the high level of knowledge and understanding of the world-leading Sheep Genetics analysis to ram breeders.

It will also articulate information about genetics in an easily consumable fashion, enhancing the understanding and knowledge of genetics to the wider agricultural industry.

Episodes will be released fortnightly on Spotify.

Visit **mla.com.au/ewe-niquely** to listen to the podcast.

Scan the QR code to read the latest Sheep Genetics *Annual Outcomes Report.*

Emissions down, weight gain up with world-first delivery of Bovaer®

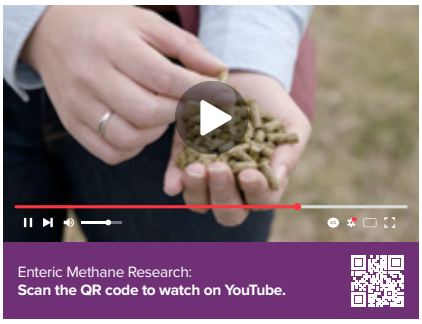
A world-first system to deliver Bovaer® to backgrounding cattle has shown how the feed additive can reduce methane emissions and increase daily weight gains.

The MLA-supported trial run by the University of Queensland used a pellet system to deliver Bovaer® to 150 cattle, supplied by the North Australian Pastoral Company.

They were split into three groups – the control group was grazing only, and the other two groups were grazing and also received either an energy pellet or an energy pellet containing Bovaer®. Their methane emissions were measured using a GreenFeed system.

The trial showed that in a typical backgrounding period, animals given Bovaer® pellets would reach their target weight 28 days faster than energy pellets alone and 54 days faster compared with grazing only. This would amount to a reduction of 340kg of CO_2 equivalent per head.

The economics stack up, with the cost of using the additive more than paid-for in the value of methane reductions (based on Australian carbon credit units) and productivity (weight gain) improvements.



Scan the QR code to learn more about the project: 'Reducing emissions of backgrounded cattle – combining Bovaer®10 with supplementation to reduce methane and increase productivity'.

Does your livestock advisor have the essentials?

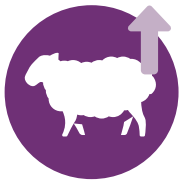
MLA and Pinion Advisory are running Livestock Advisor Essentials, a professional development program designed for early career professionals working in the livestock industry, or advisors wishing to build their skills and expand their industry knowledge and networks.

The program will be offered in southern Australia in 2024, with events in September and November.

For more information visit **mla.com.au/advisor-essentials** or email **livestockadvisoressentials@pinionadvisory.com**

Lambs break national records

Australia had the highest lamb slaughter on record last quarter at 6,935,700 head.



The data – from the latest livestock products data released by the Australian Bureau of Statistics (ABS) and analysed by MLA – shows the January–March quarter also broke production records for lamb at 167,263 tonnes, up 8% on last quarter and 48% last year.

MLA's Senior Market Information Analyst, Erin Lukey, said the higher levels of production and recorded carcase weights were reflective of conditions which occurred towards the end of last year.

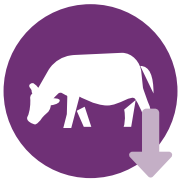
"Across the board we saw carcase weights for lamb lift 5% quarter-to-quarter to 24kg, which equates to the five-year average. This return is after the three-year lows recorded last quarter," Erin said.

"Lamb carcase weights lifted across all states according to the ABS. This is partly attributable to the end of season turnoff of older lambs, and improved weather conditions recorded in the latter months of 2023, particularly in NSW and Victoria."

National mutton slaughter was also at its highest since December 2019 at 2,784,000 head. However, carcase weights on average across the country fell 5% to 24.9kg, with the biggest drop felt in WA where weights eased 9% to 24.5kg.

The value of sheepmeat slaughtered increased 41% quarter-to-quarter to $1.257 billion, which was the largest since December 2021. This equates to $129/head per animal, which was the largest since the second quarter of 2023.

Cattle slaughter drops



For cattle, national slaughter fell 2% quarter-to-quarter to 1,811,300 head, but this was still up 17% on the first quarter of last year.

Beef production shifted down slightly by 1% but was still up 20% on last year at 570,681 tonnes, while carcase weights increased from 313kg to 315kg.

SA was the only state where slaughter and production increased, at 2% and 4% respectively.

Female slaughter rate (FSR) is now 47.05%, which is a slight lift on the previous quarter.

"This means that the 12-month rolling average FSR is now 47.7%, which is above the industry benchmark signalling a destock," Erin said.

"However, the industry is not officially in a destock as we have not had two consecutive quarters above 47%. If the FSR remains elevated into next quarter, we can reassess whether the herd is in liquidation."

Goat production up

The ABS data showed that in the three months to 31 March 2024, more goats were processed than ever before in Australia.

Goat slaughter for the quarter totalled 754,141, which is the first time the number of goats processed in a single quarter exceeded 750,000.

The new record was 5.4% higher than the previous record of 715,745 goats processed during Q1 of 2017. ■

- Markets information: **mla.com.au/prices-markets**
- Trend analysis: **mla.com.au/trends-analysis**

Future proofing our Indonesian export market

Demonstrating its commitment to securing the future of our largest live cattle export market, the Federal Government has agreed to fully fund the second phase of Australia's Indonesia Biosecurity Support Program.

The Department of Agriculture, Fisheries and Forestry will provide an initial $300,000 for Phase 2 of the program.

Managed by MLA in conjunction with Ausvet, the project began in May and is aimed at developing and piloting an Accreditation Framework for Indonesian feedlots.

Overall, it is envisaged Phase 2 will continue to support and refine cost-effective biosecurity in Indonesia with a focus on ensuring the sustainability of the current biosecurity efforts.

This work will bolster the biosecurity measures implemented during Phase 1, where Indonesian feedlots, alongside Ausvet, worked hard to build trust and demonstrate to the Indonesian Government that with good biosecurity protocols and procedures, livestock can be safely traded.

The program remains critical to protecting the future of Australia's existing live export market and enabling future opportunities, such as working with the Indonesian feedlot sector to expand opportunities for monitoring feedlot health, welfare and biosecurity through a joint quarantine taskforce.

Images by Lisa Alexander Photography

All roads lead to Rocky

May marked the event Australia's beef industry has been waiting three years for, with all roads leading to Rockhampton for Beef Australia 2024.

This year's event drew people from all facets of the industry, bringing together producers, chefs, processors, and everyone in between to celebrate a shared love of beef.

The 119,324 people who came through the gate were a captive audience to industry updates and innovations. MLA had no shortage of either, with Beef Australia making the perfect platform to keep producers and stakeholders informed about our research, tools and services.

Throughout the week, MLA hosted seminars with sustainability in mind, served up delicious beef to the masses and educated school groups who made their way through the gates.

MLA activities were influenced by the theme of sustainability from paddock to plate.

Highlights from MLA's packed program at Beef Australia included many new opportunities for the beef industry, including the release of a new cattle market indicator, innovations from MLA partnerships, and the launch of the new Environmental Credentials Platform for the Australian red meat industry.

Here's a taste of MLA's activities at Beef Australia:

Emissions plunge in latest beef sustainability scorecard

The area of Australian grazing land being managed for biodiversity has surpassed the entire farmed area of the European Union, with record rates of carbon sequestration and emissions reduction, according to the *2024 Annual Update* of the Australian Beef Sustainability Framework (ABSF).

Released at Beef Australia, the latest update reported almost 160 million hectares, or 55.07% of Australia's cattle-producing land, was managed for biodiversity outcomes in 2023.

The figure is up from the 43.7% reported in last year's *Annual Update*, with typical measures including weed and pest management, revegetation, soil remedy works, and fencing riparian areas.

Other notable achievements from the annual snapshot include:

- The number of cattle exported live increased by 13% while maintaining the record low 0.05% mortality rate.
- Renewable energy is being generated or produced by 58% of beef producers.
- Carbon sequestration through on-farm vegetation increased to 31.31 million tonnes CO_2e.

Pictured left to right at Beef Australia are MLA's Jacob Betros, Minister for Agriculture The Hon Murray Watt, Chair of Australian Beef Sustainability Steering Group Mark Davie, and CEO of Red Meat Advisory Council Alastair James.

« More than 5,000 students had the opportunity to learn about the beef industry from MLA's schools team.

Something for schools

As a supporting partner of Beef Australia 2024 School's Program, MLA's Australian Good Meat Education program played a vital role in building student knowledge about Australian sustainable beef production practices from paddock to plate.

Leading up to the event, more than 70 Queensland schools representing more than 4,000 students participated in a six-week in-classroom program where teachers utilised the Australian Good Meat Education school resources to bolster student knowledge ahead of their visit to Beef Australia 2024.

Across the event week, with the assistance of Red Meat Industry Ambassadors, MLA hosted 26 Australian Good Meat Education sessions engaging more than 720 primary and high school students with group learning and interactive games to build their red meat and livestock industry knowledge.

Additionally, MLA staff and Red Meat Industry Ambassadors participated in the Career Conversations event aimed to inspire high school students to consider a career in the Australian beef industry.

The making of meat (powder)

Australia's national science agency, CSIRO, is adding value to the beef sector, turning red meat into a highly nutritious powder to give an allergen-free protein boost to snacks and beverages, targeting a $3.8 billion health and wellness market opportunity.

Beef Australia attendees had the chance to taste test the innovative Just Meat protein powder. MLA is an investor and collaborator in the product's development.

The powder's nutritional and allergen-free profile sets it apart from other protein powders on the market so it can appeal to a wide audience in products ranging from protein balls and shakes to energy drinks.

The powder has the potential to grow Australia's $75.4 billion red meat industry, by capturing more value from a greater percentage of the carcase.

The protein powder supports food security by delivering meat's nutritional benefits to remote locations or in disaster relief by overcoming refrigeration and transportation hurdles.

CSIRO will work with commercial partners and investors to take the protein powder innovation to market.

« CSIRO's Dr Doug Hilton and Dr Aarti Tobin tasting Just Meat in a protein ball. Image: CSIRO.

» MSA R&D Strategy and Integrity Systems Manager Janine Lau receives a lifetime achievement award.

MLA employee recognised for 25 years

The Beef 2024 National Carcase Competition awards dinner honoured MLA employee Janine Lau with a lifetime achievement award.

The award recognised Janine's 25 years of contribution to the red meat industry through the world-leading Meat Standards Australia (MSA) grading program.

Janine and MSA now go hand in hand, having been involved since the program's inception.

During her 25-year stint with MSA, Janine has graded more than 80,000 beef carcases, for which she has become known as the industry gold standard.

Environmental Credentials Platform launched

Federal Minister for Agriculture The Hon Murray Watt helped launch MLA's new Environmental Credentials Platform for the Australian red meat industry, at MLA's Beef Australia Sundowner event.

The new platform provides a resource for red meat producers to compile their environmental sustainability data, engage in learning and share their credentials along the supply chain.

This project enables producers to demonstrate their sustainable on-farm practices to end users such as processors, retailers, banks or governments.

More than 50 beef producers and supply chain participants were involved in designing the platform.

The Environmental Credentials Platform is the latest development within MLA's environmental sustainability research and development (R&D) program.

» MLA's General Manager of Communications and Adoption Jane Weatherley and beef producer Melinee Leather were at the launch of the Environmental Credentials Platform. Read more on page 10.

New indicator on the block

Debuting at Beef Australia, the National Young Cattle Indicator, or NYCI, is expected to be used as the most accurate national analysis tool of the restocker market.

The indicator will cover yearling, vealer and weaner cattle over 200kg liveweight which are bought and sold as restocker animals, meaning that they will return to a farm to replace livestock, be grown out, or join the breeding herd.

The NYCI will cover cattle sold anywhere in Australia, unlike the Eastern Young Cattle Indicator (EYCI) which only covers saleyard markets on the east coast and the Western Young Cattle Indicator (WYCI), which covers cattle sold in the west.

MLA's Market Information Manager Stephen Bignell said the NYCI would provide a user-friendly interface for producers and other stakeholders.

"As processor demands have shifted to larger carcase weights, today most EYCI cattle are purchased by restockers or feeders," Stephen said.

"It was identified that industry was in need of a more accurate national restocker indicator, so we've developed the NYCI."

The publication of a restocker-specific indicator aggregating multiple channels will improve market information and deliver greater insights.

MLA's Market Information Manager Stephen Bignell presented information sessions for the new National Young Cattle Indicator (NYCI).

Images by Lisa Alexander Photography

Supply chain chews the fat on what a carbon neutral future holds

Industry experts from across the country converged at MLA's Beef Australia seminar to discuss what the future holds for sustainability in beef production, after a successful year hitting targets and more to overcome on the horizon.

In a sold-out event, eight speakers made up a panel with a wealth of knowledge and myriad of titles amongst them to explore the topic 'Our sustainable Australian beef industry – the achievements and opportunities from paddock to plate to be part of the climate solution'.

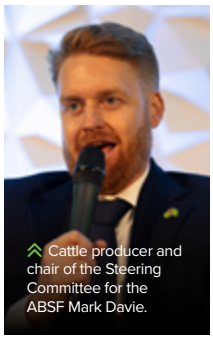
Over almost two hours, attendees got a taste of the challenges and opportunities ahead, on a range of topics including genetics and grazing practices, right throughout the supply chain.

Investing in sustainability

According to cattle producer and chair of the Steering Committee for the Australian Beef Sustainability Framework, Mark Davie, the return on investing in sustainability doesn't always add up, which impacts both motivation and the viability of implementing new processes.

"People want these extra measures and extra work to be undertaken, but they don't want to pay anything more," Mark said.

"How do we do this in a way that is as cost effective as possible for the industry, but also without taking shortcuts that drive poor outcomes?"



Cattle producer and chair of the Steering Committee for the ABSF Mark Davie.

From a perspective further along the supply chain, Teys Australia General Manager, Corporate Affairs, Michael Rogers, said meat processors are focused on reducing plant machinery emissions.

"We've been working to get the plant operating as efficiently and productively as possible, then investing in renewable energy projects to reduce reliance on traditional energy sources as one of the primary inputs to meat processing," Michael said.

BEEF AUSTRALIA The numbers:

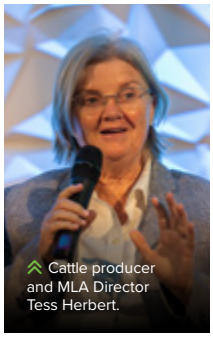
119,324 people came through the Beef Australia gates, setting a new **attendance record**

More than **600** international delegates attended from across 35 countries

Michael said the challenges meat processors face when it comes to building efficiency will be recognisable to many.

"If you take deforestation, animal welfare, workforce issues – they're issues for all of us in the supply chain."

Opportunities on the horizon


Cattle producer and MLA Director Tess Herbert.

With emissions already halved across the industry since 2005, and following strong progress in 2023, stakeholders will now have to dig even deeper to reach carbon neutral status by 2030 (CN30).

Mark has been watching the journey closely from his role with the Australian Beef Sustainability Framework.

"Good intentions and improving the supply chain, whether through industry level commitments like CN30 or even at a producer level, aligns with growing a sustainable business," Mark said.

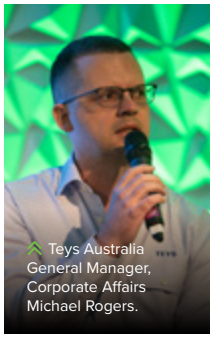
"An example is welfare standards within the live exporting industry.

"Reducing mortality rates and weight loss on the ship and other big things are all good production systems and go hand-in-hand with being more efficient or productive."

When it comes to on-farm efforts to implement increasingly sustainable practices, cattle producer and MLA Director Tess Herbert said identifying what those changes should be is often the hardest part.

"At the beginning, we didn't know where to start, but there are a lot of free tools online that help," Tess said.

"It's important to tailor actions to your own business, including your assets, location, production type and systems. If you can, engage a consultant."


Teys Australia General Manager, Corporate Affairs Michael Rogers.

Years into a journey of consciously reducing emissions, Tess and her family are still seeking out opportunities to further their efforts.

"I'm really interested in what else we can use for methane inhibition, particularly in our feedlot cattle because if it's a feed additive, for example, it's really easy for us to manage that process to include it in our feed."

Alongside the practical, Michael said communication is also a crucial step.

"People are very focused on the challenge, but sometimes we don't get to articulate the entire story about how good beef production in Australia is, and the range of really good work that's underway," Michael said.

"Having a balanced conversation which really drives actual sustainability outcomes is a huge opportunity for all of us."

Other seminar speakers included North Australian Pastoral Company CEO Allan Cooney, MLA Communications and Adoption General Manager Jane Weatherley, MLA CN30 Project Manager Julia Waite, Angus Australia President Erica Halliday, and MLA Adoption and Commercial Services Group Manager Sarah Strachan.

TOOLBOX

- Carbon calculator: **carbon-calculator.mla.com.au**
- MLA sustainability hub: **mla.com.au/sustainability-hub**
- Australian Beef Sustainability Framework: **sustainablebeef.com.au**
- Carbon Neutral by 2030: **mla.com.au/cn30**

What sustainability means to us

MLA hosted two seminars at Beef Australia, bringing together big brands, organisations and names from across the beef industry to discuss different aspects of sustainability.

Here's what some of the attendees thought after the seminar, 'Our sustainable Australian beef industry – the achievements and opportunities from paddock to plate to be part of the climate solution'.

"After this seminar, I think I really need to give the carbon calculator a try within my business. It's something I've been thinking about for a while, and they say it's the best place to start."

David Cobon – beef producer
Darling Downs, Queensland

"We've recently had our soil tested for the first time, so measuring is the first stage we're at. We know what inputs are going into our feedlot and we can measure that, which is something they spoke about at the seminar today. What we've seen is that improving our footprint is going to have to be something we'll do ourselves and it will eat into our margins."

Paul and Luke Reilly – feedlot owners
Boyup Brook, Western Australia

35.5t
of beef was served

732 carcases were entered into the AMPC National Beef Carcase Competition

79,000
people tuned in live across the world on BEEF TV

Around the grounds

Images by Lisa Alexander Photography

MLA's General Manager – International Markets Andrew Cox facilitated 'The customer: What on earth do they want now, and will they pay a premium for it?' seminar with panellists (from left to right) Peter Greenham, Managing Director – H.W. Greenham & Sons; Julie McDonald, Chief Financial Officer – MDH Pty Ltd; Karen Penfold, Owner – Four Daughters; Elissa Garling, Group General Manager Retail Sales – Hewitt Foods; Andy Hearnden, Professional chef and author; and Andrew McDonald, Director Sales and Marketing – NH Foods Australia.

The MLA-sponsored Sustainability Lounge allowed visitors to unwind and recharge, providing a welcoming retreat amidst a busy week.

It was standing room only at MLA's famed Sundowner event, where MLA's Corporate Chef Sam Burke and team showcased the best of beef over beers.

MLA's Schools and Education Manager Susan Howe, Kimberley Pilbara Cattleman's Association's CEO Bron Christensen, and education consultant Katey Street helped to build local students' knowledge about the red meat and livestock industry.

Delicious salt and pepper beef brisket croquettes with lemon myrtle aioli, prepared by MLA's Corporate Chef Sam Burke and his team, were a huge hit at the Sundowner event in the MLA marquee.

MLA's Manager – Beef Sustainability Jacob Betros helped the Australian Beef Sustainability Framework (ABSF) Steering Group launch the ABSF's Annual Update.

MLA's Carbon Neutral 2030 (CN30) Project Manager Julia Waite presented an introduction to the new Environmental Credentials Platform on the Tech & Innovation Stage.

Producers were able to find out about LPA, NLIS and eNVDs, sign up for MLA membership and the new and improved myMLA at the MLA services hub.

ON FARM

RESEARCH IN ACTION

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Check out forage options to bridge feed gaps.

Credentials back sustainability action

Environmental stewardship is a goal for the Leather family.

One of the producers involved in the development of MLA's new Environmental Credentials Platform (see story page 5) is Melinee Leather, Central Queensland.

Melinee, her husband Robert, son Adam and his wife Chloe operate a beef breeding and backgrounding business across three properties, covering 17,500ha from Banana to the North Burnett region.

They run a Brahman-based herd, crossed with Limousin, Belmont and Angus. They've also invested in a fullblood Wagyu herd, as well as Angus cattle to extend into an F1 Wagyu program.

In addition to Teys Grassland and EU accreditation, the Leathers rely on the feeder market when the seasons aren't favourable.

Sustainable management is at the forefront of their business, to ensure their environment is well looked after, and that they are doing the best possible job in terms of land management and environmental impact.

Melinee recently finished a four-year position with the sustainability steering group for the Australian Beef Sustainability Framework, and the Leathers were among the first producers in the country to access NAB's Agri Green Loan.

"NAB knew our business was very interested in sustainability and in collecting data and making sure we can verify claims, so it was a natural progression for us to go down this pathway with them," Melinee said.

"The Environmental Credentials Platform is in line with our bank's reporting requirements for the Green Loan."

Environmental Credentials Platform

The ability to collect data with a view to tracking and verifying the sustainability work they are doing was an area Melinee was keen to explore further.

When MLA offered her the opportunity in 2023 to test a platform which measures sustainable production practices on-farm and provides environmental credentials for benchmarking and trading, she knew she wanted to be involved.

MLA's Environmental Credentials Platform incorporates mechanisms to determine carbon balance and biodiversity, while delivering access to learning modules under five environmental themes:

- carbon balance
- tree cover
- ground cover
- drought resilience
- biodiversity stewardship.

"We initiated the development of the Environmental Credentials Platform in response to demands for the supply chain to demonstrate environmental sustainability," MLA Environmental Markets Project Manager Jenny Lim said.

"We've had a lot of conversations with end users – banks, even retailers and government agencies – who want to measure their Scope 3 emissions. To help them achieve this, they need producers to demonstrate they are operating sustainably and using best practice on farm."

The project – funded by the National Landcare Program's Smart Farming Partnerships initiative – was developed by a consortium led by MLA and including World Wide Fund for Nature Australia and the University of Queensland.

Biodiversity stewardship is one of the themes covered by the credentials.

SNAPSHOT

THE LEATHER FAMILY –
Melinee, Robert, Adam and Chloe. 'Barfield', Banana, 'Hazeldean' and 'Four Mile', North Burnett, Queensland

AREA
17,500ha total

ENTERPRISE
4,500 Brahman, 400 Wagyu

PASTURES
Native grasses, buffel and improved pastures

SOILS
Sandy loam over light clay and granite

RAINFALL
655–935mm

The Leathers operate a beef breeding and backgrounding business in Central Queensland in the North Burnett.

The Leathers were among more than 50 grassfed beef producers and supply chain participants involved in the platform's design, to ensure it met the requirements of the supply chain.

User-friendly goal

Jenny said although producers have the option to use audits or on-farm assessments to demonstrate their credentials, these can be very expensive.

"Audits and assessments are not always accessible if a producer is just starting out on their sustainability journey," she said.

"We wanted this project to provide a user-friendly, free or low-cost way for producers to demonstrate their on-farm practices to an end user.

"It was a collaborative effort by industry to create a platform which meets their needs."

Benefits to producers

Melinee said the platform provided value to their business.

"We're very interested in any way we can track our land management and environmental impact, obtain resources to improve this, and be able to verify our sustainability claims. This platform will do all of those things," she said.

"It has a lot of resources to upskill ourselves and our staff."

She also appreciates its user-friendly interface and compatibility with other programs.

"I like the fact the platform is within the myMLA dashboard, so everything is tidy. It's handy when you can start integrating some of the data you're collecting with other platforms. The Learning Library and the Academy can help you think about what you're doing and generate ideas for you."

Melinee said the platform's ability to share on-farm initiatives with others – in terms of verifying a producer's claims – is one of its strengths.

"Being able to demonstrate your credentials to the supply chain is a business opportunity," she said.

"We can't just say we're doing these things. We need have some sort of platform to prove the claims we make around environmental management and other sustainability measures."

Recording data

The platform has given the Leathers the opportunity to record existing sustainability initiatives which they already have underway, as well as guiding future improvements.

"You might be doing things to reduce your methane emissions, or improve your soil carbon, or have plans in place to be deforestation-free.

"Here at 'Barfield', we're linking remnant vegetation with tree planting corridors to improve biodiversity.

"The platform helps you to understand what differences these things might make to your property and your business. What will the benefits of additional tree cover and biodiversity in your pricing system mean? It opens your mind to techniques and management practices; it's a holistic thing.

"If you improve your biodiversity, you'll improve soil carbon levels and kilos of dry matter produced."

On the front foot

"We wanted a platform which is ready for producers to use if and when they see an opportunity from demonstrating their performance," Jenny said.

"The producers who are already using this platform are quite forward thinking, and they're taking advantage of things which are coming to market now and are at the forefront of that."

Melinee said this type of reporting was essential to demonstrate red meat producers are operating sustainably.

"I think producers need to understand the people who we're either getting money from or supplying product to – banks, processors etc – have to be able to demonstrate these credentials to meet their own requirements. Our Scope 1 emissions are Scope 3 emissions down the other end of the supply chain. Whoever we're doing business with will need this type of reporting." ■

How it works

The Environmental Credentials Platform was developed in response to the growing need of the supply chain to reduce Scope 3 emissions or report environmental credentials.

The main aims for the platform are to create an accessible (low to no cost) and user-friendly way for producers to show how their on-farm practices result in maintaining or improving their environmental sustainability.

To access the Environmental Credentials Platform, users sign on through myMLA. The platform is linked to their property identification code and their Livestock Production Assurance account.

The platform utilises the MLA Carbon Calculator and the Cibo Labs remote sensing platform and includes self-guided learning modules and self-assessment checklists.

A three-tiered system was developed so producers could more clearly demonstrate where they were in their sustainability journey and could achieve a credential tier based on historical adoption of on-farm sustainability practices.

Environmental Credentials

TOOLBOX

- Environmental Credentials Platform (scan the QR code):
- Quick start carbon calculator: **quick-start-carbon-calculator.mla.com.au**
- Carbon in action eLearning: **elearning.mla.com.au/courses/carbon-in-action**
- Carbon calculator: **carbon-calculator.mla.com.au**
- MLA's sustainability eLearning modules (scan the QR code):

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Efficiency and accuracy ride on back of sheep eID

« Alistair Michael tags all of Leahcim's sheep at marking.

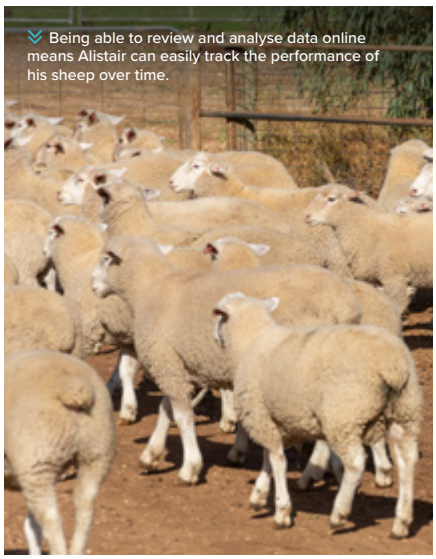
Individual electronic identification (eID) tags for sheep and goats are set to become mandatory across Australia by the start of 2025.

Here, SA sheep producer Alistair Michael of 'Leahcim' explains how individual tagging has improved efficiencies in his family's business and helped them extract more value from the data they collect.

The Michael family started farming around SA's Barunga Range area in the late 1800s, but it took another century before the enterprise diversified its holdings and began to focus more on sheep and wool production rather than cropping.

The enterprise started performance recording Merinos more than 35 years ago and became early adopters of sheep eID in 2011. Today, Leahcim has one of the most measured sheep flocks in the world – something that's increasingly essential to the success of their genetics business.

"We came on board before sheep tags were available, so we actually started out using cattle tags during that first year," Alistair said. "We were just so keen to start streamlining the recording of our production traits and speed up our decision making."


» Being able to review and analyse data online means Alistair can easily track the performance of his sheep over time.

Real-time breeding values

These days, all Leahcim sheep begin their eID journey when a Shearwell ear tag is placed during lamb marking. A DNA sample is taken at the same time and linked to the lamb's eID, together with a record of their parentage and genomic information.

Using the data from that DNA sample, Alistair can map the sheep's genes to maximise his breeding and selection decisions.

"When we're in the yards we simply scan the e-tag and the animal's breeding values come up in real time. That's helping us make breeding decisions much more efficiently than when we had to trawl through paper records."

Efficient, accurate record-keeping

Alistair said that when compared to the old paper-based system, the eID had delivered impressive improvements in both time saved and errors eliminated.

"The eID's real-time recording of data is probably saving us two months of labour every year," he said. "A lot of that time would have been punching in numbers at 11 or 12 o'clock at night when you're most likely to make a mistake."

With the business running 8,000–10,000 sheep, Alistair estimates they collect about 30,000 to 40,000 individual data points each year.

"We're dealing with a huge volume of data and the eIDs have also helped us eliminate the 10–15% of recording errors we were getting when we had to do it all by hand."

Improved use of resources

After joining, the ewes are pregnancy tested and grouped according to foetal age.

SNAPSHOT

ALISTAIR MICHAEL –
Partner, Leahcim Farming – Snowtown, Meningie and Willalooka, SA

AREA
4,000ha total

ENTERPRISE
Stud, sheepmeat and wool business with 8,000–10,000 White Suffolk and Poll Merino

PASTURES
Medic and grass base with lucerne, kikuya, and phalaris

SOILS
Variable

RAINFALL
400–500mm

"We run them through the auto drafter and eID lets us separate them into groups based on two-week lambing windows," Alistair said.

"That means we can keep the ewes on the paddock right up to the last minute and be certain they'll then lamb within two weeks, instead of potentially having to race around the paddock with trail feed at the point of lambing."

This individual management is helping the business manage its available feed more efficiently, as well as helping preserve the paddocks and reduce erosion because the ewes won't be on paddock any longer than necessary.

Meaningful insight and analysis

Alistair said the eIDs haven't just made it easier to capture the data, they've also made it easier to analyse performance over the long term and measure improvements in breeding values.

"Because we've got the electronic records, it takes me five minutes to go back and look at things like post-weaning weights, for example," he said. "I can see that since we started tracking our performance 35 years ago, our post-weaning weights have lifted by 20kg, which is huge.

"I can also see we've lifted our eye muscle depth from 26mm to 32mm – that's increased the yield on those carcases by 6–8%.

"The data is providing enormously valuable insights into our performance over time and the success of our genetics program," Alistair said. "However, if I had to muck about sorting through paper files to get it, I'm not sure I'd actually have the time or inclination to do it."

Building a premium wool brand

This year, the Michaels have diversified further and created Leahcim Wool, a new business selling and promoting their wool products using their best fleeces.

Using hip wool testing, each sheep's micron, CVH and comfort factor are recorded against their eID and downloaded into a file.

"We use this data to identify the sheep with best testing wools for our Leahcim Wool business and use the eID to separate them out with the auto drafter. It's how we ensure we're marketing our wool according to its quality and that we're making a premium on that fine end."

Supporting a quality-based payment system

In May, Leahcim ran a first-of-its-kind abattoir trial to establish the match between lamb genomics and eating quality.

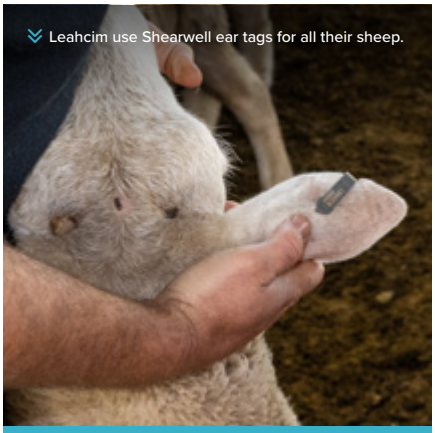
The trial was designed to look at shear force, intramuscular fat and lean meat yield on about 100 White Suffolk and 300 Merino yearling lambs with full genetic profiles recorded against their eIDs.

"Leahcim was heavily involved in the Sheep CRC Information Nucleus Flock when it was in use and, in recent years, we've invested heavily in sheep genomic 50k sequencing," Alistair said. "We are looking to validate that investment over time in hard to measure eating quality traits." ■

Keep an eye out in MLA's e-newsletter, *The Weekly*, for updates from this trial when results are available. Subscribe to *The Weekly* and other MLA e-newsletters at **mla.com.au/subscribe**

"The eID's real-time recording of data is probably saving us two months of labour every year."

leahcim.com.au Alistair Michael **leahcimgenetics@bigpond.com**
integritysystems.com.au Elizabeth Bradley **ebradley@integritysystems.com.au**



Leahcim use Shearwell ear tags for all their sheep.

Mandatory sheep eID

JANUARY 01

Mandatory sheep eID will come into force nationally on 1 January 2025. Specific rules apply to each state/territory.

Scan the QR code to learn more about sheep and goat eIDs:

Visit the Department of Agriculture, Fisheries and Forestry for specific details on requirements and timing across jurisdictions – scan the QR code.

Visit Integrity Systems Company for guidance on animal identification tags and traceability: **integritysystems.com.au/eID**

Are you ready to make the switch?

1. Familiarise yourself with the eID rules in your state or territory.
2. Participate in National Livestock Identification System (NLIS) or eID workshops or online training offered by your state or territory departments.
3. Research the available electronic tags and choose the one which best suits your needs.

Genomics enhance docility EBV

Herd temperament is becoming an increasingly important factor in beef businesses, for staff safety, animal welfare and livestock performance – particularly in feedlots and in terms of eating quality.

Fortunately, docility is a heritable trait that can be improved genetically.

Seedstock and commercial Angus producers can now rely on more accuracy when selecting for docility. While an Estimated Breeding Value (EBV) for docility has been available for about 10 years, it has now been enhanced with genomics.

Dr Steve Miller is the Director of the Animal Genetics and Breeding Unit (AGBU), a joint venture between the NSW DPI and the University of New England. AGBU develops improvements in genetic evaluation systems including BREEDPLAN to increase the economic value to livestock industries and individual producers.

He said the genomic enhancement to the Docility EBV represents a huge shift for breeders, giving them more powerful information when they're selecting animals.

"If a sire has a lot of progeny measured for docility, you can turn on genomics, but it doesn't change his breeding value – and if he has enough progeny, it shouldn't change it at all," Steve said.

"However, these aren't typically the animals which people are selecting day to day.

"Typically, people are selecting young animals – for example, choosing replacement heifers or buying a young bull to bring home. They don't have any progeny yet, so genomics has a real role to play in increasing the accuracy of the breeding values for those young animals."

Setting breeding objectives

Christian Duff, General Manager Genetic Improvement at Angus Australia, said it's important for producers to set breeding objectives before identifying bulls to suit the goals of their operation.

"A breeding objective pinpoints where you want your herd to go in regard to performance in production," he said.

"You can benchmark your operation on a commercial level using some simple statistics.

"For example, calving difficulty in your herd and weaning percentages, all the way through to how your steers are performing in the feedlot or on a carcase level, if you can access this information.

"Then you can work out where your selection criteria may need to be for your next bull selection."

Christian recommends producers take the time to upskill themselves before making any purchases.

"You can do this through industry workshops such as MLA's BredWell FedWell, which has a genetic component to it," he said.

"Angus Australia also has the Angus Education Centre, with a lot of material on genetic information particularly related to Angus cattle."

Both the MLA Genetics Hub and the BREEDPLAN website have an extensive catalogue of resources to assist producers in understanding genetics and using EBVs to accelerate herd performance.

Christian also recommends the sale catalogues of the seedstock operations, and the online resources offered by breed associations such as Angus Australia.

"Bull selection has a huge impact on the herd. One bull can impact your herd for more than 10 years with the daughters you retain, and even longer through her granddaughters, so it's definitely worth putting the time in upfront to get the right one." ■

Read story opposite to see how an Angus producer uses genetic tools.

SEASONAL ACTION PLAN

- Understand your breeding objectives and where you want your herd to go in terms of performance. To do this, you need to understand where you currently sit, so gather as much benchmarking data as possible. Without a breeding objective, you're flying blind when it comes to bull selection.
- Genetics are very powerful. They can send you in the direction you want to go, but they can also send you in the wrong direction if you make the wrong bull selection. Upskill yourself on how to interpret information such as EBVs and how to use online resources to find what you need to know.
- Do your homework early on your bull selections – don't wait until sale day. Source catalogues, do online searches through the database facilities and talk to seedstock suppliers.

TOOLBOX

- MLA Genetics Hub: **genetics.mla.com.au/temperate**
- *How to shop for a high-performing sire*: – scan QR code
- BREEDPLAN: **breedplan.une.edu.au**
- BREEDPLAN Guide to Interpreting EBVs video – scan QR code
- BredWell FedWell: **mla.com.au/bredwellfedwell**
- BreedObject: **breedobject.com**
- World Angus evaluation: scan QR code
- Angus Education Centre: **angusaustralia.com.au/education**
- Angus Heifer Select: scan QR code

Christian Duff **christian@angusaustralia.com.au** Steve Miller **steve.miller@une.edu.au** Sarah Day **sday@mla.com.au**

Genetic tools back profitable goals

Adaptable, calm and resilient cattle are the goal for the Munro family of Booroomooka Angus on NSW's Northern Tablelands – and genetic tools are the key.

Booroomooka is one of the largest established Angus studs in Australia and the Munros pride themselves on their innovative approach. The stud was founded by Gordon Munro from 'Keera', Bingara, NSW in 1926 and principal Sinclair Munro is the fifth generation to manage the property.

Meeting the market

Sinclair said Booroomooka Angus aims to offer their customers animals which can thrive in the paddock, while also producing offspring which can meet the growth and carcase specifications for chosen markets. Their genetic goals are to increase the long-term profitability of Booroomooka genetics along the supply chain.

"We aim to continue to improve meat quality while improving on-farm profitability traits. We've made big gains in reducing age to turnoff and increased eating quality," he said.

The Munros use Estimated Breeding Values (EBVs) from the TransTasman Angus Cattle Evaluation (TACE) genetic evaluation system to rank the herd genetically, then choose sires with acceptable traits for their environment and to ensure adequate genetic diversity.

The breeding program uses the BreedObject $ABI (Angus Breeding Index), which was developed to identify animals which will improve overall profitability in commercial grass and grain-finishing beef production systems.

$ABI estimates the genetic differences between animals in net profitability per cow joined in a typical commercial self-replacing herd using Angus bulls, and is measured in profit per cow joined.

While traits such as docility and structure are not currently included in this index, they're also carefully considered with thresholds set.

To be successful, Sinclair believes there are some non-negotiables in certain traits. These include the extremes of high birth weights that cause calving difficulties, poor temperament (docility), bad structure and cattle with a poor constitution.

Targeting docility

Against the backdrop of a reduced workforce and heightened occupational health and safety expectations, it's become more important to have animals which are safe and easy to handle.

A docile temperament is also a strong contributor to an animal's welfare and performance.

Sinclair said Booroomooka has demonstrated a consistent commitment to the development of a reliable EBV for docility over many years.

"We were involved in early innovative research into measuring the docility trait by flight time and crush scores," he said. "Since 2005, we've collected around 13,000 docility scores. With all the data and genomics collected, we now have access to genomically enhanced TACE EBVs."

By collecting docility data in their herd and using TACE EBVs, Booroomooka has made some impressive genetic gains to profitability. Since 2004 in the Booroomooka herd, $ABI has increased from $144 to $220; 600 day-growth has increased from +84 to +125; and birth weight has dropped from +4.1 to +3.8. In that time, docility has improved slightly from +17 to +23, and structure has also improved.

Future focus areas

Sinclair believes climatic variability, antibiotic resistance and concerns about environmental sustainability will all fuel the need to breed more resilient cattle in the future. Increased land values are pushing breeding herds into more marginal areas. In response, Booroomooka has been involved in research relating to body composition and its relationship to fertility.

"Essentially cows will need to maintain enough condition so their fertility does not drop with seasonal fluctuations. We need to produce cows which can utilise low-quality grasses and store energy so they remain fertile in poor seasons," he said.

"We're passionate about further improving maternal productivity. This is a real profit driver and will improve the sustainability of beef production." ■

SNAPSHOT

SINCLAIR MUNRO – Booroomooka Angus Stud – Bingara, NSW

AREA
12,000ha across five properties

ENTERPRISE
Stud and commercial Angus cattle

PASTURES
Native summer grasses on breeding country with forage oats, lucerne and tropical pastures

SOILS
Variable

RAINFALL
700mm

The Munro family, pictured at a Booroomooka sale.

Sinclair Munro **keera@activ8.net.au** Sarah Day **sday@mla.com.au**

« Stirlings to Coast Livestock Officer Sammy Cullen checks out a paddock of Pallaton Raphno® brassica.

Forage insights to match the season

In many parts of Western Australia's southwest high rainfall zone (HRZ), summer rainfall average totals are increasing. This has presented producers in the region with an opportunity to plant summer forage crops when the season is favourable.

Summer crops allow deferred grazing on annual pastures, giving them more time to establish and reach critical biomass. They also help to fill the autumn and winter feed gaps, allowing producers to increase carrying capacity, increase liveweight gain, and potentially have more animals ready for the market outside of peak supply times.

However, decisions about what summer forage species to plant, and how they would fit into the region's various farming systems, were not clear. So, in 2020, the Albany-based farming systems research group Stirlings to Coast Farmers embarked on an MLA-funded Producer Demonstration Site (PDS) to explore these questions.

Feed value

The 'Alternate forage crops for Southern WA' PDS aimed to demonstrate the feed value of alternate high biomass summer forage crops in increasing stocking rates and liveweight gain of prime lambs or beef cattle relative to current systems in the HRZ of WA.

The project involved eight sites sown to a range of summer forages, including Pallaton Raphno® (a brassica which is a hybrid of kale and radish), millet, Hyola 970CL canola, winter wheat and sorghum. Five of the sites demonstrated the grazing capacity of sheep and three the grazing capacity of trade cattle.

The alternate forages were grazed concurrently alongside a stubble or established pasture, and the liveweight gains compared. Sowing dates, fertiliser inputs and crop protection, stock numbers and class, plant nutritive value testing, biomass cuts and soil samples were also recorded at each site.

Profitability

From this data, key results showed all alternate forages had a higher nutritional value and were able to support a higher stocking rate than their control counterpart.

All forages except for millet recorded consistently higher biomass compared to their control, and the alternate forages produced more liveweight per hectare on every occasion.

The improved weight gain per hectare did not always equate to increased profit per hectare once establishment costs were considered. However, the cost-benefit analysis was conducted only for the short period of the project and did not consider the future life of the crop and future grazing opportunities or other streams of revenue.

Alternate forage species such as Banker sorghum, DS Bennett wheat and Pallaton Raphno® will support multiple grazing events and possibly hay, silage or even grain production.

This is important for producers to consider for alternate forages which have a large outlay, such as Pallaton Raphno®, which costs more than $450/ha to seed and establish.

A more accurate picture of profitability would require a longer time frame than was reflected in these scenarios.

Forage options

Stirlings to Coast Livestock Officer Sammy Cullen said the project showed producers in the region there were a range of alternate summer crops which could be deployed when the season allowed.

"Alternate summer forages are a tool for the producer to have in their back pocket when they have excess rain in September/November," Sammy said.

"The trial looked at which forages were going to be the most cost-effective for our region."

However, she said the trial was not designed to recommend one forage option over another.

"All the forages performed better in terms of carrying capacity and liveweight gain, but it will come down to the producer's assessment of risk," Sammy said.

« Stirlings to Coast Livestock Officer Sammy Cullen.

TOOLBOX

Producer Demonstration Sites (PDS):

- Learn more about the PDS program: **mla.com.au/pds**
- Use the PDS search tool to see what is happening in or relevant to your region: **mla.com.au/pds-search**
- Stay up to date on PDS activity (including project progress, events and project calls) – scan the QR code to subscribe to PDS updates

Scan the QR code to access the PDS alternate forage crops project

Stirlings to Coast Farmers project page: **scfarmers.org.au/alternate-forage-crop**

"Some of the forage options are expensive to establish, so producers need to decide which are going to be the best fit for their operation." ■

Learn more from producers involved in the PDS on pages 17 and 18.

Stirlings to Coast Farmers **scfarmers.org.au/alternate-forage-crop** Sammy Cullen **samantha.cullen@scfarmers.org.au**
Lizzie von Perger **ceo@scfarmers.org.au** Alana McEwan **amcewan@mla.com.au** Richard Apps **rapps@mla.com.au**

Winter wheat grows profitability

Tim Metcalfe has been a long-term user of grazing canola to bridge the winter feed gap on his property in the Porongurup region of WA – and he has now added a new forage option into the mix.

His involvement in the MLA-funded 'Alternate forage crops for Southern WA' Producer Demonstration Site (PDS), run by the Stirlings to Coast Farmers group, offered Tim his first foray into using wheat as a grazing option.

Tim, along with his brother Chris and their parents Christine and Richard, produces seedstock Angus and Murray Grey cattle, alongside a commercial beef herd and crossbred lambs.

The Metcalfes were regularly grazing canola to defer stocking their pastures. When Stirlings to Coast Farmers learned what they were doing, they approached them to take part in the PDS (see page 16).

"We're in the high rainfall zone, so not a lot of our farm is suitable for cropping," Tim said.

"We're limited to the paddocks we can crop without the risk of water logging. Adding the wheat into our rotation allowed us to optimise our cropping program, and the wheat stubble is better than canola for grazing in summer as well."

PDS insights

In 2022, as part of the trial, Tim grazed 25.5ha of ryegrass/clover pasture with 35 yearling steers and compared the results to 85ha of DS Bennett ⟨D⟩ winter wheat which was grazed with 210 yearling heifers.

DS Bennett ⟨D⟩ produced more than twice the biomass of the clover ryegrass pasture. Cuts taken prior to grazing returned a result of 3.88t/ha compared to 1.86t/ha for ryegrass/clover.

Nutrient value analysis was similar for both feed sources, with DS Bennett ⟨D⟩ recording a slightly higher feed quality:

- crude protein – as % of dry matter (DM) – was 21.7 compared to 20.0 for ryegrass/clover
- digestibility (% of DM) was 84.3 compared to 71.1
- metabolisable energy (MJ/kg of DM) was 12.9 compared to 10.6.

The yearling steers grazing the ryegrass/clover gained 74kg on average, while the heifers grazing the DS Bennett ⟨D⟩ gained an average of 48kg.

However, because of the greater biomass produced and the higher stocking rate, when compared in kg/ha/day the alternate forage performed better.

DS Bennett ⟨D⟩ saw the heifers gain 0.43kg/ha/day more than the steers on the ryegrass/clover, resulting in a total livestock weight gain of 17.2kg/ha more.

This equated to a profit of $583/ha for the DS Bennett ⟨D⟩, compared to $498/ha for the ryegrass/clover.

Range of options

Tim said a further advantage of using the winter wheat for grazing option was the range of options it offered, over and above grazing.

"We cut 17ha for silage, which yielded 290 rolls at approximately 700kg each (12t/ha). We took the remaining 68ha through to harvest, with an average yield of 3.6t/ha," he said.

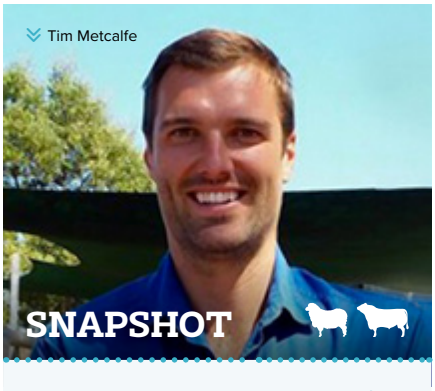
This versatility translated to greater overall profitability for DS Bennett ⟨D⟩ of an extra $85/ha, with the silage and grain providing additional revenue.

The results from the PDS convinced the Metcalfes to keep winter wheat in their rotation going forward. They have switched from DS Bennett ⟨D⟩ to Illabo ⟨D⟩, a shorter season variety that works in better within their operations.

"Having a winter wheat in our system has allowed us to increase our profits," Tim said.

"It gives us large amounts of grazing and, at the end, we've deferred our pastures, so we've got extra feed in the spring. Being able to lock the wheat up for a cash crop at the end is just a bonus." ■

Turn the page to meet another producer involved in the project.



METCALFE FAMILY –
Manypeaks, WA

AREA
8,500ha

ENTERPRISE
Commercial and seedstock Angus and Murray Grey cattle and crossbred lambs

PASTURES
Ryegrass, clovers, canola and wheat for grazing and grain

SOILS
Sandy loam duplex

RAINFALL
720mm

LESSONS LEARNT

- Although it wasn't part of the PDS process, we included a Hi Mag lick in the paddock, as well as roughage in the form of hay, to help with animals' gut health.
- Grazing crops need to be managed the same way you would manage a grain crop in terms of weed and pest control.
- If you're thinking of trying an alternate forage like winter wheat, just go for it. If it doesn't work out as a grain crop, you can continue to graze it. It can be just as profitable.

« DS Bennett ⟨D⟩ wheat establishing on Tim Metcalfe's property.

Tim Metcalfe **timmetcalfe_10@hotmail.com** Alana McEwan **amcewan@mla.com.au** Richard Apps **rapps@mla.com.au**

Brassica earns its place to fatten lambs

Brothers Tim and David Pyle put forage crops through their paces as a feed option in their mixed farming enterprise on the south coast of WA.

In 2020, they took part in an MLA-supported project (see story page 16) to explore the value of alternate summer forage crops for liveweight gain in their lambs.

The region has warm, dry summers and autumns. Prior to the project, the Pyles were supplementing their lambs in the first four to five months with dry feed.

The Pyles opted for the brassica Pallaton Raphno®, a kale–radish hybrid, to compare with their existing canola stubble and ryegrass pasture.

Dry matter cuts prior to grazing showed the Raphno® had more biomass available (3.83t/ha compared to 3.01 t/ha for ryegrass).

Nutrient value analysis revealed the Raphno® to be of much higher feed quality:

- crude protein – as % of dry matter (DM) – was more than double at 16.4 compared to 7.9 for ryegrass
- digestibility (% of DM) was 88.3 compared to 51.2
- metabolisable energy (MJ/kg of DM) was 13.6 compared to 7.2 for ryegrass.

Stocking rates

The Pyles grazed 30ha of ryegrass with 360 lambs at a stocking rate of 12/ha, while 45ha of Raphno® was grazed with 1,400 lambs at a rate of 31.11/ha.

Taking the different stocking rates into account, the Raphno® produced excellent results.

The lambs grazed on the Raphno® gained an extra 62.5g/head/day – 171.88g compared to 109.38g for the lambs on ryegrass. This equated to an average weight gain of 5.35kg/ha/day for the Raphno®, compared to 1.31kg/ha/day for ryegrass.

In the second year, the alternate forage was compared to canola stubble (with germinated clover) with 59ha of Raphno® grazed with 1,580 lambs and 30ha of canola stubble grazed with 670 lambs.

Conditions were vastly different to the first year, with the crop receiving very little rain. Despite this, at the end of the grazing period in the second year, there was still significant biomass in the paddock.

Tim said soil preparation and adequate summer rainfall are the most critical factors to ensuring the forage crops succeed. He also said it was important to have appropriate inputs ready when they were needed.

"It's not having weeds which will compete with the plants as they germinate," Tim said. "It's having the nitrogen ready when you're about to get rain, and it's being prepared to spray for diamondback moth as soon as you see it."

As a result of their participation in the trial, Tim said they will now always plant summer crops.

Over the past two years they have changed from Raphno® to Hyola 970CL to reduce costs.

Because they are so convinced of the value of summer forages for their enterprise, the Pyles now regularly set aside some of their better paddocks for them.

"It allows us to reduce our reliance on grain to finish our lambs," Tim said.

"We still have our grain-fed operation but if the crops go well, we don't need to spend anywhere near as much money on the lambs to finish them. It's an extremely cheap way of fattening lambs." ■

Well-established Pallaton Raphno® prior to grazing.

The Pyles' Dohne lambs at marking time.

Sheep and cattle producers, Tim and David Pyle.

SNAPSHOT

TIM AND DAVID PYLE –
South Stirling, WA

AREA
7,000ha

ENTERPRISE
15,000 Dohne Merino sheep,
800 Angus cattle

PASTURES
Ryegrass, clovers, canola/barley rotation, ryegrass for silage and hay

SOILS
Sand over sand, and sand over gravel

RAINFALL
650mm

LESSONS LEARNT

- Being part of the PDS allowed us to see industry best practice and introduced us to new concepts and practices.
- To reduce our reliance on grain, we'll always plant a summer crop now. We still have our grainfed operation, but if the crops go well, we don't have to spend anywhere near as much money on grain.
- Keep summer forages for lambs, rather than rams and ewes, and make straw available as well.
- Be prepared. If you're prepared with your nitrogen, prepared with your insect knockdowns, then rain is the only limiting factor. If there's a good chance of rain, go for it.
- Don't be deterred if it doesn't work the first time – if it works one in three years, it's going to pay for itself.

Tim Pyle **tim-pyle@hotmail.com** Alana McEwan **amcewan@mla.com.au** Richard Apps **rapps@mla.com.au**

Financial strategy gives Hills the edge

Managing a family partnership means the numbers need to add up for Queensland cattle producer Eustie Hill.

Together with his brother George, Eustie runs the Tooloombilla Partnership – a family-owned cattle enterprise encompassing three properties covering more than 35,770ha in south-east Queensland's Maranoa region.

Eustie and his family live on 'Boondee' near Meandarra, while his brother's family are based at 'Tooloombilla Station' north of Mitchell, and a manager runs the third property south of Mitchell.

With a focus on the heavy feeder market, the enterprise's steers and surplus heifers from the Mitchell properties are sent to Boondee for backgrounding before going to feedlots on the Darling Downs.

Confidence to implement ideas

Eustie recently presented at an MLA Business EDGE workshop. He said the industry was rapidly changing and it's important for producers to get off farm occasionally to expand their business knowledge with extension programs such as EDGE.

"Doing these courses gives you the confidence to go home and progressively implement new skills and ideas," he said.

Eustie Hill and daughter Sophie.

"Even something simple like learning how to record, read and understand financials can be a challenge to begin with.

"As producers, we are running big businesses worth a lot of money so it's important that we learn the skills needed to support sustainable enterprises.

"Understanding your numbers will hold you accountable for every decision and help ensure you are creating a business that is financially sustainable in the long term."

Unlock the power of numbers

Benchmarking the partnership's three properties against each other has allowed Eustie to see how they perform individually and, over time, identify some of the issues around scale and labour efficiency.

"There's huge power in looking at our properties individually," Eustie said.

"Benchmarking them separately over the past decade has not only helped us better understand their performance, but it has also challenged some long-held misconceptions."

By looking at the individual numbers, Eustie could see what the partnership had always thought was its cheapest breeding country was in fact its most expensive in terms of cost of production ($/kg liveweight produced).

"We could see from the benchmarking that our cost base remained stable across each property, regardless of the number of adult equivalents we ran, but the property we'd thought was the cheapest wasn't producing enough kilograms of beef to absorb that cost base effectively. That's something we wouldn't have known had we kept running the numbers as a single enterprise.

"Benchmarking individually means we're no longer relying on guesses or preconceived ideas to make decisions. Instead, we're now able to use evidence to identify real problems of scale and labour efficiency within the business and then work on finding solutions."

Eustie and George Hill.

SNAPSHOT

EUSTIE AND GEORGE HILL – Tooloombilla Partnership: 'Boondee' – Meandarra; Tooloombilla Station – Mitchell, Queensland

AREA
35,770ha total

ENTERPRISE
5,000 Shorthorn/Santa Gertrudis/ Charolais and 2,000 black Angus

PASTURES
Buffel grass, natives, improved pasture trials

SOILS
Sandy loam

RAINFALL
610mm

Sustainable business

Eustie said the business looks at both the financial actuals and forecasts every three months, which allows them to manage cash flow throughout the year.

"This allows us to keep a close eye on the number of cattle we're selling and then restructure our expenses, if necessary, or even reconsider our capital expenditure in the long term," he said.

"We're looking at expanding the business by increasing our existing breeder area or backgrounding area (or a combination of both), which is exciting. But it also has its challenges, so we're focused on managing the land we already have more effectively with things like pasture improvement trials, putting in more paddocks and watering points.

"The key for us is to manage and focus on what is within our control, like cost of production. Benchmarking lets us see how each property is performing over time and whether our strategies are improving scale, labour efficiency and operating return across the business." ■

mla.com.au/business-edge Eustie Hill **eustiehill@gmail.com** Sarah Hassall **shassall@mla.com.au**

» Rotational grazing has maintained constant ground cover at 'Tenterden Station', even through drought years. Image: Agrishots.

Rotational grazing boosts soil organic carbon

The commonly held perception that increasing soil organic carbon can only be achieved with reliable and consistent soil moisture has been called into question by early findings in an MLA-led grazing trial across NSW's New England region.

The MLA Donor Company (MDC) project, 'Grazing system impact on livestock productivity, soil moisture and soil organic carbon', raised interesting questions about the relationship between soil organic carbon, soil moisture and rotational grazing.

The project, which is coordinated by soil and pasture agronomy company Precision Pastures, monitors 10 farms from Walcha to Bingara. Data is being collected from soil moisture probes, soil sampling, rain gauges and pasture cuts.

One of the host sites is at 'Tenterden Station', near Guyra – home to Jane Mactier and Rodney Neill.

They produce pasture-fed Angus-cross cattle, superfine Merinos and Australian White sheep, and finish stock which are sold direct to processors and supermarkets.

Digging deeper

Jane and Rodney joined the MDC project to obtain deeper knowledge of their soil moisture and carbon levels, to assist with decision making around pasture management.

They purchased Tenterden Station in 2018 and saw an opportunity to further develop and improve the land through various activities – a major focus being intensive grazing.

"We converted the grazing system to rotational grazing according to feed availability instead of set-time rotations," Rodney said.

They also installed additional dams and troughs to ensure there was enough quality water.

Dry challenges

It hasn't always been smooth sailing, as the purchase of Tenterden coincided with the 2019 drought. Rodney and Jane said this reinforced the importance of rotational grazing to rest paddocks and maintain ground cover.

During the drought years, they managed to maintain 22,500 dry sheep equivalent (DSE). They currently run approximately 45,000 DSE.

After the drought, they were unsure which pasture species had survived, so they took the opportunity to replant improved pasture in most of their paddocks, using a combination of disc seeding and broadcasting seeds using vehicles, drones and aeroplanes.

They also trialled different products including microbial stimulants to promote root growth and stimulate the soil biology.

Results

Rodney and Jane said the results speak for themselves, as careful management of pastures has increased soil organic carbon.

On the project paddocks, soil organic carbon levels have, on average, increased by 1.46% in the topsoil (0–15cm depth) and 0.17% at a depth of 15–30cm, between October 2022 and October 2023, despite lengthy dry spells during 2023.

Baseline carbon levels in October 2022 were 2.60% and 1.75%, at depths of 0–10cm and 10–30cm respectively.

"We believe the kick-up in carbon levels is partly attributed to our high intensity rotational grazing program," Rodney said.

» Jane Mactier and Rodney Neill look at data collected from moisture probes and rain gauges, as part of the MDC project. Image: Agrishots.

SNAPSHOT

JANE MACTIER AND RODNEY NEILL –
Tenterden, NSW

AREA
1,500ha

ENTERPRISE
2,150 Angus (800 cows and calves, 150 heifers, 1,200 steers), 1,000 Merinos and 300 Australian Whites

PASTURES
Improved multi-species grasses and legumes

SOILS
Clay loam base of red basalt ferrosols, rocky, black vertisols along valley floors and creek plain

RAINFALL
870mm

"It's very important we do not over or under-graze these pastures. Perhaps at times, we must have a compromise between the 'ideal' grazing management, animal health and overall farm management.

"Even though Tenterden received some big rainfall events at the end of 2023, we haven't seen any runoff, so through rotational grazing, we are ensuring constant ground cover which is keeping roots in the ground and helping water infiltration."

Future focus

Jane and Rodney would consider registering a soil carbon project if they were to buy an undeveloped property, where they could implement significant changes, such as cell grazing and improved pasture.

Due to the improved grazing management adopted at Tenterden, Jane and Rodney are not sure how close to saturation in carbon levels the soils are. This means they do not know what the potential gains in soil carbon levels over time might still be.

For them the primary importance of increasing soil carbon is to increase production – if they maintain increased carbon levels, they will maintain a higher production level. ■

LESSONS LEARNT

- The productivity of our property has been increased by rotationally grazing livestock according to feed availability, developing watering points and improving pastures.
- Soil organic carbon has increased with careful management of pastures.
- Rotational grazing ensures constant ground cover, which reduces erosion and helps with water infiltration.

TOOLBOX

- For project information, scan the QR code:
- Feedbase and soil resources: **mla.com.au/healthy-soils** and **mla.com.au/feedbase**
- Carbon EDGE program: **mla.com.au/carbonedge**

Jane Mactier and Rodney Neill **tenterdenstation@gmail.com**
Andrew Morelli **amorelli@mla.com.au**

Putty delivers new tool for wild dog and fox control

Land managers now have a new tool in their kits to protect Australia's native species, livestock production and natural environment from invasive pests, with the release of an environmentally responsible lethal measure – PAPPutty.

PAPPutty is a toxic paste which is applied to cloth wraps on one jaw of a foot-hold trap to target and manage wild dogs and foxes. Once caught, wild dogs and foxes tend to bite at the trap and ingest the toxin in the cloth.

PAPP or para-aminopropiophenone stops oxygen binding to haemoglobin causing the animal to become unconscious and die.

Developed by the Centre for Invasive Species Solutions (CISS) in collaboration with the NSW Department of Primary Industries (DPI), Connovation in New Zealand, and Animal Control Technologies Australia (ACTA) to help manage wild dog and fox populations, PAPPutty is a control method which reduces suffering to trapped dogs and foxes while protecting Australia's native and endangered species from decimation by these predators.

CISS CEO Andreas Glanznig described it as a 'welfare-positive' addition to land managers' toolkits.

"With foxes responsible for up to 30% of lamb losses and wild dogs a risk to at least 14 endangered or vulnerable native species, PAPPutty offers an environmentally responsible tool to protect our native environment from destruction by introduced predators," Andreas said.

"To tackle this threat, a collective effort from government, researchers, industry, community groups, landholders and organisations such as our own to implement best-practice management strategies using every tool available, including PAPPutty, is required."

Dr Paul Meek, Senior Research Scientist from NSW DPI, conducted large field trials to test PAPPutty. These trials showed that PAPPutty wrapped in cloth attached to the trap jaw resulted in more than 85% of captured dogs accessing the toxin and dying.

"PAPPutty provides a more humane alternative to strychnine when using foot-hold traps and is another arrow in the quiver when controlling wild dog and fox populations, helping land managers protect native species and ensure the welfare of their livestock," Paul said.

PAPPutty use

The use of PAPPutty is highly regulated and comes with strict conditions, such as notifying neighbours 72 hours before traps are put in the ground and putting up signage to alert visitors that PAPPutty is being used on the property, to ensure it is used correctly and safely.

When administered quickly, a veterinary-only antidote is available for domestic dogs who may have ingested PAPP. Immediate veterinary care should be sought for domestic dogs that are suspected of accidentally ingesting PAPP.

PAPPutty is manufactured and distributed in Australia by ACTA. Guides for the use of the product can be accessed at **animalcontrol.com.au/products/papputty-lethal-paste-for-wild-canids**

Turn to page 27 to read more about wild dog management.

Centre for Invasive Species Solutions: **invasives.com.au**
mla.com.au/wild-dogs Sally Leigo **sleigo@mla.com.au**

Improving performance with effective weaning

On-farm strategies which ensure weaners are well-prepared to thrive in backgrounding or feedlot operations also deliver the added benefit of meeting the expectations of consumers.

Elders' Feeder Ready Program – the only audited weaning program in Australia – supports producers to set their weaned cattle on the path to productivity.

Rob Inglis, Elders Livestock Production Coordinator, said the program supported industry to demonstrate its credentials as stewards of best practice in animal welfare.

"It shows we can produce healthy, appropriately prepared cattle which are certified ready for feedlots or backgrounding, and command a premium price as a result," he said.

Set feeders up for success

Animals which are accredited through the Feeder Ready Program receive an Elders pink ear tag which immediately identifies them as having been weaned in line with industry best practice.

The program has two mandatory criteria:

- audit by a third-party expert
- a vaccine schedule.

In addition, there are three recommended steps designed to help optimise performance:

- a trace mineral injection
- an internal and external parasite treatment program
- a good quality ration.

Rob is one of three independent auditors conducting site visits to inspect the cattle post-weaning and ensure they meet each of the program criteria. This includes observing cattle behaviour in the yards to confirm they have been yard-weaned for at least seven days.

Feeder Ready complements the Immune Ready guidelines, with the independent auditors confirming clostridial and bovine respiratory disease vaccinations have been given and that any additional vaccinations are also noted on the schedule.

Other strategies

The program also recommends animals receive a trace mineral injection (Multimin® Evolution), appropriate parasite treatments and a good quality ration to support their accreditation. Rob said these recommendations were assessed by auditors on a case-by-case basis.

"We look at the circumstances of each property to determine what parasite treatments or rations are most appropriate," he said.

"The important thing is we're delivering transparency around these criteria so that buyers receive a full account of how that animal has been treated up to the point of sale."

Benefits of the program

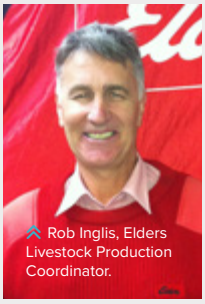
There are a range of benefits from accreditation through the program.

Price premiums: The Elders pink tags make it easy for buyers to identify feeders that have been correctly weaned, potentially delivering price premiums to producers.

Transport ready: Effective weaning makes cattle easier to handle in the yards and calmer during travel, creating a safer environment for both animals and humans.

"Appropriately weaned cattle are easier and safer to load and unload," Rob said.

"They'll also experience far less stress during trips and be in better condition when they eventually reach the feedlot."


Rob Inglis, Elders Livestock Production Coordinator.

Improved performance: Cattle which have been appropriately weaned convert feed more efficiently and spend less time in feedlots, resulting in lower feed costs and reduced carbon emissions.

Improved survival: More importantly from the feedlot's point of view, appropriately weaned cattle have a lower morbidity rate.

"We have stats from a couple of feedlots which show the morbidity rate for unweaned cattle is around 20%, while for properly weaned animals it's around 4%," Rob said.

"That's a significant difference and I think we're now seeing more feedlots walk past cattle that haven't been properly weaned because they just don't want to run that risk." ■

SEASONAL ACTION PLAN

- After three strong seasons, winter growth this year is likely to be substandard so make sure you have supplementary feed on hand.
- Supplement feed your late-pregnant and early-lactating cows where necessary to ensure calves hit their weaning weights earlier.
- This preparation can impact next year's fertility as early weaning means cows have longer to recover and are more likely to go in calf early during the next joining.

New Transport Hub drives industry forward

MLA's new Transport Hub, which was developed in consultation with the livestock transport supply chain, helps to navigate rules, roles and responsibilities for livestock transport anywhere in Australia.

The hub includes information on transporting cattle, sheep and goats by road in Australia, with specific advice on different classes of animals and links to other relevant sites.

It equips producers with tools to identify and implement best practice in dispatching and receiving stock, including the latest industry trends, hands-on practical advice and scientific research.

Transport Hub

Learn more at **mla.com.au/transport-hub**

Sights set on Merino ewe survival

Image: AWI

Merino ewes make up about two-thirds of Australia's breeding ewe flock and, anecdotally, tend to have higher mortality rates than ewes of other breeds.

However, the industry doesn't have an accurate handle on what causes many of these losses – which usually occur around lambing – or what cost-effective and practical intervention strategies might increase ewe survival rates.

A team of researchers, veterinarians and consultants are working with Merino producers to tackle this challenge.

The four-year project is funded by MLA and Australian Wool Innovation (AWI) and builds on a recent study which assessed the causes and rates of ewe mortality during the lambing period across commercial maternal flocks.

Getting a handle on losses

A review of Australian literature indicated a range in mortality rates of 2–10% of Merino ewe flocks, with reports as high as 25% in some flocks.

However, the method with which mortality is determined could be influencing that variability. For example, mortality can be determined as the number of confirmed deaths by counting carcases, or as the difference in numbers between yardings.

Without a carcase, the cause of death is harder to determine with certainty.

Generally, the cause of death is divided into three categories – those occurring before, during or after lambing. A fourth category can be considered – the deaths which occur around the lambing period not directly caused by pregnancy or lambing, but to which ewes can be more susceptible during this time.

Common causes of death before lambing include pregnancy toxaemia and hypocalcaemia, or vaginal prolapse, if followed by complications such as infection or rupture of the vaginal wall.

Risk factors include age and litter size, with older ewes or those carrying multiples being at greater risk. A prolonged or difficult birth (dystocia) is a common cause of Merino ewe death during lambing.

Dystocia can be due to the lamb's position (such as head back or leg back), or the ewe's physiology (for example, a small pelvis). Risk factors for dystocia include ewe age, body condition score, litter size and lamb birth weight.

Death after lambing can often occur due to reproductive tract infections, or mastitis.

Some studies indicate only about 10% of ewe deaths are investigated by a vet.

However, the cause of death can't always be determined by just looking at a carcase, with research finding veterinary post-mortems may be needed to diagnose dystocia. However, a post-mortem does not guarantee a diagnosis – one study showed that a cause of death could not be found in up to 20% of mortalities.

Ongoing research

During this year's lambing, mortality incidence and causes will be determined on a selection of farms across southern Australia as part of the Merino ewe survival project. Producers' farm diaries and veterinary-conducted post-mortems will be used to collect data on Merino ewe mortality.

This data, together with the recently conducted industry-wide survey on Merino ewe mortality, will inform mitigation strategies that will be trialled on-farm during the lambing season of 2025. ■

makingmorefromsheep.com.au **mla.com.au/bwfw**
Esmée de Looff **edelooff@pinionadvisory.com.au**
Sharon Dundon **sdundon@mla.com.au**

Weaning strategies

Once calves are 160–200kg, Rob suggests vaccinating them and then letting them back in with the cows for at least three or four imprint feeds of whatever ration they'll be weaned onto.

"By **vaccinating early** and allowing them to adjust to the new feed, the only stress will be separation from the cow," he said. "They may be upset for a few hours, but once they discover the feed and start eating, it's a pretty smooth transition."

Rob also suggests **drafting by weight, rather than sex**.

"By separating them into a heavy group (>200kg), a middle group (175–200kg) and a lighter group (<175kg), the hierarchical effect is reduced and there'll be less bullying.

"In a perfect world, the diet would be modified according to size," he said.

"The lighter weaners would be fed a better ration to help them catch up to the bigger animals, with the ultimate goal being to have them all reach a similar weight within two to three months."

TOOLBOX

Scan this QR code to learn more about the Elders Feeder Ready Program or contact your local Elders branch:

Immune Ready Guidelines: **immuneready.net.au**

Rob Inglis
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Sharon Dundon
sdundon@mla.com.au

Our sustainability investments in action

As global markets, customers and investors accelerate their climate change and biodiversity commitments, MLA is strongly focused on providing our stakeholders with the science, technology and adoption practices they need to meet changing market expectations.

Demonstrating sustainability as an industry

Carbon Neutral 2030

The Australian red meat and livestock industry has set a target to make no net releases of greenhouse gas (GHG) emissions into the atmosphere by 2030.

Australian Beef Sustainability Framework

The Australian beef industry has identified key sustainability priorities and reports annually on performance and progress.

Best animal care	Environmental stewardship	Economic resilience	People and the community
■ Animal husbandry ■ Biosecurity ■ Processing practices ■ Livestock transport ■ Health and welfare	■ Biodiversity ■ Soil health ■ Ground cover ■ Balance of tree and grass cover ■ GHG emissions and carbon capture ■ Water ■ Waste	■ Climate change resilience ■ Productivity ■ Profitability ■ Market access	■ Food safety and quality ■ Nutrition ■ Work, health and safety ■ Labour practices ■ Community contribution ■ Diversity ■ Antimicrobial stewardship ■ Capacity building

Sheep Sustainability Framework

The Australian sheep industry has identified key sustainability priorities and reports annually on performance and progress.

Caring for our sheep	Enhancing the environment and climate	Looking after our people, our customers and the community	Ensuring a financially resilient industry
■ Animal care and handling ■ Animal health	■ Environment ■ Climate change	■ Health and safety ■ Capacity building ■ Contribution to community	■ Profitability, productivity and investment ■ Market access

Demonstrating sustainability in your business

Environmental Credentials Platform

The platform enables producers to compile and collate their environmental sustainability data, build their sustainability learning and share their data with supply chain partners.

MLA technology, tools and training

Key resources to support producers' sustainability performance and progress to build climate and business resilience, and improve market advantage.

Australian Beef Sustainability Framework

Download the *Annual Update*

Australian Sheep Sustainability Framework

Download the *Annual Report*

Australian Feedbase Monitor tool

World-first tool to help improve grazing management, forage budgeting and ground cover

Balance of Tree and Grass Cover dashboard

Analyse trends in woody vegetation and ground cover at a regional level

Biodiversity condition toolkit for grazed lands

For facilitators, extension officers and NRM groups

Business EDGE workshop

Enhance knowledge and skills in financial management for business efficiency and profitability

Carbon calculator

Create a comprehensive calculation of total enterprise greenhouse gas emissions

Carbon eLearning modules

Foundational information about carbon farming and greenhouse gases relevant to agriculture

CN30 On-farm Strategy Guide

A guide to help make productivity-led emissions reductions and improvements in carbon storage

Environmental Credentials Platform

A user-friendly platform for producers to show their on-farm sustainable practices

Grazing land management hub

Resources to help improve management and utilisation of your feedbase

Healthy soils hub

Practical resources for soil testing and soil management

Transport Hub

Practical livestock preparation guidelines for the safe transport of livestock

Pasture Paramedic

Decision-making tool that allows rapid assessment of pasture condition

Polled gene testing

Reports on the likelihood (%) of an animal being true 'polled'

Stocking rate calculator

Determines the number of cattle you should put into a paddock based on its carrying capacity

» Pieter van Jaarsveld received an MLA-supported Nuffield Scholarship in 2021. Image: Pieter van Jaarsveld.

Nuffield journey leads to goat opportunities

In the face of COVID-related challenges, Queensland goat producer Pieter van Jaarsveld refocused his Nuffield Scholarship to investigate how to value-add to goat enterprises amid challenging market conditions.

Pieter operates Sunset Hill Ag Services, Inglewood, and is an agricultural data consultant and contractor. He received an MLA-supported Nuffield Scholarship in 2021.

Delays caused by COVID-19 restrictions not only saw Pieter's travels for his Nuffield Scholarship curtailed, but prompted a pivot in his research topic.

"The topic I originally planned on researching was how crossbreeding rangeland and Boer goats can increase meat production and drive greater productivity in the industry," Pieter said.

Due to COVID-19 related travel delays, Pieter's cohort of Nuffield scholars needed to think outside the box as they had to spend a lot more time doing their research domestically than was originally expected.

"At the same time, in the Australian goatmeat industry, we witnessed a large peak in people investing in and going into goats, followed by a dramatic downturn based on prices and market access.

"That has seen a lot of people question if they want to be in the goat industry, and an oversupply of goats causing a range of issues," Pieter said.

This situation led Pieter to look beyond crossbreeding opportunities, which are great when the market is good, but possibly insufficient during challenging market conditions.

He focused on figuring out how best to value-add to goat enterprises as due to an oversupply, many goat producers were not getting expected returns on selling their animals.

eID opportunities

"There is the issue of the mandatory goat electronic identification (eID) system that's set to start in January 2025.

"As a result, my research report is now looking at what value we can implement now, at a low cost, and how we can use tools such as eID to ensure our animals remain profitable in the long-term," Pieter said.

Pieter is the project manager of the MLA-supported goat industry research project Kids+ and also has goats in the trial.

His Nuffield Scholarship research topic ties in with the Kids+ project in looking at the value of implementing eID tags.

Pieter runs about 2,000 breeding does, with all does and bucks individually eID tagged to enable data collection and full traceability.

Overseas insights

Pieter and his cohort of 2021 Nuffield Scholars will present the findings of their scholarship research at the Nuffield Australia National Conference in Launceston, Tasmania, in September 2024.

Despite not being able to travel overseas as extensively as he originally intended, Pieter has travelled to Ireland, France, South Africa, Zimbabwe, the UK and Argentina for his Nuffield research.

"In South Africa I had the opportunity to go on-farm and look at their systems and how producers manage their animals.

"In the UK I spent a lot of time with goat producers and, in France, went to a goat semen facility where they have a variety of goats and export a lot of that semen.

"While visits to other countries didn't necessarily involve visiting specific goat enterprises, they did involve looking at value-added or unique farming systems in those countries. Talking to people who have been able to adapt and overcome challenges is hugely valuable," Pieter said.

Pieter said the Nuffield Scholarship provided unrivalled opportunities and he encourages anyone considering applying, to not hesitate.

"Seeing first-hand how others have developed and pivoted, or expanded or done something different to build resilience, has been an outstanding opportunity that Nuffield has provided." ■

SNAPSHOT

PIETER VAN JAARSVELD –
Inglewood, Queensland

AREA
900ha

ENTERPRISE
2,000 breeding does

PASTURES
Improved pastures: Rhodes grass, native bluegrass and kangaroo grass; speargrass

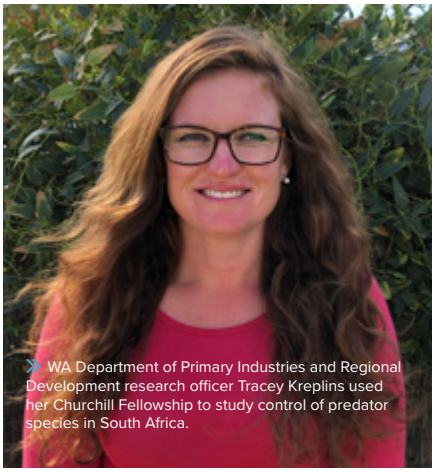
SOILS
Traprock

RAINFALL
600mm

mla.com.au/goats-hub · Nuffield Australia: **nuffield.com.au/how-to-apply**
Pieter van Jaarsveld **pietervj11@gmail.com** · Joshua Whelan **jwhelan@mla.com.au**

Wild dog insights out of Africa

A wildlife ecologist packed her bags for South Africa in a quest to learn more about improving community understanding of wild dogs, as well as improving wild dog control practices.



WA Department of Primary Industries and Regional Development research officer Tracey Kreplins used her Churchill Fellowship to study control of predator species in South Africa.

WA's Dr Tracey Kreplins investigated predator management in a farming and agricultural context under a Churchill Fellowship.

"Everything about wild dogs is hotly contested, debated and argued, often more emotively than a scientist would like," she said.

"A lot of my role as a research scientist for the WA Department of Primary Industries and Regional Development is to provide scientific evidence to support wild dog management in WA."

South African predators

Her research involved collaborating with a range of predator researchers in South Africa – where caracals and black-backed jackals damage small stock farming.

She also interviewed a range of producers, academics, researchers and conservation organisations and attended the Southern African Wildlife Management Association conference.

Her research findings will inform wild dog management in WA and Australia more broadly.

"I was interested in South African predator management as they use a range of control tools excluding poison," Tracey said.

"A range of management tools and ideas are available to land managers and owners for predator management including lethal and non-lethal options – and yet, producers in WA and South Africa both rely heavily on the lethal options in the toolbox of predator management. For example, shooting with a thermal scope is very popular in South Africa.

"Guardian dogs are used by some South African landholders to reduce losses in the paddock. Not unlike trials in WA, they produce a mixed bag of results which do not completely exclude the predators from the paddock."

Learnings

"I did learn to think outside the box when it comes to conservation and control of predators, and that solutions are not necessarily in the form of new tools but new outlooks and approaches," Tracey said.

"A big learning from my travels was around programs and knowledge which can bridge the gap between conservation and agricultural management options for predators. In the changing landscape of predator management which now encompasses a wide range of values, it's important to incorporate as many ideas as possible."

Proactive control

Tracey's research in WA has demonstrated how proactive control reduces losses in the predator management space.

"South African farmers experience more losses as they only put control tools on the ground when losses occur, rather than managing more proactively like WA farmers," she said.

"Travelling overseas to learn about predator management in a different context and landscape, with different predator densities and cultural pressures has led to some out-of-the-box thinking which can be used for managing predators in WA going forward."

She plans on incorporating her learnings into the next WA Wild Dog Action Plan 2025–2030, with a strong emphasis on providing options for all properties. ■

Jackals pose a challenge to livestock in South Africa.

TOOLBOX

- MLA wild dog information: **mla.com.au/wild-dogs**
- National Wild Dog Action Plan: **wilddogplan.org.au**
- WildDogScan app and website: **feralscan.org.au**
- PestSmart's wild dog control toolkit: **pestsmart.org.au/toolkits/wild-dogs**
- Scan these QR codes to read:

PestSmart's *Glovebox Guide for Managing Wild Dogs*

PestSmart's *Best Practice Manual for the use of Livestock Guardian Dogs*

Sally Leigo **sleigo@mla.com.au**

How to use new indexes to dial up genetic gain

New Merino Indexes have just been released – but how can you use them in your business?

Here, MLA's Sheep Genetics manager, Peta Bradley, shares her tips and tools to help sheep producers target genetics which align with their production goals.

Whether you're a Merino breeder or looking to purchase rams for a commercial flock, these new indexes meet the needs of different sheep enterprises.

Understanding how indexes work

For producers who aren't as familiar with or who haven't utilised indexes before, Peta said understanding their purpose and value is key to improving a flock's genetic merit.

"I like to use the cereal aisle in your local grocery store as an analogy of how to use these indexes," she said.

"If having a healthy breakfast is most important to you, you can look at the health star rating on each box to condense your shortlist.

"The next most important factor may be having a tasty breakfast, so from the shortlist, you may then look at the individual ingredients to find something you know you will enjoy.

"Ultimately, you're left with a drastically refined list of cereals you would buy, allowing you to make the final call based on value for money," Peta said.

"Our Merino Indexes can be used the exact same way – rather than overwhelming yourself by inspecting every ram at the sale, you can use our indexes to do some pre-sale homework and rule out the rams which don't meet your requirements, leaving yourself with a shortlist of all the ones which do."

Key changes

Following on from last year's release of the new research indexes for Merinos, Sheep Genetics has refined these into four indexes which will be released.

"Over the past 12 months, we've looked at the feedback we received, taken it into consideration and then refocused our research to fine-tune our previously released indexes," Peta said.

Across all four indexes there is an emphasis on health and welfare traits which are appropriate for the production system.

For example, the Sustainable Merino (SM) Index includes a focus on health traits such as:

- reducing breech wrinkle
- reducing worm egg count
- reducing dag score.

"The indexes also continue to drive genetic progress in the key production traits such as reproduction, growth and fleece traits," Peta said.

"Indexes allow genetic improvement for a range of traits even if antagonistic relationships exist. For example, the new indexes yield favourable responses simultaneously for fleece weight and breech wrinkle."

Updated modelling which best captures the different types of Merino production system has been a focus during the development of the new indexes.

"For some indexes, wool traits are a main focus as for some sheep production systems a majority of the income is derived from wool production, whereas other Merino systems achieve more profit from lamb and surplus sheep sales.

"The different indexes enable you to select the one that best suits your production system."

Peta said feed intake is modelled and accounted for in the new indexes. The updated software also enables methane output to be incorporated in the future when there is an Australia Sheep Breeding Value (ASBV) available for that trait.

How to make the most of new indexes

When it comes to making to most of the new Merino Indexes, Peta suggested producers start by pinpointing their breeding objective.

"Before you start using breeding values and the Merino Indexes, you need to set your flock production goals," Peta said.

Pinpoint your breeding objective by identifying your:

- flock's current performance
- target market
- profit drivers
- operational environment.

MLA's Genetics Hub is a valuable tool to set and review breeding objectives. The hub also has a range of modules on understanding breeding values and indexes which are a useful refresher before heading into this year's sale season.

The Sheep Genetics website has more information on breeding values, indexes and boosting genetic gains.

For producers who want to access more information and advice on maximising breeding profit, a BredWell FedWell workshop is a great option. ■

TOOLBOX

- MLA Genetics Hub: **genetics.mla.com.au**
- New Merino Indexes: scan the QR code
- Sheep Genetics: **sheepgenetics.org.au**
- BredWell FedWell workshop: **mla.com.au/bredwellfedwell**

Peta Bradley
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Stay a step in front

WA producers who attended MLA's BeefUp forum at Fitzroy Crossing earlier this year came away with a checklist of strategies to manage uncertainty in their grazing enterprises.

As part of the event, producers and advisors shared their perspectives on how they approach the season ahead, with four key tips:

- Know your critical decision dates.
- Focus on what you can control, not what you can't.
- Match stocking rates to carrying capacity.
- Consider the opportunities for overall herd improvement which come with reducing livestock numbers.

Know what is in your control

David McLean, of Resource Consulting Services (RCS), encouraged producers to consider their 'spheres of influence' and be mindful to focus on the things within their control rather than those outside of it. See figure below.

One example he provided was to adjust stock numbers to carrying capacity.

"Come back to your experience. Get out, go for a drive and have a look at what you've got. Ask yourself the questions – don't ask yourself what you could run, ask yourself what you can run.

"Know your livestock numbers and keep your country 'rain ready'," he said.

Land that is 'rain ready' – that is, in good condition with attached ground cover – will ensure a quick pasture response when it rains.

Critical dates

Harvest Road's Chief Operating Officer, Ben Dwyer, spoke about how to set critical decision and action dates.

"We have our critical green dates and dates to make decisions. In the Kimberley these dates are around early December – our team has already made these decisions going forward," he said.

"On one property we didn't get any early storms so we've finished weaning already and the dry cows have been segregated. If we don't get any rain coming through soon, we will start moving cattle off."

Ben also stressed the importance of adjusting stocking numbers to maintain the land condition on their properties.

"You've got to know your stocking numbers. You also need to know how quickly you can move stock and pre-empt that before you need to.

"The most important thing is to get mouths off, so we don't degrade the potential of the future years' growth."

He said it's better to make a decision early, based on what stock can be moved.

"If it does rain and you've already moved stock, you are only going to get growth on that rain-ready grass. Look at your long term profitability not your short term profitability," he said.

Early weaning

Anne-Marie Huey from 'Dampier Downs Station' has seen a dry start to the season. She said they would also be weaning early to reduce the nutritional demand on breeders and reviewing stock numbers.

"Early weaning is going to be a lever we can pull," she said.

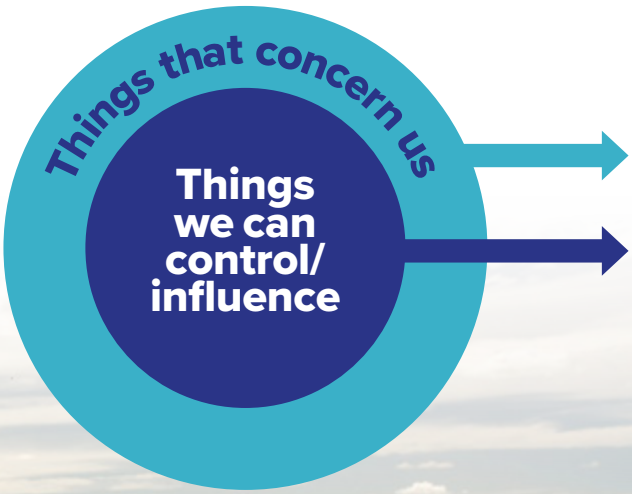
"We will look at our overall stocking rate and we'll get rid of passengers in our cow herd which will set us up for future years with a more productive herd. We'll be better situated going forward by making those tough decisions now."

If dry conditions persist, Harvest Road will take a similar approach to improve the herd on affected properties.

'If we have to reduce numbers, our 16-month and older wet rebreed will be culled," Ben said.

"We will do what we have to do, to look after the environment and pastures for next year." ■

Figure 1: The 'spheres of influence'



Keep an eye on **mla.com.au/events** for BeefUp forums and other events in your area.

mla.com.au/beefup Harriet Bawden **hbawden@mla.com.au**

» Dr Enoch Bergman demonstrates a bull breakdown investigation.

Protect your breeding season from bull breakdown

With this year's bull sales underway, as with any investment, it's important to consider how to best protect assets and maximise productivity.

When it comes to bulls, particularly virgin bulls, one of the largest threats is balanoposthitis – or inflammation of the penis and prepuce.

Affected bulls often progress to catastrophic preputial and penile injury if they aren't removed from the mating group.

The potential cost to a beef business if bulls are affected by balanoposthitis depends on:

- the time of onset of the syndrome
- the amount of time until producer recognises it and takes action
- access to replacement bulls
- sale and salvage value of affected bulls.

At best, a producer may have time to replace an affected bull during the joining season if the bull is identified early.

This will come with the added expense of acquiring a new bull and disruption to joining.

However, if the bull's condition is identified late in the season, producers will likely see a higher proportion of animals tested empty at pregnancy testing time which will disrupt the breeding rate and more calves will be born late in the calving season.

What's the solution?

MLA is investing in a three-year Producer Demonstration Site (PDS) project aimed at preventing bull preputial breakdown, in partnership with the WA-based producer group, ASHEEP & BEEF. The aim is to demonstrate the success of prevention of balanoposthitis by vaccination in the South Coast region of WA.

The project's lead producer Simon Fowler said prior to the research, producers were already using vaccination to diminish the risk.

"Local producers have been vaccinating bulls for more than 10 years and have anecdotally seen a large reduction in balanoposthitis," Simon said.

"I certainly expect the PDS to show a more significant reduction in injuries to vaccinated bulls."

Surveys were conducted across 48 properties, with survey participants giving an average score of 9.5 out of 10 when asked if they believe vaccination helps in the prevention of bull preputial breakdown.

On properties where bulls were unvaccinated, 20.5% of the virgin bulls broke down during joining, with 17.4% being due to balanoposthitis.

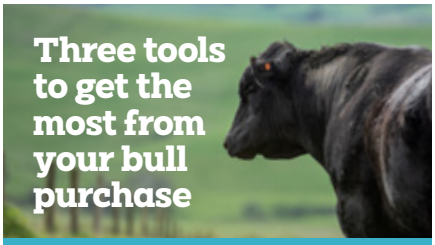
Where vaccination had occurred on properties, 13.4% of the virgin bulls broke down, 12.9% of which was attributed to balanoposthitis.

During the PDS, the following observations were made:

- Exposing virgin bulls to sexual experience (commingling with cull cows) prior to joining may help reduce the incidence of balanoposthitis.
- Wet conditions may contribute to the incidence and severity – 45.2% of producers who reported no virgin bull breakdowns reported wet conditions whilst 64.7% of those who reported virgin bull breakdowns reported wet conditions.

MLA is continuing the PDS with aims to increase the sample size through more properties and collect data from producers following pregnancy testing and the calving season.

This should offer more thorough data on the impact of balanoposthitis and methods of prevention. ■



Three tools to get the most from your bull purchase

1. **BULLCHECK:** Ensure your potential bull purchase is healthy and fertile. Scan this QR code to learn more about the BULLCHECK™ Veterinary Bull Breeding Soundness Evaluation.
2. **Bull buying guide:** MLA's *How to shop for a high-performing sire* guide provides step-by-step advice on setting breeding objectives, selecting EBVs, navigating sale day and keeping your new sire performing at his best: **mla.com.au/bull-buying-guide**
3. **MLA's genetics hub:** Visit **genetics.mla.com.au** to watch a series of short 'how-to' animations demystify breeding values and show how to select desired traits, navigate BREEDPLAN and purchase high-performing bulls.

Sign up to receive PDS updates at **mla.com.au/pds** Scan the QR code to learn more about this PDS project

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Pastures sow seeds of excellence

Running their grazing operation like a dairy farm to ensure a year-round supply of quality feed for their cattle has underpinned success for Gippsland beef producers, Neville and Karen Beecher.

The Beechers run a mix of Angus, Hereford, and Angus-Hereford cross cattle on their farm at Churchill, and their MSA results have seen them win Most Outstanding Non-Grain Fed MSA Larger Producer in Victoria in the most recent MSA Excellence in Eating Quality Awards.

The Beechers, who have been MSA registered producers since 2017, achieved an average MSA compliance of 99.7%, and average MSA Index of 63.51 across 2021–23.

Pasture management

With an average annual rainfall of approximately 800mm, the Beechers run their property like a dairy farm, growing as much ryegrass and clover as possible while maintaining a good supply of fodder to ride out tough seasons.

They sell the best of their silage to dairy farming clients with the rest kept on-farm for their cattle.

"We put down a base fertiliser on our paddocks and use the advice of our agronomist. We also re-sow ryegrass and clover each year to top up the paddocks and make sure we have feed for winter," Neville said.

The cattle are supplementary fed silage in autumn and have access to hay to feed on *ad lib* in winter.

"Cattle have a tendency to lose condition in winter, but we make sure they have plenty of grass and hay to keep them moving forward," Karen said.

"We don't have a set target weight for turning them off, but we aim for around a 400kg carcase weight."

Rotational grazing is also used on-farm to carefully manage pastures and maintain weight gain.

"We don't graze our paddocks down to picking level, even in autumn," Karen said.

Low-stress handling

In the yards and during transportation, the focus on low-stress stock handling continues.

The Beechers transport their cattle themselves, supplying the Greenham Bass Strait Beef brand.

The Beechers are part of the Greenham NEVER EVER Beef Program, which specifies:

- cattle are grassfed
- cattle are MSA certified
- no hormone growth promotants (HGPs) are used
- no antibiotics are used
- cattle are free from Genetically Modified Organisms.

Their close proximity to Greenham means Neville and Karen can continuously select the best of their cattle for processing.

MSA feedback

The Beechers look at their MSA feedback in myMSA and attribute their ongoing high rates of MSA compliance to their feeding regime.

Shavonne, Neville, Karen and Bailey Beecher.

SNAPSHOT

NEVILLE AND KAREN BEECHER –
Churchill, Victoria

AREA
120ha

ENTERPRISE
390 head of Angus and Black Baldy steers and heifers

PASTURES
Ryegrass

SOILS
Light grey soils

RAINFALL
800mm

"We're not buying in the most expensive, top lines of cattle, but I think our results come down to how we feed our cattle and maintaining quality feed all year round," Neville said.

For the Beechers, the path to becoming award-winning MSA beef producers started as a sideline to their agricultural contracting business.

"Our approach to our cattle business has been more opportunistic, and dependent on the market and seasons," Neville said.

"We produce silage and pasture hay and provide cultivation services for clients. We used to run about 200 head, mainly for fodder management, but when drought hit about five years ago and cattle prices dropped, we increased our numbers to more than 1,000 head.

"We were buying in steers and heifers at the right price and sold them at a good time.

"When we could see cattle prices getting high, we transitioned to cows and calves. As our calves are growing out to heavy heifers or bullocks, we are selling our cows and transitioning back to buying in steers, which is more a work/life balance decision.

"We buy through AuctionsPlus and local store markets, to source weaners between 200–300kg from producers who we have bought from previously and had good results with." ■

mla.com.au/msa Neville and Karen Beecher **nb.contract@bigpond.com** David Packer **dpacker@mla.com.au**

» In the absence of a fully polled cattle herd, dehorning is a requirement for the majority of Australia's northern cattle.

Patch bridges gap in poll goal

Research into the potential of a therapeutic wound patch to reduce morbidity and mortality following dehorning comes at an ideal time as Australia's cattle herd transitions towards being fully polled.

This MLA-funded research, being undertaken by University of Sydney (USYD) PhD candidate Samantha Rudd, aims to provide solutions in the meantime. Genetic breeding strategies ultimately mean patches like this won't be necessary in the future. However, MLA recognised producers and their herds – particularly in the remote northern regions of Australia – would benefit from research looking to address dehorning-related issues such as haemorrhage, infection, wound healing, mismothering, feeding issues and pain.

Lecturer in Animal Welfare Science and Animal Behaviour at the USYD Sydney School of Veterinary Science, Dr Dominique Van der Saag was also involved in the project. Together with Dominique, Samantha and the Livestock Production and Welfare Team conducted extensive producer consultation to determine the need for such a solution.

Results confirmed producers want answers to the productivity and animal welfare impacts of dehorning and recognise the importance of maintaining the industry's social licence to operate around this issue.

Dehorning remains necessary

In the absence of a fully polled cattle herd, dehorning is a requirement for the majority of Australia's northern cattle. Staff and livestock safety is significantly enhanced by the practice, as is carcase quality and value, due to the prevention of transport-related bruising. The live export industry, for example, requires that cattle possess horns no longer than 12cm.

"Cattle without horns require less space during transport, in feedlots and handling facilities," Samantha said.

"Horned cattle are discounted at entry to feedlots. Dehorning greatly reduces carcase discounts due to bruising and improves safety and welfare outcomes for both the herd and handlers."

Progress

Collaboration between a team of biomedical engineers and trauma experts from USYD and The University of NSW led to multiple novel wound treatments being developed for the purpose of reducing haemorrhage, preventing infection, and ideally improving wound healing outcomes for dehorning wounds in cattle.

These products include a patch made from a bioactive material that enables it to incorporate into the wound to advance healing.

The resulting patch has blood clotting properties, enabling it to adhere to and protect the wound.

Sticking power key

The study tested the efficacy of the patch as a post-procedure treatment in nine horned Hereford calves, located near Taralga, NSW.

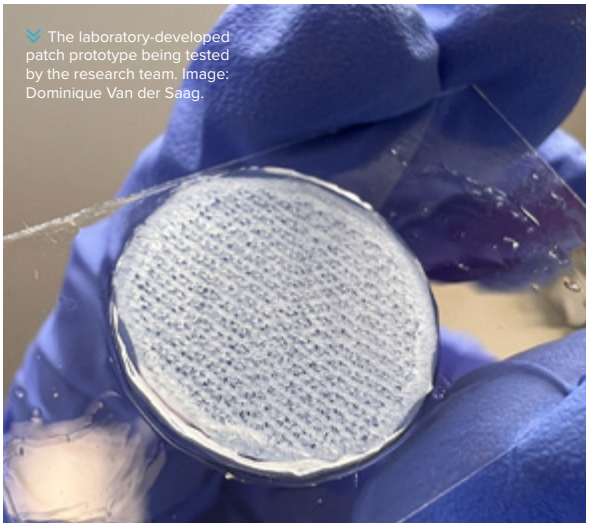
During initial testing, the team recognised the need to improve the patch's wound adherence as well as keeping application time to a minimum.

Despite previous trials demonstrating superior adhesion results using more expensive, finely-spun patches, a more cost-effective patch design is being developed to achieve similar adhesion performance.

The team is also developing a range of wound dressing actives which will be combined with the patch material for superior performance.

"Our pilot trial looked at ease of application, adherence and haemorrhage control, which gave us information to tweak our wound treatments for the next stage of testing," Samantha said.

"In our next experiment we will also be looking at whether the treatments reduce infection."



» The laboratory-developed patch prototype being tested by the research team. Image: Dominique Van der Saag.

PhD student Samantha Rudd's research is investigating the potential of a therapeutic wound patch to reduce morbidity and mortality following dehorning. Image: Samantha Rudd.

The next round of testing with cattle from a northern pastoral company aims to determine the infection control capabilities of the wound patch and bioactives.

Overcoming challenges

Bringing a 'set and forget' type wound treatment to market has the potential to deliver enormous benefits, particularly for producers who face distance-related challenges in managing their herds.

For many northern Australian cattle operations, mustering is a once-a-year event which means many cattle undergoing dehorning will have passed the ideal age of around two months, before the horn begins fusing to the skull.

Dehorning older cattle causes elevated pain, severe haemorrhage and increased infection risks, particularly in wet or dusty environments.

Without a patch, wounds can take up to 14 weeks to heal and are vulnerable to infection and irritation (e.g. fly strike) throughout this period.

Going forward, the researchers aim to design and test a wound dressing which:

- contains pain relief medication and antiseptic and antimicrobial ingredients for infection control
- provides superior wound adhesion for protection of the wound throughout healing.

Benefits outweigh costs

A key goal of the wound treatment is to provide pain relief following dehorning – with many producers recognising its benefits.

"Many producers say the broader use of pain relief is a no-brainer – while it may not always guarantee extra kilos of weight gain, it may reduce calf mortality and mismothering, and is important for maintaining animal welfare," Samantha said.

Where to now?

The research team aims to develop a functional, practical wound dressing by the end of 2025 for experimental purposes. Pathways for commercialisation are being explored during the project.

"We're also considering existing commercially available wound treatment products for testing and will compare our novel products with these. Some producers are already using products such as aluminium-based aerosol bandages," Samantha said. ■

Sticky solution to dehorning challenges

The research offers a solution to dehorning-related challenges which producers in extensive grazing systems face.

These include:

- Large open wounds, particularly in older cattle, can bleed excessively and pose an infection risk.
- Pain relief products which are currently available don't offer adequate wound protection or long-lasting effects for the entire wound healing process, which can take several weeks.
- Re-yarding to provide follow-up wound treatment and monitoring is often not practical or feasible in extensive systems and can cause stress and further damage to wounds which are still healing.
- Without any form of wound protection, knocks to dehorning wounds can cause re-bleeding, delayed healing and can increase risk of infection, particularly in dusty conditions.

SEASONAL ACTION PLAN

- Consider which seasonal and climatic conditions best suit dehorning, for reduced dust and rain events.
- Adhere to good infection control techniques, such as disinfecting tools in between animals.
- The current gold standard for pain relief involves a multi-modal approach, combining a local anaesthetic and non-steroidal anti-inflammatory drugs, to target both acute nociceptive (pain caused by trauma) and inflammatory pain.

TOOLBOX

- MLA pain relief resources: **mla.com.au/pain-relief**
- MLA husbandry research and development: **mla.com.au/husbandry**
- Scan the QR code to read *A guide to best practice husbandry in beef cattle Branding, castrating and dehorning – 2nd edition*:

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» Joe Leven with his wife Benita. Image: Simon Freeman.

Benefits of resilient land are crystal clear

A group of Casino Food Co-op producers in the Northern Rivers region of NSW have set their sights on three areas to deliver productivity benefits and solutions to environmental challenges – not only on their own farms, but for the wider community.

The 'River Crystal' initiative focuses on soil, water and climate.

River Crystal's leader Joe Leven – who hosted one of MLA's Aussie Beef Mates delegations in 2023 – said the resilience and longevity of their land is the key goal for the producers involved.

"Our goal is to not only improve productivity of the land in the short term, but to see it continue for the generations of producers to come," he said.

Climate

The region receives summer-dominant rainfall, with 1,100–1,500mm falling annually.

"While we are a high-rainfall area, our rainfall is restricted to the summer months," Joe said.

"We'll kick off each year with this abundance of high-quality feed which, come April, will completely transform into dry matter.

"So, there's 5–6 months each year where our pastures are experiencing a huge nutritional deficiency.

"However, through understanding these climate impacts our region faces, there's opportunity to address them."

Access climate resources at mla.com.au/climate and tools to prepare for dry conditions at **mla.com.au/dry-ready**

Soil

Joe said while many producers are aware their soils play a huge role in the productivity and resilience of their land, they often find themselves not knowing where to start when it comes to improving their soil health.

For Northern Rivers producers, loss of topsoil due to runoff and soils which cannot adequately store water are key issues.

"Understanding your soil's function, constraints and abilities is a very important component to improving your land productivity as it determines the standard of your pastures and therefore, the standard of your livestock," Joe said.

"Long term, it also determines how many generations of farming your land will provide for."

According to Joe, the first step to understanding your soil begins with a soil test. As part of the River Crystal initiative, he travels to producers' properties, walks them through the test, and engages them in conversations about the test results, impacts and possible solutions.

"From the soil test, we can determine soil types they're losing to runoff, if there's any nutrient deficiencies, how much water their soil is storing and even the level of organic carbon their soil has."

Following on from the soil test results, Joe said producers in the group can then spend half a day with a local agronomist to better their soil knowledge and confidence in addressing their own soil constraints.

"Soil is an important part of land productivity but it's also an important part of their red meat business," Joe said.

"Through this initiative, producers are becoming increasingly aware of how soil can be impacted by climate and changes to the landscape, as well as how soil can be managed and transformed to benefit pasture productivity and reduce carbon emissions.

"Overall, the shift in knowledge producers gain is taking their soil conditions from poor or average to better and excellent."

Find out how to conduct a soil test at MLA's healthy soils hub: **mla.com.au/healthy-soils**
To learn more about carbon storage, visit MLA's CN30 hub: **mla.com.au/cn30**

Water

When it comes to water, the initiative not only emphasises the importance of water in a grazing business, but also its role in the function of the area's ecosystem.

"The combination of modern civilisation and environmental challenges can do a very good job at dehydrating the land over time," Joe said.

"However, if we actively take into account these impacts and their causations, we can find and implement solutions that prevent this from happening.

"Throughout this initiative, we explored strategies that improved the function of water on the property in ways that subsequently benefited the wider community."

Due to the region's highly concentrated wet season, Joe said water storage is essential to ensuring year-round productivity.

"Investing in water management infrastructure reduces your reliance on your riparian area as a sole water source," Joe said.

"It also reduces the amount of water you have leaving your property and taking topsoil with it."

According to Joe, key water management infrastructure which River Crystal producers have invested in included tanks, troughs and pumps.

To further address runoff, contouring has been implemented by producers in the initiative.

"Whether it's done at a large scale or small scale, contouring has become one of the preferred approaches to slowing water flow during the wet season," Joe said.

"We have a lot of inclines in elevation across the Northern Rivers region, which gives water a chance to accumulate enough speed to drag sediment as it moves down the landscape and into our rivers.

"But, through performing tillage and increasing vegetation along the land's contour lines, we're interrupting the water's downwards flow."

In addition to reducing topsoil runoff, Joe said contour planting has delivered benefits by:

- reducing erosion
- sequestering more carbon from the atmosphere through increased vegetation
- increasing the amount of water stored in the soil.

"Another great benefit we're seeing are cleaner rivers thanks to the decline in soil nutrients entering waterways," Joe said.

"This is a really positive outcome because it leads to not only an improved ecosystem, but also an improved reputation for red meat producers.

"In turn, we've also been able to receive grants from river conservation groups to invest in more water management infrastructure."

For more advice on reducing runoff, visit **mla.com.au/maintain-ground-cover**

Joe Leven explains the importance of healthy soil to MLA's Aussie Beef Mates. Image: Simon Freeman.

Joseph Leven **member.services@cassino.com.au**
Harriet Bawden **hbawden@mla.com.au**

New tool to self-assess LPA

In coming months, the Livestock Production Assurance (LPA) program will introduce a new self-assessment tool as part of its accreditation and re-accreditation process.

The new tool will offer a bespoke experience to significantly improve the learning opportunities available to producers and should only take 20 minutes to complete.

What's changed?

While the current accreditation process quizzes producers on their knowledge of the LPA program, the new self-assessment tool asks them to reflect on their own practices and identify where they sit against the LPA rules and standards.

As producers work through the assessment, a list of recommendations and resources relevant to each question will appear, helping expand producer knowledge and deliver a deeper understanding of how specific risks apply to their enterprise.

On completion, the tool generates a personalised recommendations report, prompting reflection on current practices and whether changes or improvements are needed. The report also identifies educational opportunities relevant to the producer's situation.

Why it matters

As well as improving on-farm risk management, the new tool will help inform LPA's future compliance priorities by identifying emerging trends. This will enable the program to tailor education materials and extension activities in response and, where necessary, consider changes to the standards.

For updates on the new tool, ensure your details are up to date on your LPA account: **integritysystems.com.au/lpa**

Integrated systems nurture

This is the third article in our series on Argyle Foods Group's (AFG) initiatives in the sustainability space. Here we look at how AFG's integrated management systems and steps to achieve carbon neutrality underpin the environmental credentials of their new sustainable grassfed beef brand, Argyle Nurture. Read the previous articles in the Autumn and Winter 2023 editions of Feedback *at* **mla.com.au/feedback**. *AFG was a finalist for this year's Banksia Foundation's 35th National Banksia Sustainability Award (Agriculture and Regional Development Award), which MLA sponsors.*

AFG – the vertically-integrated pastoral company and parent to Argyle Carbon – is reaping the rewards of increased efficiency, productivity and market demand by a continued commitment to sustainable management of its farms and livestock.

Its new 'nature positive' beef brand, Argyle Nurture, has built a loyal customer base through being transparent around its sustainability credentials – which encompass not only carbon, but also regeneration of its land.

A brand built on trust

For AFG's General Manager, Naomi Leahy, the company's integrated systems are a conduit for building open communication and trust with their customers.

"Our integrated systems support our brands – as well as provide consumers with more certainty around the supply chain supporting our product," Naomi said.

"Connecting our customers to our supply chain supports the continual development and expansion of best practice through driving demand from a customer base who really care about what we are producing and want to come back to our product again and again.

"It's about connecting our consumers to our story and where their product comes from."

Market access

Beyond the Australian market, AFG is tapping into strong demand in the US for 'regenerative' food products – the fastest growing segment in this market.

Argyle Nurture has also received an unexpected spike in interest from Hong Kong's increasingly environmentally conscious consumers.

Producer impact

AFG's beef suppliers understand that what they do on-farm has a direct impact on Argyle Nurture's success as a brand. Both this, and the certainty of demand for their beef, gives them confidence to continue investing in on-farm changes to maintain their supplier status.

"Our producers can see the value in being involved and say, 'yeah, it's worth doing'. It supports them long-term to make changes on their farm because they know they've got a market for it to go to," Naomi said.

Argyle Foods Group General Manager, Naomi Leahy. Image: Argyle Foods Group.

SNAPSHOT

ARGYLE – operating across 40 properties in NSW and Victoria

AREA
60,000ha

ENTERPRISE
Vertically integrated grassfed beef supply chain – 30,000 head Angus and Angus-cross cattle, some *Bos indicus* cattle on northern properties and trade lambs at Harden, NSW

PASTURES
Improved pastures, native pastures, cropping

Navigating your sustainability journey

Every producer's sustainability journey will present a unique set of opportunities as well as challenges specific to their enterprise. Here, Naomi Leahy shares some tips to derive additional value from environmental projects and to smooth out any road bumps:

1. Identify what you can do now to get started. What will support your enterprise's overall productivity and contribute positively to the environment? For example, plant shelter belts of trees to promote greater biodiversity, improve soil health and promote greater animal welfare.

2. Understand your five and 10-year goals and engage with a service provider to help work out how environmental improvements can support these goals.

3. Some activities may also be eligible for additional financial reward under incentive schemes, such as the Emissions Reduction Fund (ERF) or *Nature Repair Bill 2023*. In some cases, registering a project under a crediting scheme could build on the benefits for undertaking activities a producer had already intended to pursue in the farm business.

   For example, undertaking a soil sequestration project prior to implementing a new five-year pasture improvement plan could enable you to maximise the benefits through the measurement of soil carbon, the generation of ACCUs and gain productivity improvements in livestock.

4. Engage with a supply chain whose brand story supports your on-farm goals. This will help support the business in the long term to secure livestock offtake agreements.

« Argyle Nurture's customers want their beef raised sustainably in a stress free environment. Image: Argyle Foods Group.

environmental transparency

Now, having first implemented the Argyle Pastoral Program across its own livestock enterprises, Argyle is expanding its program to other suppliers to support the growth of the Argyle Nurture brand.

Joining the supply chain

Producers whose values and current or planned on-farm practices match with brands such as AFG's, can benefit through forward contracts creating certainty of demand for their livestock.

"We want our partners to share in the benefit of our supply chain with us for ongoing and lasting success," Naomi said.

"Supporting them to make long-term changes on their farms to back-up the sustainability goals of the brand, while making sure the requirements are able to fit each individual business's needs, is key."

Supportive partnerships

AFG aims to foster close, long-term relationships with the producers it partners with.

"We want like-minded producers who prioritise sustainable actions on-farm," Naomi said.

While the Argyle Nurture brand doesn't claim to be carbon neutral, AFG is strongly committed to building as healthy a farm ecosystem as possible with each producer they work with.

"Through partnerships with our suppliers, we spend time ensuring we're doing everything we can from Argyle's side to help them achieve their goals," Naomi said.

Argyle's hands-on onboarding process supports suppliers to meet Argyle Pastoral Program requirements and collect and collate the necessary data and information.

Program requirements include livestock being antibiotic free, 100% grassfed, hormonal growth promotant-free, never confined and a participant of 'Better Choices'. Scan the QR code to learn more on the Australian Beef Sustainability Framework website. ■

Taking the first steps

Here's a closer look at the steps Argyle took as part of their soil project and environmental plantings.

Soils project

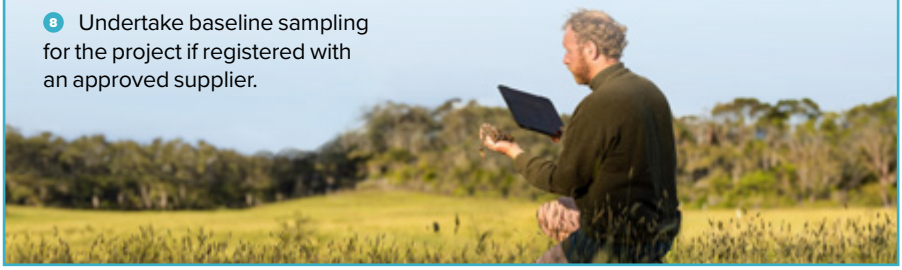
1. Review soil characteristics using software.*
2. Map property boundary and paddocks.*
3. Determine potential carbon estimation areas (CEAs) and identify exclusion zones.*
4. Consider engaging a soil measurement company to conduct baseline sampling. This will add costs but help you make a go/no go decision to progress.
5. Determine carbon sequestration potential. AFG used LOOC-C (developed by CSIRO).
6. Develop a land management strategy and complete registration forms with the Clean Energy Regulator.
7. Assess the benefits of registering the project with the Emissions Reduction Fund (ERF).
8. Undertake baseline sampling for the project if registered with an approved supplier.

Environmental plantings

1. Map project boundaries on the farm map. AFG used GIS software.
2. Determine the size of the potential project.
3. Conduct initial carbon assessment and estimate the Forward Abatement Estimate. AFG used FullCAM software.
4. Consider consulting with carbon experts to gain a clearer picture of this method's feasibility for your farm. If feasible make the decision to:
   - complete registration forms with the Clean Energy Regulator
   - submit Emissions Reduction Fund (ERF) registration of the Environmental plantings project.

A service provider can provide guidance on both methods and help match their suitability to the farm in question.

*These steps may need to be completed by a consultant/project developer.



TOOLBOX

- Scan this QR code for MLA's carbon management e-learning modules
- MLA's Carbon EDGE program: **mla.com.au/carbonedge**
- MLA's carbon calculators: **carbon-calculator.mla.com.au**, **quick-start-carbon-calculator.mla.com.au**
- Australian Beef and Sheep Sustainability Frameworks: **sustainableaustralianbeef.com.au, sheepsustainabilityframework.com.au**
- Soil carbon courses: **soilcquest.org.au/courses**

mla.com.au/cn30 **mla.com.au/sustainability-hub** Naomi Leahy **naomi.leahy@argylefoodsgroup.com.au**
Josh Whelan **jwhelan@mla.com.au** Julia Waite **jwaite@mla.com.au**

People, data and decisions pack a punch

Dr Penny Schulz is a woman of many talents: producer, livestock consultant, lecturer and adoption specialist with the University of Adelaide's SA Drought Hub department.

Here, she shares her advice on how to make decisions which stand up to the pressures and volatility which go hand-in-hand with life on the land.

People power

Penny and her husband Jason run a well-established operation in SA's Limestone Coast region. Supporting her on-ground knowledge is broad industry involvement and experience which has led Penny to embrace the value of a team approach.

"Getting a good team of people around you in farming seems to be the key to helping you ride out those tough years," Penny said.

Drawing from the experience and support of their local livestock benchmarking group and farm advisor has been a game changer for Penny and Jason's on-farm decision making.

"We learn just as much from other participants as from the group facilitator and the data gurus. Plus, our fellow producers keep us accountable and motivated," she said.

"Discussions with other producers about where they're going to invest their money in a tough year or what their plans are for buying or selling stock are mutually beneficial, but there needs to be trust involved and openness needs to go both ways."

The couple also meets with their farm advisor several times a year to plan, review, budget and set goals.

"These networks are invaluable when considering an enterprise change, land purchase, or how to strategically use our funds during tough market or seasonal conditions, like we've experienced recently," Penny said.

Technology and training

Embracing technology and boosting business skills are also key to building business resilience.

Penny said using technology to collect and analyse on-farm data and then filter it through a logical decision-making framework can reduce stress.

"Good decision-making processes should be able to work for a good, tough or average year. It's also important producers come up with tactics to make the most of opportunities in those good years," Penny said.

When it comes to business skills, Penny admits she's never met a producer who went into farming because they love finances or bookkeeping – but she's seen many learn to love it.

"You need to be able to do more than just enough bookwork to keep your accountant happy. Knowing your cost of production, debt servicing costs, the usual price for your product and return on assets are just a few benefits.

"Make technology your friend to access pasture assessments, make record keeping easier for Livestock Production Assurance requirements, monitor water remotely and to utilise precision livestock management tools."

Planning ahead

Once you have data, forward planning can mean you're not having to make decisions under pressure.

Penny has found Cam Nicholson's (Nicon Rural Services) decision-making matrix very useful, particularly when times are tough. They use it for important decisions like buying or selling stock, containment feeding ewes and fodder conservation.

"Spending a couple of hours developing a decision-making spreadsheet will save time and give you greater confidence in your decisions going forward," she said.

"It will help identify the critical factors and pieces of information you need each time you make those decisions, so you know your farm's tipping points – that's why knowing your numbers and having the right technology is so valuable." ■

- Business EDGE workshop: **mla.com.au/edgenetwork**
- Penny Schulz **penny.schulz@adelaide.edu.au**
- Keely Kovacevic **kkovacevic@mla.com.au**

Dr Penny Schulz. Image: Brad Griffin.

SNAPSHOT

PENNY AND JASON SCHULZ –
Field, SA

AREA
1,313ha

ENTERPRISE
80 Angus, Hereford and Limousin-cross breeders and 2,200 Merino ewes joined to Border Leicester rams

PASTURES
Dryland lucerne, veldt grass pastures, grazing crops

SOILS
Sandy loam

RAINFALL
460mm

TOOLBOX

- Australian Feedbase Monitor: **mla.com.au/afm**
- Bureau of Meteorology climate outlooks– scan the QR code:
- Drought Resilience Self-Assessment Tool: **drsat.com.au**
- My Climate View: **myclimateview.com.au**
- MLA calculators: **mla.com.au/tools-calculators**
- Lifetime ewe management course: **wool.com/ltem**

MLA's 'Understanding climate drivers' eLearning – scan the QR code:

Winter webinars fire up productivity and profitability

Practical advice for building a better business is just one click away with MLA's Productivity & Profitability (P&P) series.

Through a series of live monthly webinars and corresponding podcasts, P&P provides a range of knowledgeable speakers to aid on-farm decision making for beef, sheep and goat producers.

The line-up for winter 2024 features presenters who are armed with topical information to help every beef, sheep and goat producer harness the latest research and data to increase business success through the colder months.

REGISTER NOW

Sally Martin

eID: does it really add value?

Wednesday 19 June

The January 2025 deadline for sheep and goat electronic identification (eID) is fast approaching. While it may be mandatory, if used effectively, eID can bring many business opportunities beyond compliance.

Sally Martin from Sheep MetriX joins P&P to discuss the benefits of using eID, including management, production and breeding opportunities and the growing potential for animal-specific carcase feedback.

REGISTER NOW

Callen Thompson

Growing beef from dairy

Wednesday 10 July

Dairy producers are facing an ongoing issue with their social licence to operate as they tackle the question of what to do with excess calves which can't be absorbed into the herd.

Ongoing research between MLA and Dairy Australia is providing insights into how well-managed dairy beef has the potential to be a quality product and provide another income stream for producers.

Callen Thompson from AgSTAR Projects will walk you through how to breed, feed and manage surplus calves to meet market specifications.

REGISTER NOW

Elke Hocking

Hot tips for heifers

Wednesday 14 August

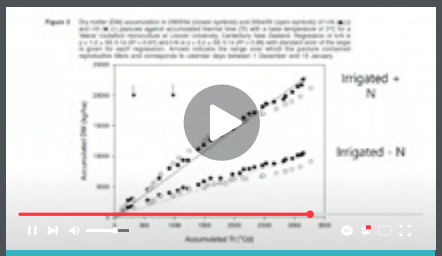
The list of ways to increase productivity and profitability with heifers is long and varies for every producer.

An MLA-funded study involving 19 beef businesses is doing the work for you, to find which methods work best to improve breeder reproduction rates from heifers through to their second calving, and why.

SA Livestock Consultant Elke Hocking presents the facts so far when it comes to solving reproductive issues, and shares extensive insights from the project, including factoring in nutrition requirements, weight targets, calving time and animal health, along with genetic selection and bull fertility.

Other winter webinars ready to watch now:

Winter cleaning pastures agronomy panel with Jim Virgona and Tim Prance: **Scan the QR code to watch on YouTube.**



Brr it's cold in here – the effects of temperature on pasture production with Jim Virgona: **Scan the QR code to watch on YouTube.**

Checking your cows are at optimum condition score this winter with Dr Paul Nilon: **Scan the QR code to watch on YouTube.**

Register for the webinars or catch up on any you've missed at **mla.com.au/pandp** Prue Francis **prue@agrista.com.au**

Rolling, rolling, rolling: two ways

A new guide from the MLA-supported Dung Beetle Ecosystem Engineers (DBEE) project provides practical tips for getting the most out of dung beetles on your farm.

Credited with improving soil health, pasture quality and water use efficiency – while reducing parasites and bushfly populations – dung beetles are a powerhouse workforce for livestock producers. But they aren't a 'set and forget' solution.

Maximising your share of the estimated $620 million in ecosystem services dung beetles deliver to Australia's agricultural sector each year requires some active management.

Here, the guide's co-author – Technical Research Coordinator of the DBEE project at Charles Sturt University, Dr Russ Barrow – shares two of the top actions producers can take right now to boost beetle benefits on-farm.

1 Close the 'service gap'

Across Australia, there are more than 25 established introduced species of dung beetles and more than 500 native species which process sheep and cattle dung.

DBEE monitoring revealed that while many regions support multiple species, geographic barriers and local environmental conditions limit diversity in others.

"Beetle diversity is fundamental to optimising ecosystem services," Russ said.

"Dung beetles are seasonal – so for most Australian farms, addressing this 'service gap' is a big challenge.

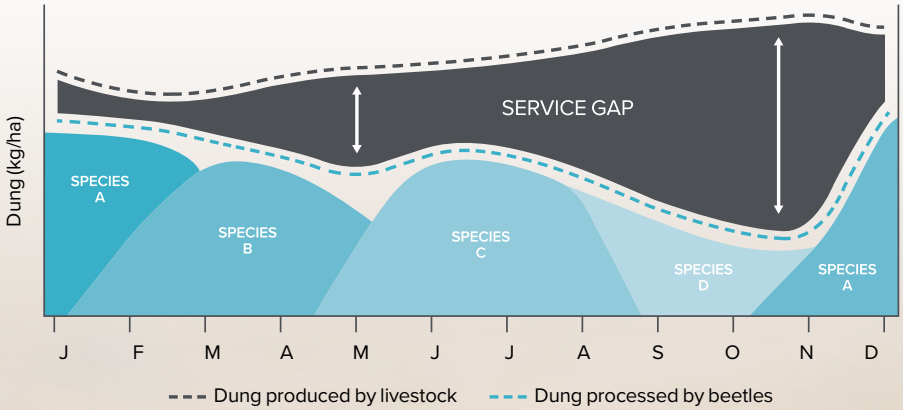
"To ensure year-round processing of dung and year-round benefits, producers should be aiming to have at least 6–10 different species of beetles throughout the year."

Figure 1 (below) shows the gap between dung produced and dung processed by beetles.

Thanks to an almost 60-year program of work by CSIRO and various partners (including DBEE project partners) Australia enjoys a variety of naturalised dung beetle species that provide excellent ecosystem services when they are active. But in most regions, they do not provide year-round seasonal coverage.

Many regions could potentially support winter-active beetles, with suitable species being found from the Desert Channels around Blackall in Queensland to the cool climate of East Gippsland in Victoria.

Figure 1: Typical grazing property situation showing seasonal service gaps caused by the lack of optimal dung beetle fauna



Technical Research Coordinator of the DBEE project at Charles Sturt University, Dr Russ Barrow.

SEASONAL ACTION PLAN

- Identify and monitor your on-farm beetle populations – scan the QR code to read the DBEE guide, *Managing dung beetles on your farm*.
- Select dung beetle species which are well-adapted to your property and environment – local groups such as Landcare and commercial dung beetle suppliers can assist: **landcareaustralia.org.au**, **dungbeetles.com.au/livestock-producers/buying-dung-beetles**
- Manage the duration and intensity of grazing, to provide beetles with access to ample fresh dung, and always protect the pasture from over-grazing. MLA's grazing land management and healthy soils hubs have useful resources: **mla.com.au/grazing**, **mla.com.au/healthy-soils**
- Evaluate the choice and timing of drench to best preserve and protect your dung beetles on-farm – scan the QR code for more information.

to get more out of dung beetles

However, DBEE monitoring suggests these winter species could take decades to spread organically, so manual redistribution is essential.

"Also, beetle populations can be wiped out due to flooding or severe drought – so having had a healthy population in the past is no guarantee of future coverage," Russ said. "That's certainly the case in the central west of NSW, where we've been assessing beetle populations after the devastating November 2022 floods."

Selecting species to reduce or close your service gap requires an understanding of the beetle diversity existing on your property. The DBEE management guide (along with other resources on the DBEE website) provides help with identification and management.

Russ said commercial dung beetle consultants can also help determine what beetles are suitable for your location, climate and soil type, and design a beetle management strategy that encourages beetle diversity and abundance.

> **"Dung beetles can deliver a substantial return on investment to livestock businesses, if producers put a little time into supporting them."**

Local Landcare and farming systems groups provide workshops and guidance on how to successfully introduce and manage beetles in regional areas across Australia, and can also assist producers with redistribution.

2 Review drenching and grazing practices

"The question producers ask most frequently is: can drenching my livestock harm my dung beetles? More often than not, the answer is: yes," Russ said.

Table 1 (right) provides more details on which products should be avoided – and there's also more information available from Zoetis Australia's dung beetle resources (see link in 'Seasonal action plan').

Other management strategies can also impact dung beetles.

"Be it an ear tag designed to combat buffalo fly, or an oral treatment for gastrointestinal worms, the use of veterinary chemicals (regardless of the method of administration or the intended target) should be considered as potentially detrimental to dung beetles," Russ said.

While the management guide helps producers understand the chemicals which impact dung beetle populations, good management practices can reduce the likelihood of decimation.

For example, adhere to withholding period on drenches.

If you are using veterinary chemicals for animal health and production benefits, quarantine treated animals for two weeks post-treatment as the amount of chemical in dung diminishes with time – this will limit the number of beetles encountering toxic dung.

Grazing strategies can also optimise beetle activity.

Rotational grazing encourages higher densities and species richness than set stocking regime – the higher the density of beetles resulting from rotational grazing, the better.

"Dung beetles can deliver a substantial return on investment to livestock businesses, if producers put a little time into supporting them," Russ said.

"The management guide provides the 'how to' that producers need to get started." ■

Table 1: Veterinary chemicals in common use and their potential impact on dung beetles

Pesticide group	Group	Chemical example	Significant excretion pathway	Impact on dung beetles
1A	CM	propoxur	urine	low
1A	CM	bendiocarb	urine	low
1B	OP	dichlorvos	urine	probable #
1B	OP	chlorfenvinphos	urine	probable #
1B	OP	diazinon	urine	probable #
1B	OP	naphthalophos	urine	probable #
1B	OP	fenthion	urine	probable #
1B	OP	chlorpyrifos	urine	probable #
3A	SP	deltamethrin	dung and urine	high
3A	SP	permethrin	dung and urine	high
3A	SP	bifenthrin	dung	high
3A	SP	cypermethrin	dung and urine	high
3A	SP	flumethrin	dung and urine	high
4A	NN	acetamiprid	urine	low
4A	NN	imidocloprid	urine	low
5		spinosyns	dung	high
6	ML	doramectin	dung	high
6	ML	ivermectin	dung	high
6	ML	eprinomectin	dung	high
6	ML	abamectin	dung	high
6	ML	moxidectin	dung	low
7	IGR	cyromazine	dung and urine	low
7	IGR	dicyclanil	dung and urine	low
7	IGR	diflubenzuron	dung and urine	low
7	IGR	fluazuron	dung	low
	BZ	albendazole	urine	low
	BZ	fenbendazole	dung	low
	BZ	oxfendazole	dung	low
	LV	levamisole	urine	low
	SA	closantel	dung	low
	IQ	praziquantel	urine	low
	AAD	monepantel	dung	low
	AAD	nitroxynil	urine	low
	SF	clorsulon	dung and urine	low
19	FA	amitraz	urine	low

AAD – amino-acetonitrile group; **BZ** – benzimidazole group (white drenches); **CM** – carbamate group; **FA** – formamidine group; **IGR** – insect growth regulator; **IQ** – isoquinoline group; **LV** – levamisole group (imidazothiazoles); **ML** – macrocyclic lactone group (mectins); **NN** – neonicotinoid; **OP** – organophosphate group; **SA** – salicylanilides/phenols group; **SF** – sulfonamide group; **SP** – synthetic pyrethroid.

even though excretion is primarily in the urine, dung from animals treated with dichlorvos has been associated with high dung beetle mortality.

Associate Professor Russ Barrow and Professor Leslie Weston of Charles Sturt University, Gulbali Research Institute, were authors of the guide: *Managing dung beetles on your farm.* The guide was produced with support from the DBEE project through MLA and the Australian Government Department of Agriculture, Fisheries and Forestry.

dungbeetles.com.au mla.com.au/dung-beetles Cameron Allan **callan@mla.com.au**

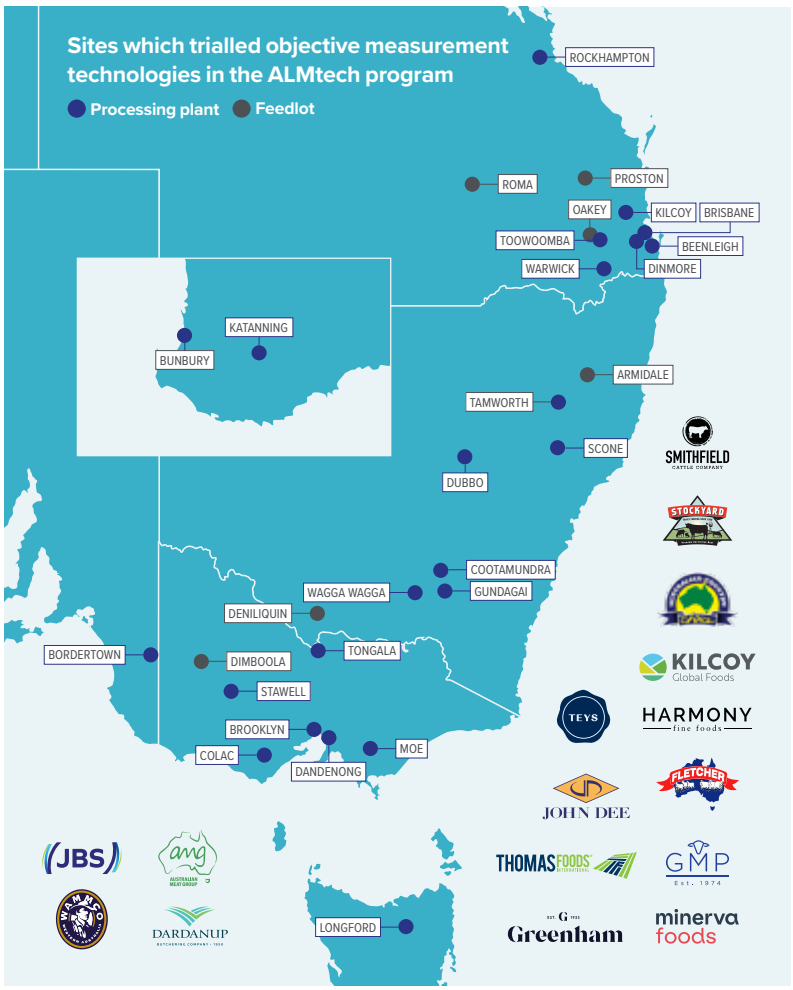
ALMTech links profit to producers

Historically, lean meat yield (LMY) and eating quality have been difficult traits to measure within the beef and lamb industry. However, the recently completed Advanced Livestock Measurement Technologies (ALMTech) program has changed this, delivering improved measurement technologies and systems.

More than 30 feedlots and abattoirs across Australia are now using some form of objective measurement technology that was developed with the assistance of ALMTech. It's estimated by 2040, ALMTech will have generated an increase of $858 million for Australia's beef, lamb and pork industries.

The latest phase of ALMTech built on phase one – which wrapped up in 2020 – to further enhance the Australian beef and lamb industries' ability to respond to market demands and capture value chain price differentials via advanced objective measurements of meat quality and quantity.

ALMTech I and II have delivered a combined benefit–cost ratio of 6.7:1 to the red meat industry, with an estimated 34% of that generated profit to be retained by producers.



From plate to paddock:

three ways measurement tech benefits producers

Here's a look at how ALMTech II technologies are benefiting producers.

1 Offering value-based insights

When it comes to measuring lean meat yield (LMY) and eating quality, finding non-destructive objective methods which are cost-effective and able to operate in both on-farm and commercial environments are essential to enhancing the productivity and profitability of the red meat supply chain.

MLA Objective Measurement and Data Adoption Manager, Dean Gutzke, said the true value for producers of objective measurement technologies is their ability to improve fair pricing and transparency.

"Currently, the value of each carcase tends to be averaged out – by default, the payment producers receive is also averaged out," Dean said.

"But with the adoption of new objective measurement technologies enabled through ALMTech, producers can be paid the specific value of each carcase cut – including offal and hide.

2 Providing opportunity to improve on-farm

Dean said the difference in value between a producer's best and lowest performing animal at slaughter can be as large as $600.

"This result has really highlighted that even though the cost of production may be the same for each animal, the value of the final product it produces can vary significantly," he said.

Dean said this is where live animal objective measurement technologies come into play.

"While the accurate scoring of carcase traits can help producers to better understand how to improve the overall quality of the herd or flock, live animal objective measurement technologies give producers the data, and therefore the opportunity, to improve the individual animal before it goes to market," he said.

"Feedback shared from producers has told us that measuring an individual animal's predicted LMY, eating quality, intramuscular fat and marble score while it's still alive can help them plan ahead when it comes to making financial decisions and herd or flock profile decisions."

These technologies would not be as advanced as they are today without the support of the ALMTech program.

3 Ensuring transparency with data flow

"During ALMTech II, we worked with a number of groups within the supply chain to improve both communication and collaboration when it came to collecting, storing and sharing individual animal data," Dean said.

"Throughout the program, we focused on how we could analyse data and present it back to producers in a way that would allow them to utilise it to advantage their herd or flock profile."

This was achieved through three main components:

- enhanced data capture by recording additional conditions observed during processing, and contributing this data to processor information systems and industry databases
- links to existing databases by integrating kill floor data with feedback pipelines and ensuring data for animals with genetic background information can be used in genetic evaluation
- fostering new/improved feedback systems by engaging with MLA and collaborating processors to deliver interpretable information to and facilitating its use from commercial producers.

Looking ahead, Dean said MLA will continue ALMTech's legacy with maintained focus on examining the value of using carcase data to build upon industry genetic evaluation systems. ■

You can read more about the objective measurement devices developed in ALMTech I in the December 2020/January 2021 edition of *Feedback*: **mla.com.au/feedback**

ALMTech hub: **mla.com.au/om**
Dean Gutzke **dgutzke@mla.com.au**

New course rides into feedlots

The feedlot industry now has access to new training tool for pen riders.

The Pen Riding Fundamentals course – supported by MLA – was filmed at Smithfield Feedlot in Queensland. It was developed by Group Livestock Manager for Smithfield Cattle Company Ryan Brown, ALFA's Feedlot Training Project Manager Emily Litzow and veterinarian Julie Brown, with input from other feedlot consulting vets.

The engaging, interactive course is broken down into a series of modules highlighting exactly what a day in the life of a pen rider looks like and the role's importance to feedlot operations.

"Until now there's been a definite gap in formal training for pen riding," Ryan said.

"We all recognise the labour shortage we're experiencing and the skills shortage that we're concerned about in the future, so highlighting the foundations of pen riding is essential."

Each module within the course begins with a brief discussion where Ryan describes the task ahead and follows the different stages of pen riding. A veterinarian then outlines the animal's health, discussing the identification and progression of the illness.

"Pen riding is an incredibly detailed task when done well, but what we're trying to do is simplify it to the point where it makes sense for somebody with no experience," Ryan said.

The course is available via the feedlot industry's dedicated careers and training platform, Feedlot TECH. Access to all Feedlot TECH online courses is free to all feedlots, employees and industry-associated individuals. ■

Visit the Feedlot TECH Training Hub: **feedlottech.com.au/training**

Putting a freeze on food waste

Meat is one of the main household food items wasted in Australia, with one-third of total food waste attributed to consumer practices and refrigerator performance – presenting an opportunity for industry to understand how to reduce it.

The Royal Melbourne Institute of Technology (RMIT), MLA and the End Food Waste Cooperative Research Centre (CRC) have been studying Australian household and refrigerator practices.

The project involved real-time temperature monitoring, interviews with households, and fridge searches to understand fridge performance and efficiency, as well as how consumers buy, store, consume and dispose of meat.

RMIT's Dr Bhavna Middha said food waste occurs at all stages of the supply chain, and it's important for all sectors to understand each other's practices and work together to optimise processes.

"Consumers will buy a piece of technology and think it will work perfectly for a long time, but that doesn't always happen – they need to find ways to maintain and use them effectively," Bhavna said.

"However, retailers and manufacturers should understand their consumers and optimise their products for them as an honest and trustworthy source."

The results highlighted multiple opportunities for different sectors to reduce meat waste, including:

- consumers operating and maintaining refrigerators more efficiently
- retailers better communicating optimal refrigerator temperatures and accurate product shelf-life
- manufacturers developing refrigerators with better temperature control.

How consumers use fridges

Some of the key highlights of consumer practices include:

- freezers are being used to save meat from expiring, despite some households noticing reduction in quality and higher energy consumption
- many householders are unaware of temperature variations in their fridges, with many noting fridge design sometimes prevented a clear view of all food items, leading to forgetfulness and discard
- increases in prices of all essential commodities are making many householders more conscious about food waste
- knowledge about shelf-life and food waste are acquired from packaging labels, internet searches and lived experience
- date labels are used as an indication of freshness or shelf-life – if near expiry, it could be purchased to save money, or if not expired, could be bought and frozen to extend its life.

RMIT's Dr Peter Stasinopoulos said retailers and manufacturers accounting for a margin of error can be beneficial when developing packaging and storage information for consumers.

"Providing information is cheap, so the extra step should be taken to provide information dependent on fridge temperature, cold storage and travel time to ensure consumers are using their products most effectively," he said.

"Consumers should then ensure they are taking note of this information, using it accordingly and taking note of their own fridges' performance."

Informing industry

The collection of data on how red meat is stored in the main household food refrigerator and subsequently discarded can help create improvements for consumers and businesses on environmental and financial scales.

Retailers can use it to aid in shelf-life investments – leading to decreases in mark-down costs and unpurchased product waste.

Consumers will also have greater surety that their products are fresh – reducing wastage and improving wellbeing – while refrigerator manufacturers can use this to better inform product development that suits consumers, maintaining productivity and profitability with sustainability at the forefront. ■

Key findings of refrigerator performance include:

- 70% of households had one refrigerator unit – however, those with more kept them in non-insulated areas such as garages, leading to reduced performance
- fridges had a mean setpoint of 3.4°C and freezers had a mean setpoint of -17.8°C – the ideal temperatures are 3 to 5°C for fridges and -18 to -20°C for freezers
- average fridge temperature had a mean of 4.4°C, with 17% of fridges outside optimal range
- average freezer temperature had a mean of -15.9°C, with 43% of freezers outside optimal range
- most door seals were in good condition, enabling slowed heat infiltration
- different average temperatures across different shelves of the same fridge
- temperature control of 36% of shelves was imprecise.

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Crunching the numbers on refrigeration sustainability

A new tool has been developed to provide insight into emission and cost challenges, while maintaining the quality of red meat products if transported in differing temperatures.

MLA and All Energy developed the refrigeration calculation tool for transporters and exporters looking to improve their processes.

MLA Program Manager – Food Innovation, John Marten, said the calculator helps identify costs and emissions during the cold storage and transportation phases of processing.

"Refrigerated transport is a significant contributor to the cost of goods paid by processors, which is ultimately passed on to consumers – so this tool allows processors and producers to understand the cost of refrigeration relative to the products they are supplying," John said.

The tool simulates different variables and scenarios within processing and transport, providing insights into emission levels under various conditions, including transportation methods and refrigeration requirements.

How it works

By inputting starting temperature and distance travelled for each freight method, the calculator provides the total cold chain emissions (kg CO_2 equivalent/t) and the chilling cost ($/t) at the processing stage, including any supplementary costs. This data can then be used to compare the current transportation method costs and environmental impacts against hypothetical non-refrigerated scenarios, such as sterilised *sous vide* packaging.

"The incentive for significant adoption might come from international markets, where there's a willingness to pay a premium for carbon-neutral products," All Energy's Max Barnes said.

The research team focused on using existing emissions data and scientific theories when developing this tool, in response to the need for comprehensive emissions measurements.

"The approach we took was basically going back to those first principles of thermodynamics and heat transfer, fluid mechanics and conductive convective heat transfer.

"Put simply, the tool is about evaluating options and baselining current practices, providing 'what if' transport scenarios for decision-making," Max said.

This tool equips users with the data to optimise their supply chains and identify opportunities to reduce emission levels, in line with the red meat industry's carbon neutral by 2030 (CN30) goal. These, in turn, will reduce costs and create understanding between producers and processors on how best to support their production and export goals.

The food technology sector is working to ensure costs, efficiency and quality are maintained throughout their supply chain – with an aim for any benefits to flow back to the farm-gate, benefiting producers, as well as our end-consumers. ■

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Biosecurity tools for feedlots

MLA and the Australian Lot Feeders' Association (ALFA) are working together to champion biosecurity preparedness for exotic animal disease (EAD) threats.

They have teamed up to both provide a biosecurity manager for Australian lot feeders, with Rachael O'Brien appointed to this role, as well as to develop tools to arm the industry in the event of an incursion.

The main priority of the newly funded position of Manager – Feedlot Biosecurity, is to deliver the five objectives of the ALFA EAD Biosecurity project.

These include:

1. review the AUSVETPLAN enterprise manual for beef feedlots (last updated in 2010)
2. develop feedlot operational procedures for preventing and responding to a foot-and-mouth disease (FMD) or lumpy skin disease (LSD) incursion, which meet AUSVETPLAN and National Feedlot Accreditation Scheme requirements
3. build feedlot enterprise capability to prevent and respond to an FMD/LSD incursion at the feedlot enterprise level
4. build feedlot industry service providers' knowledge and understanding of the feedlot industry's operational procedures for preventing and responding to an FMD/LSD incursion
5. build ALFA exotic animal disease response capacity.

Tools

ALFA President Barb Madden said Rachel will also oversee the development of a range of tools to aid Australian feedlot enterprises to respond to an EAD incursion in Australia to protect their businesses.

"The tools will include templates and guides on how to strengthen biosecurity practices to best manage animal health in a feedlot during an EAD response," Barb said.

"The biosecurity manager will physically visit lot feeding regions and conduct a series of workshops and extension days covering pre and post-EAD tools and resources.

"They'll also work closely with feedlots to workshop how to use these tools and resources to build EAD capacity and confidence for individual feedlots."

Looking ahead

ALFA will continue to search for opportunities to address gaps in EAD preparedness to better prepare the feedlot industry for an EAD incursion.

"Having a person on-the-ground, dedicated to this task will keep the Australian lot feeding industry in good hands," Barb said. ■

TOOLBOX

- ALFA disease preparedness hub: **feedlots.com.au/disease-preparedness-hub**
- Subscribe to Animal Health Australia's animal disease alerts at **animalhealthaustralia.com.au**
- The Australian Government's outbreak site has information on current biosecurity incidents: **outbreak.gov.au/current-outbreaks**
- Information on FMD and LSD: **mla.com.au/fmd-and-lsd**

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« Shuichi Kitano has an impressive 25 years' service under his belt at MLA. Image: Shuichi Kitano.

Insights from 25 years

MLA is celebrating our 25th year – meet one of the team who has been there from the start.

Shuichi Kitano (SK), Senior Manager Trade & Insights, International Markets, is one of MLA's longest serving staff members, with an impressive 25 years' service under his belt.

Based in Japan, SK sees his role as key in facilitating a bridge between Australia's red meat industry and Japan.

His wealth of experience in the red meat industry includes on-the-ground and office-based roles. Early in his career, SK spent a decade as a meat wholesaler and also worked in meat delivery, a butcher's shop, a pork abattoir and in marketing for a beef import business.

Changes over the years

Over SK's 25 years in the red meat and livestock industry, he's witnessed many improvements and changes.

"The red meat quality has improved wonderfully, and I think the system must be the highest level in the world at the moment," SK said.

SK is grateful to his colleagues and the many MLA members who have contributed their expertise, information, insights and data to advance the industry.

"MLA's International Markets team has been wonderful at sharing information about activities in each area and the Japanese team is fantastic to work with," SK said.

Catching waves

An active and motivated man, SK enjoys playing golf, fishing, watching sports including baseball and soccer, traveling, eating out with friends and spending time with his wife.

Something which may surprise SK's colleagues is his passion for surfing and admiration for Aussie pro surfers.

"I used to be a surfer when I was a student – but my skill level wasn't so high and the big waves were scary. Unforgettable highlights for me were watching great Aussie surfers like Mark Richards perform," SK said.

SK recollects being a spectator at the World Championships in Chiba, Japan, in the 1980s where Tom Carroll, Cheyne Horan and Mark Occhilupo competed.

Proud to work at MLA, SK hopes to stay active and continue to strive for excellence in his career.

"I would like to keep working, either at my desk or perhaps cutting or delivering Aussie beef. I'd also like to play golf with my friends once a week. I will continue to do my best today, this week, this month and onwards, over the next five to ten years," SK said.

A red meat fan, SK's favourite red meat meal is medium-rare Aussie beef cutlets with Japanese sauce, especially sesame sauce or ponzu sauce (soy sauce, vinegar and citrus). ■

SK's top three highlights from his time at MLA

1. MLA's Japan team has maintained good, solid relationships with external stakeholders.
2. SK has amassed a collection of more than 20,000 business cards – and counting.
3. SK says his English is better than it was 25 years ago.

mla.com.au/international-markets Shuichi Kitano **skitano@mla.com.au**

Lambassadors add spice to Indonesia

Australian lamb recently took centre stage in Indonesia during the nation's first-ever Lamb Challenge.

Pictured from left to right are Lambassador Chef Windoe, Archipelago Vice President Winston Hanes, Archipelago CEO John Flood, MLA Trade Development Manager (Indonesia) Siti Nur Aini, Chef Gilles Marx and Lambassador Chef Rizqi.

Held at Archipelago International, the largest hotel operated in South-East Asia, the program was a partnership between the hotel group and MLA, with support from Global Victoria.

The launch brought together 22 renowned chefs, who participated in a masterclass and culinary competition, featuring unique modern Asian dishes that highlighted different cuts of Aussie lamb.

MLA's Trade Development Manager for Indonesia Siti Nur Aini said the collaboration was part of MLA's commitment to supporting Australian red meat's public perception and awareness in Indonesia, and further increasing consumption of Australian lamb.

"Australian lamb is renowned in Asia for its naturally tender texture and delicate flavour, making it the ideal blank canvas for the diverse spice palettes and cooking methods found across the continent," she said.

The Lamb Challenge coincided with the start of the peak consumption of lamb and sheepmeat during the holy month of Ramadan (starting on 11 March) and culminated with the most significant festival, Eid al-Fitr, in early April.

"Australian lamb has earned a reputation for being highly regarded as halal for Muslim consumers worldwide as every step of the process, from slaughter to processing, adheres to Islamic guidelines," Aini said.

"This commitment to quality and religious sensitivity has made Australian lamb a trusted source of halal meat and complete peace of mind for many consumers worldwide, including Indonesia."

Following the success of this Lamb Challenge, with many of the participants going on to permanently feature Aussie lamb on their menus, plans are underway to host a second competition in the first quarter of 2025. ■

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Fast lamb kicks off

With the 2024 AFL Premiership season underway, footy fans can sink their teeth into lamb with the return of the Lamb Paddock at the Melbourne Cricket Ground (MCG).

The Lamb Paddock – by Australian Lamb and hospitality company Delaware North – follows a project between MLA and CSIRO, which centred around increasing the value-added lamb products suitable for quick service restaurants (QSR).

MLA's Product and Business Development Manager and Corporate Chef, Sam Burke, said the aim was to elevate lamb from a 'limited offer' product to a regular menu item in QSRs nationwide.

"MLA worked with CSIRO to understand the barriers QSRs and full-service restaurants (FSRs) had in featuring lamb products on their menus," Sam said.

"We worked with more than 20 fast food and quick service outlets to discuss how to overcome these barriers and increase the likelihood of lamb products in QSRs."

Dr Aarti Tobin, who leads animal protein research at CSIRO, said the QSR stakeholders interviewed provided significant insight into understanding the role of lamb within fast food restaurants and hospitality venues.

"The interviews showed lamb was traditionally eaten as part of a meal, as roasts and chops, hence is not considered a fast food," Aarti said.

The QSR companies said barriers to offering lamb included ensuring consistent product quality, reliability of supply and costs compared to other proteins.

Sam and the CSIRO team developed and tested two lamb products for QSR menus – a lamb burger and pulled lamb shoulder, both featuring Middle Eastern spices. A 28-day frozen storage trial showed both products maintained their sensory quality after cooking and reheating.

"These two lamb products will provide the industry with a great opportunity to value add to lower value lamb cuts and trim, as well as address an unmet need of the QSR market," Sam said. ■

mla.com.au/domestic-marketing

Organic Collagen Australia's range of products. Image: Organic Collagen Australia.

Freeze-dried collagen adds value, reduces waste

Freeze Dry Industries (FDI) launch of its range of eco-friendly organic collagen products into the domestic market marks the successful conversion of an innovative business idea into a commercial reality.

Based on the Sunshine Coast, FDI's range of world-first, Certified Organic collagen skincare and supplements range – Organic Collagen Australia – is set to provide benefits across the wider red meat value chain.

MLA's seed funding meant FDI was able to go out on a limb and explore how freeze-drying technology could be used to add value to traditionally low value agricultural by-products as well as reduce waste.

John Marten, MLA's Program Manager – Food Innovation, said FDI's successful product launch is a great example for other Australian businesses to follow.

"The trajectory from their initial discussions about how they could extract something of value from waste hides and pelts to where they are now – with a whole range of products of significantly greater value – is a great success story," John said.

Valuing the fifth quarter

Converting low value bovine and ovine inputs including glands and organs (or the 'fifth quarter' of the carcase), into more valuable products is a key step in opening up new markets for Australian meat processors.

"The impact of valuing the fifth quarter is significant because it will allow us to play in world markets where we traditionally haven't had a presence," John said.

"Who would have thought that there was an opportunity to sell a range of collagen products in an up-market butchery?

"The reality is that there is a great story to be told and shared here and there is a logical adoption pathway for bovine collagen products to be sourced and sold by businesses that may not have traditionally been associated with a range of health and wellness products."

MLA is actively investing with Australian processors and technology providers to better understand the opportunities for value adding to the fifth quarter of bovine and ovine supply chains.

Extraction process

FDI's Michael Buckley and Fiona Dobbrick began their business journey with the goal of discovering which part of the bovine carcase could demonstrate a three to five times value uplift.

"Very quickly, we identified that bovine hides were severely undervalued, and collagen came out as the lead runner," Fiona said.

MLA's seed funding helped clear up any doubts that the collagen extraction process would be possible, with FDI's early-stage experiments leading to the creation of a product with the desired amino acid protein profile.

Low energy technology preserves the product through first freezing it and then removing the water.

This produces a light weight, nutritious product that doesn't require sugar or other additives to maintain freshness.

Benefits of collagen

Certified Organic capsules include collagen, liver, collagen and liver, collagen and spirulina, and collagen and strawberry, as well as a skincare range.

The bovine inputs used to make the products are hides and liver from Australian Certified Organic pasture-raised cattle.

Collagen is the most abundant protein in the human body, found in the bones, muscles, skin and tendons but as we age our collagen levels decline, so supplementation can be of benefit. Liver is one of the most nutritionally dense foods in the world and is packed full of essential nutrients, such as iron, vitamin A and B12.

The Organic Collagen Australia range is available online and at Eumundi Meats Noosa, whose products are organic, free range and pasture raised. Consumer demand has been strong, with turnover exceeding expectations. ■

Organic Collagen Australia's collagen skincare and supplements range is a world-first. Image: Organic Collagen Australia.

freezedryproteins.com.au organiccollagenaustralia.com.au eumundimeats.com.au John Marten **jmarten@mla.com.au**

Spiced lamb shank soup

Share the Lamb
100% AUSTRALIAN

Warm up as the temperature drops with this flavoursome lamb dish – it's guaranteed to become a winter favourite. Discover more ways to cook lamb at **australianlamb.com.au**

Serves **4** Prep time **10 minutes** Cooking time **3 hours 5 minutes**

INGREDIENTS

4 Frenched lamb shanks (approx. 350g each), fat trimmed

2 tbsp olive oil

2 garlic cloves, finely chopped

6cm piece ginger, peeled, roughly chopped

1 red onion, cut into thin wedges

2 tbsp mild curry powder

2L (8 cups) beef stock

400ml can coconut milk

400g can chickpeas, rinsed, drained

200g green beans, cut into 3cm pieces

½ bunch cavalo nero (Tuscan kale), stalks removed, finely shredded

Coriander sprigs, long red chilli, thinly sliced, to serve

METHOD

1. Heat half the oil in a large casserole dish or heavy based saucepan over medium–high heat and cook shanks for 5–6 minutes or until browned all over. Set aside on a plate.
2. Add remaining oil to dish, reduce heat to medium and add garlic, ginger and onion. Cook for 4–5 minutes or until softened. Add curry powder, stock and coconut milk. Stir well, return lamb to dish and bring to the boil. Reduce heat to a low simmer, cover and cook for about 2.5 hours or until lamb is tender. Remove from heat. Add chickpeas, beans and cavalo nero to dish, stir well and cover for 5 minutes to heat through. Season.
3. Divide shanks and soup between serving bowls and top with coriander and chilli, to serve.

TIPS

- Buy a good quality mild curry powder from your grocer, deli or specialty store.
- Swap the curry powder for Moroccan, Tuscan, Italian or Cajun seasoning for a different flavour profile, or add an Asian or Indian curry paste instead.
- Diced pumpkin, sweet potato, zucchini and cauliflower would all work well in this soup. Swap the cavolo nero for regular kale, silverbeet, English or baby spinach.
- Make a double batch of soup, shred the lamb off the bone and freeze the leftovers for a delicious, warming midweek meal.

LambEx | mla MEAT & LIVESTOCK AUSTRALIA

Major event partner

Inspire. Advocate. Innovate.

7–9 August

Adelaide Convention Centre

MLA/Integrity Systems Company stand: *daily*

A display of the latest programs and research showcasing solutions and technologies which embrace sustainability and set sheep producers up for success, including Meat Standards Australia (MSA) and new genetic tools.

MLA Managing Director Michael Crowley: *Friday 9 August*

MLA's new Managing Director Michael Crowley takes to the stage to lay out the essentials for his leadership, which will craft the industry landscape for the next decade. While the quest for innovation and ready adoption is at the heart of it, there is much more to the man in charge.

Cuts to cuisine: *lunchtime on Thursday 8 and Friday 9 August*

Join MLA Product and Business Development Manager and Corporate Chef Sam Burke alongside MLA Business Manager – Retail and Corporate Butcher Doug Piper as they give a guided breakdown for transforming trends into menus.

The story of the AMPC LambEx Feedlot Carcase competition – and who won: *Thursday 8 August*

MSA Program Manager David Packer will be contributing to the session, to share the key learnings, surprise findings and how these results compare across industry.

The Sheep Sustainability Framework's 2024 *Annual Report*: *Wednesday 7 August*

The Sheep Sustainability Framework's 2024 *Annual Report* will be launched alongside LambEx. The Sheep Sustainability Framework defines sustainable sheep production in Australia, prioritises industry issues and measures industry performance against relevant indicators.

Buy tickets and stay up to date at **mla.com.au/lambex24** and **lambex.org.au**